Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme

NTA Observations on the Proposed Scheme Submissions

September 2023

BUS CONNECTS

SUSTAINABLE TRANSPORT FOR A BETTER CITY.

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1. Introduction and Overview

1.1 Introduction

This report provides a response to the submissions made to An Bord Pleanála ("the Board") in response to the application under Section 51 of the Roads Act 1993, as amended, for approval of the Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme ("the Proposed Scheme").

An overview of the submissions is provided in Section 1.2 below. The issues raised in the submissions on the Proposed Scheme, together with responses thereto are provided in Section 2.

Where the same issue is raised in a number of submissions, this report identifies the individuals who raised those issues and provides a composite response to each issue raised.

1.2 Overview of Submissions Received

A total of 59 submissions in response to the Proposed Scheme were received by the Board.

Each submission was individually numbered by the Board and this numbering system has been retained for ease of reference in this report.

In Tables 1.2.1 to 1.2.3 the 59 submissions in response to Proposed Scheme are broken down into groups either associated with a particular location along the Corridor or of a more general nature below.

There were six locations referenced by more than one submission and seven locations that were referenced by a single submission. Eleven submissions raised various issues along the route of the whole scheme.

Table 1.2.1: Summary of Locations Referenced by more than One Submission

Location	No. of submissions referencing this Location	Key Issues Raised
Bancroft Park (Construction compound)	17	• Visual Impact • Loss of public green space and Tallaght LAP • Character of area • Biodiversity • Safety of vulnerable pedestrians • Air, noise, dust, light pollution • Community care and recreational premises • Property values • Alternative locations • Lack of consultation • Drainage • Loss of educational resource • Noise impacts on students
Tallaght Village	**7**	• Archaeological and cultural heritage • Loss of community plaza • Alternative route available • Loss of on-street parking • Loss of cul-de-sac and traffic congestion
Parkview	14	• Loss of green space • Environmental impacts • Safety of children / students / residents • Loss of privacy • Access to amenities • Lack of consultation • Unnecessary change providing no real gains to bus travel times • Property values

Location	No. of submissions referencing this Location	Key Issues Raised
		• Bus stops • Alternative options
Greenhills Road	**5**	• Negative effect on businesses • Traffic • Security concerns with proposed cul-de-sac of Greenhills Road • Lack of consultation • Property values and future development • Alternative proposal • Bus stops and future bus routes • CPO of land • Mitigation measures • Zoning
Bunting Road / Kildare Road / Old County Road / Clonard Road / Bangor Drive / Saul Road	**7**	• Increased traffic congestion and additional traffic on surrounding roads leading to noise & air pollution • Safety concerns for traffic diversions onto residential roads leading to danger to children playing, and walking / cycling • Loss of street parking • Tree replacement unacceptable • Bus time improvement not justified • Quiet Road signage and enforcement of bus gate unclear • Removal of existing bus stops on Clogher Road • Construction traffic • Lack of community engagement • Disagree with EIAR statement of minimal impact on community • Combined effect of schemes • Request for mitigation • Bunting Road cycle route • Proposed Construction Compound at Bunting Park
Naas Road / Long Mile Road junction	**2**	• Unlikely proposed ped/cycle bridge would be used as intended • Reduced visibility of businesses and visual amenity • Safety concerns of proposed ramp close to petrol station • Clarification required for proposed landtake • Loading/unloading access • Visibility of property • Vandalism / Litter / anti-social / damage • Access / egress and timescale of works • Lack of information justifying proposed bridges

Table 1.2.2: Summary of Locations Referenced by a Single Submission

Location	Key Issues Raised
Walkinstown Roundabout	• Surplus Land Acquisition / Lack of clarity regarding scheme impacts • Drainage / access concerns • Works may affect property / parking • Impact on business
Walkinstown Road	• Safety of children / reinstatement of boundary/gates • Property access • Health of residents / noise & dust concerns • Property value concern / quality of life affected by works
New Nangor Road	• Site security • Proposed tree types will sterilise parking lot • Proposed hedgerow outside scheme extents • Access to lands required at all times
Dolphin's Barn	• Request loading bay for retail and commercial premises

Location	Key Issues Raised
Rafter's Road	• Loss of green space negative impact on community • Property values / scheme will not bring positive change to Crumlin area • Suggest use of green area as bike depot • Mature trees help offset traffic emissions
Calmount Road /Ballymount Avenue	• Concern scheme impact on operational performance of junction • Suggest design amendment at junction to facilitate adjacent development
Calmount Business Park	• Widening of Greenhills Road not considered • City Edge project not properly engaged/considered • Land use not considered in EIAR • Significant impact on Calmount Business Park during construction & operation • Impact on future development • Scheme premature and does not consider alternatives

Table 1.2.3: Summary of Submissions Covering Scheme Wide Issues

Entity	Key Issues Raised
Local Resident	• Impact on local roads not researched • No account of traffic outside rush hours • Impact on businesses and local residents • Traffic congestion due to school journeys • Traffic modelling out of date (Covid) • Public Consultation Aarhus compliance • Cumulative impact of schemes should be assessed
MEP	• Separation between road, cycle and footpath / adequate cycle parking required. • Tallaght zipway greenery / signage and truncation of Main Street cycleway. • Bus stops to be wheelchair accessible • Remove road median for wider footpaths • Bus passengers disembark onto cycle lane
Dublin Commuter Coalition	• Advocate for the Proposed Scheme • Provide enforcement cameras and provide 24/7 bus lane operation • Various design queries along the route • Segregation of cyclists and motor traffic • Queries on layout at Nicholas Street • Naas Road / Long Mile Road junction queries
Residents Association	• Aarhus Convention compliance • Incomplete planning application (extent of scheme) • Displaced traffic / Cumulative traffic predictions • Bus usage • Access to Lidl store • Walkinstown roundabout traffic • Carbon emissions
Dublin Cycling Campaign	• Cyclist comfort levels (noise buffer) • All cycle tracks should be 2m wide minimum • Continuous cycle tracks should be provided rather than short bus lane length • Increase levels of filtered permeability • Adopt CROW guidelines for Quiet Street treatment • Concern 50kph speed limit remains for Crumlin Rd/Walkinstown Rd/Kildare Rd • Concern for enforcement requirement
Senator	• Period allowed for submission insufficient / Adherence to Aarhus • No extra buses / Crumlin community access to public transport curtailed • Gain in journey time reduction / cost benefit disproportionate • No cross-community bus service / public transport system not enhanced • Traffic modelling inadequate / cumulative corridor assessment required • Query suitability of local roads for traffic / environmental impact • Scheme fails to reduce carbon emissions

Entity	Key Issues Raised
	• Plan based on all journeys going to city centre
TII	• National Roads / light rail not considered separately in EIAR • Detailed CTMP required, including mitigation measures • National Roads • Interactions, mitigations and recommendations for National Roads and light rail
DAU - DHLGH	• Calcicole Plant Communities Conservation Plan required • No removal of vegetation during main bird breeding season • Archaeology: mitigation to be implemented / CEMP / Project Archaeologist • Planning authority and dept. shall be furnished with final archaeological report
Member of Public	• No additional buses / removal of existing bus services / existing difficulties • Minimal journey time savings • Inadequate time to review CBC proposal / poor consultation process • Metro alternative should be considered • Proposed City Edge development should be considered • Inadequate traffic modelling / how is city centre affected • Expedite Bunting Road proposals • Parkview bus route queried
SDCC	• Bus Interchange / tie-in with SDCC public plaza • Bancroft Park Compound requirements • Old Greenhills Road Plaza concerns / enhanced public realm • Cycle lanes to connect into existing cycle lanes • Various queries in the Mayberry Road / Birchview Avenue / Treepark Road / Castletymon Road • Provide high-quality open spaces • Site compound requiring planning condition for agreement with LA • Pedestrian and cycle linkages welcomed • Various queries re green space / design between Calmount Road and existing Greenhills Road • Naas Rd/Long Mile Road junction requires uplift in design ped/cycle bridge • Public realm and maintenance implications for LA require clarity • Detailed CEMP necessary / Departmental Recommendations
DCC	• Site compounds to be appropriately reinstated • Design of public realm fundamental to success of proposed scheme • Design should be supported by pedestrian traffic counts • All historic fabric and features should be retained and protected • Public realm improvement • Information provided insufficient to facilitate proper assessment • Land acquisition and Taking in Charge • Confirmation sought whether these lands will be transferred to LA • Numerous design, land and maintenance queries • Percent for art strategy queried • Suitable locations for water drinking fountains should be identified • New trees should only be indicated where sufficient footpath width for pedestrians and wheelchair users • Number of traffic signal poles needs to be rationalised • Gantry signage is not suitable in low speed residential areas / conservation areas • Existing village signage should be retained / co-ordinated • Departmental recommendations

Table 1.2.4: Location(s) Referred to by each Submission on the Proposed Scheme (by ABP Reference Number)

No	Location	No	Location	No	Location	No	Location
1	Walkinstown Roundabout	16	Parkview	31	Scheme wide - MEP	46	Naas Road/Long Mile Road junction
2	Bancroft Park	17	Bancroft Park & Tallaght Village	32	Bunting Road, Walkinstown & Kildare Road	47	Naas Road/Long Mile Road junction
3	Bancroft Park	18	Parkview	33	Bancroft Park & Tallaght Village	48	Calmount Business Park
4	Walkinstown Road	19	Kildare Road / Old County Road / Clonard Road / Bangor Drive / Saul Road	34	Scheme wide – Dublin Commuter Coalition	49	Bancroft Park
5	Bancroft Park &Tallaght Village	20	Parkview	35	Rafters Road	50	DCC
6	Kildare Road / Old County Road / Clonard Road / Bangor Drive / Saul Road	21	Parkview	36	Parkview	51	Parkview
7	Stannaway Road	22	Greenhills Road	37	Calmount Road / Ballymount Avenue	52	Bancroft Park
8	Parkview	23	Kildare Road / Old County Road / Clonard Road / Bangor Drive / Saul Road	38	Scheme wide – Residents Association	53	Bancroft Park
9	Parkview	24	Scheme wide – Local Resident	39	Bancroft Park, Tallaght Village & Parkview	54	Bancroft Park, Kilnamanagh & Springfield
10	Greenhills Road	25	Kildare Road / Old County Road / Clonard Road / Bangor Drive / Saul Road	40	Scheme wide – Dublin Cycling Campaign	55	Scheme wide – Member of public
11	New Nangor Road	26	Bancroft Park/Tallaght Village	41	Scheme wide - Senator	56	Greenhills Road
12	Bancroft Park	27	Dolphin's Barn	42	Bunting Park	57	Greenhills Road
13	Bancroft Park	28	Bancroft Park, Tallaght Village & Parkview Greenhills Road	43	Scheme wide - SDCC	58	Parkview
14	Bancroft Park	29	Parkview	44	Scheme wide - TII	59	Bancroft Park
15	Bancroft Park & Tallaght Village	30	Parkview	45	Scheme wide - DHLGH		

2. Response to Submissions on Proposed Scheme

2.1 Proposed Scheme at Bancroft Park

2.1.1 Description of the Proposed Scheme at this Location

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.1.1 of Chapter 4 of Volume 1 of the EIAR, Proposed Scheme Description, from Belgard Square East the route continues via Blessington Road and Main Street to Greenhills Road. To avoid traffic congestion on Greenhills Road it is proposed for buses to use the Old Greenhills Road alignment and create a new bus only junction at the location of the existing cul-de-sac opposite Bancroft Park Road, to facilitate bus only turn movements to Greenhills Road (R819). This will aid the bus in avoiding congestion at the Main Street / Greenhills Road (R819) junction. Stone paving will be used in the area and localised planting will be implemented to retain the character of the existing cul-de-sac treatment.

The extract from the General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR are included in Figure 2.1.1



Figure 2.1.1: Extract from General Arrangement Drawing (Sheet 6)

2.1.2 Overview of Submissions Received

Table 2.1.2.1 below lists the 17 submissions within which issues were raised in respect of the Proposed Scheme at Bancroft Park.

Table 2.1.2.1: Submissions Made in Respect of Bancroft Park

No	Name	No	Name	No	Name
02	Theresa McCann	15	Debbie Gray	49	Hannah Fitzpatrick
03	Niamh Walker	17	Collette Hardiman	52	Bancroft Residents Association
05	Lynn Broderick	26	Cllr. Teresa Costello	53	Kylie Burke
12	Cllr. Liam Sinclair	28	Cllr. Kieran Mahon	54	James and Charlotte Acton
13	St. Mary's National School Board of Management	33	Tallaght Community Council	59	Paul Browne

No	Name	No	Name	No	Name
14	Cllr. Mick Duff & Cllr. Charlie O'Connor	39	Sean Crowe TD		

Of the 16 submissions, 10 were from residents, 1 from an educational facility, 1 from a community organisation and 5 were from elected representatives supporting the residents. A number of issues were raised, and these are listed below and described in Section 2.1.3 below.

Common Issues Raised

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

Other Issues Raised

The following issues were raised by submission 13 only.

1. Loss of educational resource
2. Noise impact on students.

The following issue was raised by submission 2 only

3. Support for the scheme

2.1.3 Common Issues Raised and Responses

2.1.3.1 Visual Impact

Summary of Issue Raised

A number of submissions mentioned how the location of the proposed site compound on the existing green area of Bancroft Park would detrimentally impact the visual aspect of the location in general. The submissions asserted that the installation of a site office, toilet facility, parking spaces, vehicle storage and material storage would result in the significant destruction of existing trees and would constitute an "eyesore" affecting the quality of life of locals.

Response to Issue Raised

The land in question is the temporary land acquisition is to provide a contractor's site compound TC2.

As described in Section 5.7.1 of Chapter 5 Construction of Volume 2 of the EIAR, *'The Construction Compound locations have been selected due to the amount of Available space, their relative locations near to the majority of the Proposed Scheme major works, and access to the national and Regional Road network. Refer to Chapter 6 (Traffic & Transport) of this EIAR for an assessment of the construction traffic.'* Figure 2.1.2 below shows the indicative layout of the construction compound.

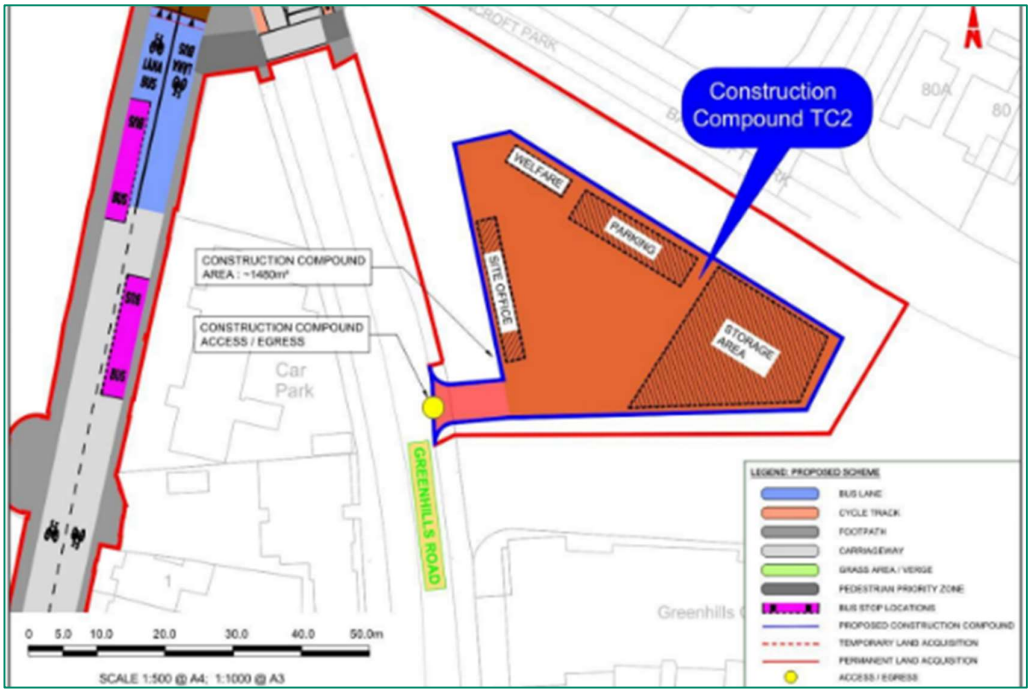


Figure 2.1.2: Extract 1 from Image 5.2 of Chapter 5 Construction of Volume 2 of the EIAR

Figure 2.1.3 is an aerial photography image at Bancroft Park with the proposed layout of the site construction compound overlaid showing the proposed access point, office, parking, welfare, storage and extents (blue line). This shows that the compound has been positioned to avoid impacting existing trees, both along Greenhills Road and within the green space itself. The area of the compound has been kept to the smallest practicable extent to minimise the land take on this area.



Figure 2.1.3: Site Compound TC2 Aerial Image Overlay (Image Source: Goggle)

Section 5.3.1 of EIAR Chapter 5 Construction describes the construction works in the various sub-sections of Section 1 of the Proposed Scheme between Tallaght and Ballymount. It is anticipated that Site Compound TC2 will be used in connection with sub-section 1j (70m along Blessington Road between its junction with Belgard Square East and the junction with Belgard Road, with an expected construction duration of approximately one month), sub-section 1k (Belgard Road / Blessington Road junction, with an expected construction duration of approximately two months), sub-section 1l (450m along Blessington Road, between the Belgard Road junction and the Courthouse Square Apartments, with an expected construction duration of approximately one month), sub-section 1m (approximately 300m along Main Road, with an expected construction duration of approximately one month), sub-section 1n (approximately 200m along Old Greenhill Road, between the Main Road and Bancroft Park junctions, with an expected construction duration of approximately six weeks) and sub-section 1o (1750m along Greenhills Road from Bancroft Park to the M50 bridge with and expected construction duration of approximately five months). Site Compound TC2 is anticipated to be in use from Q1 of the first year to Q3 of the third year for the Proposed Scheme total Construction Phase as shown in the indicative construction programme Section 5,4 of EIAR Chapter 5 Construction.

Figure 2.1.4 is an extract from EIAR Chapter 5 Figure 5.1 Volume 3 Part 3 of 3 showing the location of each section / sub-section along the Proposed Scheme.

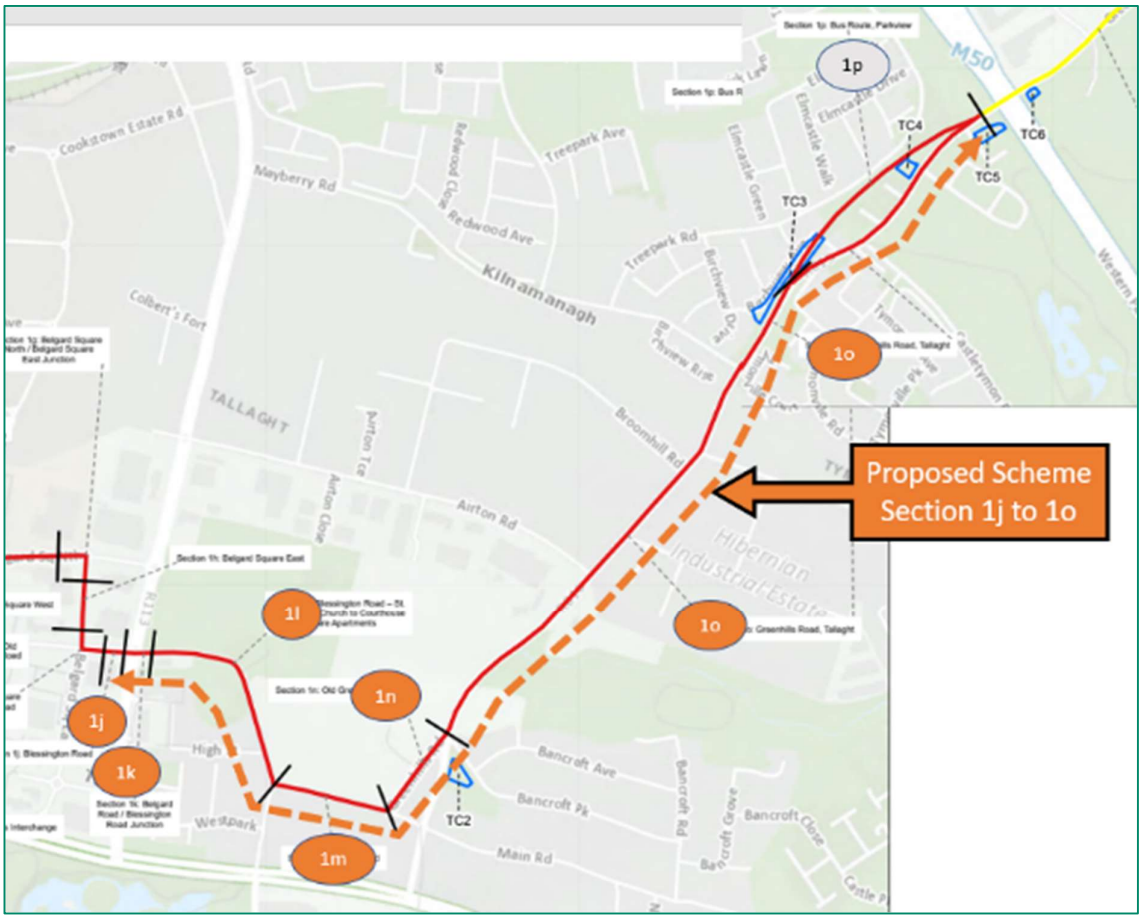


Figure 2.1.4: Extract from Figure 5.1: EIAR Chapter 5 Part 3 of 3 of Volume 3

As stated in Section 5.5.5 of EIAR Chapter 5, *"On completion of construction, all construction facilities and equipment such as plant, materials, temporary signage, and laydown areas, Construction Compounds, etc. will be removed. The area which was occupied by the Construction Compounds will be reinstated (refer to the Landscaping General Arrangement Drawings (BCIDA-ACM-ENV_LA-0809_XX_00-DR-LL-9001) in Volume 3 of this EIAR)."*

Figure 2.1.5 is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR and shows the proposed enhanced landscaping proposals for the green area that will be implemented once the temporary construction compound is removed.



Figure 2.1.5 Extract from Landscaping General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR

As identified in the Landscaping General Arrangement Drawings (contained in Part 1 of 3 of Volume 3 of the EIAR), none of the existing trees will need to be removed to allow the area to be used for Construction Compound TC2 during construction of the Proposed Scheme.

The proposed reinstatement will restore the grassland, plant 2 standard Silver Birch Trees, 5 semi-mature Cherry Trees, 3 standard Alder Trees, 5 standard Rowan Trees, a new hedgerow and a new gravel path connecting the park at Greenhills Road and Bancroft Park Road.

Section 17.4.3.2.5 of EIAR Chapter 17 Landscape (Townscape) and Visual, summarises the assessment of the construction impact on various amenity designations along the Route of the Proposed Scheme, including Bancroft Park. It is concluded that the *"potential townscape / streetscape and visual impact of the Construction Phase on Amenities is assessed to be* ***Negative, Significant and Temporary / Short- Term****."*

Section 17.4.4.2.5 of EIAR Chapter 17 Landscape (Townscape) and Visual, summarises the assessment of the operational impact on various amenity designations along the Route of the Proposed Scheme, including Bancroft Park and states the following: *"There will be provision of landscape improvements at the open spaces off Blessington Road, Bancroft Park and Rutland Avenue which will be used as construction compounds. Improvements include new tree planting and provision of new footpaths. The sensitivity is high and the magnitude of change is medium.*

The potential townscape / streetscape and visual impact of the Operational Phase on open spaces is assessed to be ***Positive, Moderate and Short-Term becoming Positive, Significant, Long-Term****."*

2.1.3.2 Loss of only public green space and Tallaght LAP

Summary of Issues Raised

The submission stated that the green at Bancroft Park serves the local community who use and maintain it, with residents of the area meeting there socially and using it as a general recreation area. They expressed the view that a construction compound here would dissuade residents to linger and chat so diminishing the green's social and amenity value to locals.

The submission also stated that using the green area for a site compound was in direct contravention of the Tallaght Local Area Plan, specifically objective OS *"To preserve and provide for open space and recreational amenities"*

Response to Issues Raised

Loss of public green space

As described above, The Construction Compound will be fenced off during the construction phase (see section 5.5.2.8 in Chapter 5 of Volume 2 of the EIAR). As shown in Figure 2.1.6, the temporary compound will occupy the south-western portion of the wider green area, the eastern portion of the of the green area will remain available to the community at all times.



Figure 2.1.6: Site Compound TC2 within the wider green area at Bancroft Park (Image Source: Google)

Enhanced landscaping proposals for the green area will be implemented once the temporary construction compound is removed.

Section 17.4.4.2.5 of EIAR Chapter 17 Landscape (Townscape) and Visual, summarises the assessment of the operational impact on various amenity designations along the Route of the Proposed Scheme, including Bancroft Park and states the following: *"There will be provision of landscape improvements at the open spaces off Blessington Road, Bancroft Park and Rutland Avenue which will be used as construction compounds. Improvements include new tree planting and provision of new footpaths. The sensitivity is high and the magnitude of change is medium.*

The potential townscape / streetscape and visual impact of the Operational Phase on open spaces is assessed to be ***Positive, Moderate and Short-Term becoming Positive, Significant, Long-Term****."*

South Dublin County Council Tallaght Town Centre Local Area Plan (LAP)

The Proposed Scheme will require temporary acquisition of a part of the green area at Bancroft Park for site Construction Compound TC2. The temporary land to be acquired is needed in order to allow the appointed contractor to manage the delivery of and construct the Proposed Scheme.

The Construction Compound will be fenced off during the construction phase (see section 5.5.2.8 in Chapter 5 of Volume 2 of the EIAR). As shown in Figure 2.1.3.5 above, the temporary compound will occupy the south-western portion of the wider green area, the eastern portion of the of the green area will remain available to the community at all times.

Figure 2.1.7 is an extract from Tallaght Town Centre Local Area Plan 2020

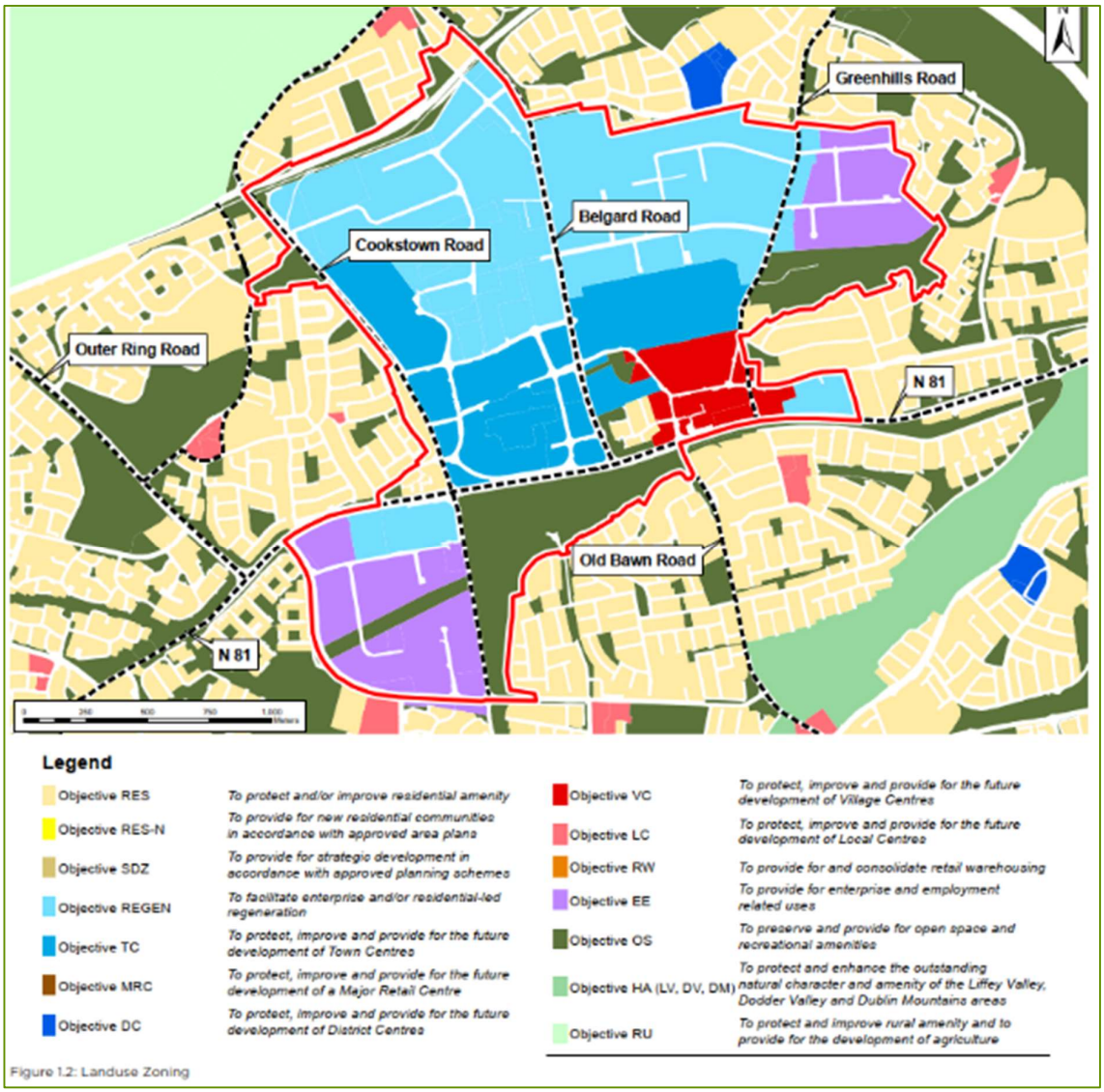


Figure 2.1.7: Extract from SDCC Tallaght Town Centre Local Area Plan 2020 (Figure 1.2 Landuse Zoning)

As stated in Section 5.5.5 of EIAR Chapter 5, *"On completion of construction, all construction facilities and equipment such as plant, materials, temporary signage, and laydown areas, Construction Compounds, etc. will be removed. The area which was occupied by the Construction Compounds will be reinstated (refer to the Landscaping General Arrangement Drawings (BCIDA-ACM-ENV_LA-0809_XX_00-DR-LL-9001) in Volume 3 of this EIAR)."*

Section 4.2.1 Zoning of EIAR Chapter 2 Appendix A2.1 Volume 4 Part 1 of 4 notes the following:

"The lands are within the functional area of SDCC at the Old Blessington Road / Cookstown Way to the M50 bridge. Lands are zoned in the SDCDP 2022-2028 (SDCC 2022a). For a detailed description of the zonings, refer to Table 1.2 in Appendix 1 (Local Policy). The application boundary that incorporates the Proposed Scheme works includes lands within the following zoning objectives outlined in Table 4.1. Construction Compounds TC1, TC2, TC3, TC4 and TC5 for the Proposed Scheme will be located within the SDCC area on lands zoned within the SDCDP 2022-2028 (SDCC 2022a), as follows:

- *OS – Open Space; and*
- *RES – Existing Residential.*

Table 4.1: Zoning Objectives Potentially Affected by the Proposed Scheme

Planning Authority	Zone	Objective
SDCC	REGEN	*'To facilitate enterprise and/or residential-led regeneration subject to a development framework or plan for the area incorporating phasing and infrastructure delivery'*
	OS	*'To preserve and provide for open space and recreational amenities'*
	VC	*'To protect, improve and provide for the future development of Village Centres'*
	RES	*'To protect and/or improve residential amenity'*
	TC	*'To protect, improve and provide for the future development of Town Centres'*

Figure 2.1.8: Table 4.1 of Appendix A2.1

As noted above, the areas required for Construction Compounds TC1, TC2, TC3, TC4 and TC5 will be for a temporary period. Reinstatement works will be carried out following construction. All compounds will be located on sites which currently have no development. The Proposed Scheme will not prevent any long-term zoning objective for the land from being achieved."

Section 4.2.5 of Table 1.1 Section 1.1 South Dublin County Council Development Plan 2022-2028 Policies and Objectives of EIAR Chapter 2 Appendix A2.1 Sub Appendix 1 Local Policy Volume 4 Part 1 of 4 notes the following in relation to Policy GI7 Landscape, Natural, Cultural and Build Heritage - Protect, conserve and enhance landscape, natural, cultural and build heritage features and support the objectives and actions of the County Heritage Plan:

"The Proposed Scheme is compliant with this objective as it will protect, conserve and enhance landscape, natural, cultural and built heritage features. As outlined in EIAR Chapter 17 (Landscape (Townscape) & Visual) found in relation to the Operational Phase that: 'the Proposed Scheme will give rise to some degree of townscape and visual effect, most notably during the Construction Phase. These impacts arise especially where there is temporary and / or permanent acquisition of lands associated with residential or other properties including amenities, and where tree removal is required. The Proposed Scheme includes for replacement of disturbed boundaries, reinstatement of the Construction Compounds, return of temporary acquisition areas, and for replacement or additional tree and other planting where possible along the Proposed Scheme."

Figure 2.1.5 above is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR and shows the proposed enhanced landscaping proposals for the green area that will be implemented once the temporary construction compound is removed."

2.1.3.3 Character of the area

Summary of Issue Raised

A number of submissions stated the proposed site compound at Bancroft Park would constitute industrial use of green area, such industrial use and development on this mature area of green, recreational space would not be in keeping with the character of the area.

Response to issue Raised

Figure 2.1. shows the wider green area at Bancroft Park.



Figure 2.1.9: Wider green area at Bancroft Park (Image Source: Google)

Section 17.4.3.2.5 of EIAR Chapter 17 Landscape (Townscape) and Visual, summarises the assessment of the construction impact on various amenity designations along the Route of the Proposed Scheme, including Bancroft Park. It is concluded that the *"potential townscape / streetscape and visual impact of the Construction Phase on Amenities is assessed to be* ***Negative, Significant and Temporary / Short- Term****."*

Section 17.4.1.4.6 of Chapter 17 Landscape and Visual of Volume 2 of the EIAR sets out the general landscape / townscape and visual measures included within the Proposed Scheme, which includes the following:

"Proposals for the treatment of the urban realm within the streetscape impacted by the Proposed Scheme will have regard to the existing character of the street or location, to emerging policies, objectives and proposals for the urban realm and to opportunities for mitigation of impact on the urban realm and the streetscape. Proposals will have regard to historic details and features, to the quality of existing and proposed materials, to the reduction of clutter, ease of legibility, and management and maintenance requirements".

Section 17.4.1.4.1 of Chapter 17 Landscape and Visual of Volume 2 of the EIAR notes the following: *"Reinstatement of open space at Bancroft Park with provision of additional landscape improvements in the form of a new gravel footpath, tree planting and boundary hedgerows (off-chainage)."*

Section 17.4.4.2.5 of EIAR Chapter 17 Landscape (Townscape) and Visual, summarises the assessment of the operational impact on various amenity designations along the Route of the Proposed Scheme, including Bancroft Park and states the following: *"There will be provision of landscape improvements at the open spaces off Blessington Road, Bancroft Park and Rutland Avenue which will be used as construction compounds. Improvements include new tree planting and provision of new footpaths. The sensitivity is high and the magnitude of change is medium.*

The potential townscape / streetscape and visual impact of the Operational Phase on open spaces is assessed to be ***Positive, Moderate and Short-Term becoming Positive, Significant, Long- Term****."*

Figure 2.1.3.4 above in Section 2.1.3.1 Visual impact, is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR and shows the proposed enhanced landscaping proposals for the green area that will be implemented once the temporary construction compound is removed.

The proposed reinstatement will restore the grassland, plant 2 standard Silver Birch Trees, 5 semi-mature Cherry Trees, 3 standard Alder Trees, 5 standard Rowan Trees, a new hedgerow and a new gravel path connecting the park at Greenhills Road and Bancroft Park Road.

2.1.3.4 Biodiversity

Summary of Issue Raised

The submissions expressed the view that Bancroft's green space is a natural greenway for fauna and forms part of such a corridor to Tymon Park and beyond. The submissions states that foxes, rabbits, hedgehogs and squirrels have used this route to gain access to both Priory Grounds and the green area. The submission also state that the green area is also home to a variety of butterflies and a

habitat for birds such as goldfinches, bullfinches, pied wagtails, great tits, sparrowhawk and march thrush.

The submissions also note that there are over 35 trees such as ash, white ash, common lime, sour cherry, common horse chestnut, red horse chestnut, African cedar, scots pine, honeydew oak and beech, stating that the trees and woodland ecosystems are incredibly valuable to the quality of life for residents and provide clean air, offer protection and storage of carbon from the neighbouring Greenhills Road.

Response to issue Raised

EIAR Chapter 12 Biodiversity outlines the methodologies for surveys and their results for the entire study area which comprised of all lands within the red line boundary of the Proposed Scheme, including the area of the proposed Construction Compound TC2. Construction Compound TC2 and its habitats are not discussed separately as they are considered together with these habitat types elsewhere in the wider study area.

Results presented in Chapter 12 include those for the study and surveys undertaken: Study results were presented together with survey results in their relevant sections and all relevant records returned in the desk study are noted. Refer to Chapter 12, Section 12.3 Baseline Environment and Figures 12.1 to Appendix A12.2 Desk Study Appendices Part 3 of 4 Volume 4 of the EIAR.
Section 12.2.3.2 Chapter 2 Biodiversity of Volume 2 of the EIAR describes the various ecological survey methodologies used to collate baseline ecological information for the Proposed Scheme between 2018 and 2022 including walkover surveys.

Survey results comprised of detailed textual descriptions of findings and accompanying figures visually depicting these results. Refer to Chapter 12, Section 12.3 Baseline Environment and the associated figures in Volume 3 of the EIAR.

With regard to removal of trees in the vicinity of Construction Compound TC2, the Proposed Scheme does not result in the removal of trees in the area.

Figure 2.1.3 is an aerial photography image at Bancroft Park with the proposed layout of the site construction compound overlaid showing access point, office, parking, welfare, storage and extents (blue line) which shows the compound has been positioned to avoid impacting the existing trees to the east (Greenhills Road) and south of the construction compound.

Habitat surveys were undertaken on the Proposed Scheme. The habitat types encountered are shown in Figure 12.5 in Volume 3 Part 3 of 3 of the EIAR. Figure 2.1. below is an extract from the drawing, the area in which the Construction Compound TC2 is situated can be seen. The green/grey cross-hatch line denotes amenity grassland, the solid light green shading denotes hedgerow and the green/white dot shading denotes scattered trees and parkland habitat types.

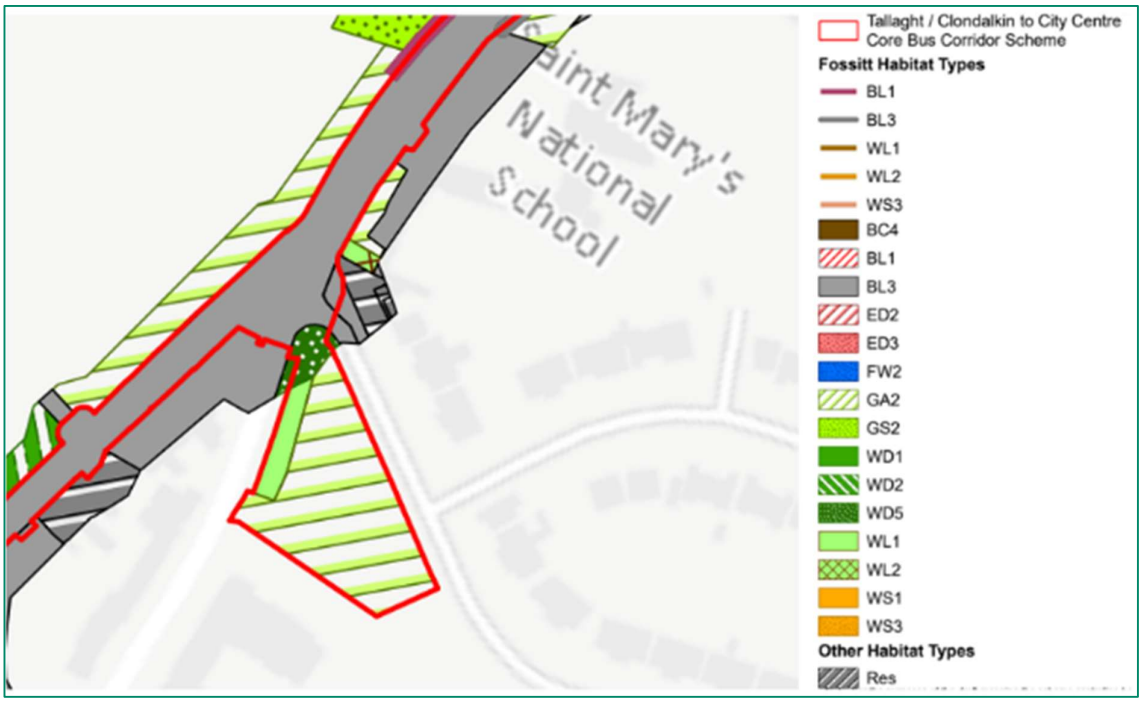


Figure 2.1.10: Habitat Survey Results Sheet 2 of 11 (Figure 12.5) from Figures: Part 1 of 3 of Volume 3 of the EIAR

Section 12.4.3.4.2.3 of Chapter 12 notes that: *"Site clearance works have the potential to result in the mortality of badger species. Although no setts were located during the surveys there remains the risk that commuting / foraging badger might become entrapped in deep excavations, particularly in open areas and wooded territory bordering / adjacent to the Proposed Scheme, including areas where historical sightings have been recorded e.g., Landsdowne Valley, Drimnagh, Bancroft Park, Tallaght. Given the relatively low numbers that might be expected to be affected, and that these species are highly mobile, the risk of mortality due to site clearance and or excavation is unlikely to result in a level of mortality that would affect the species' conservation status, and result in a significant negative effect, even at a local geographic scale."*

Section 12.4.3.5.1.1 of Chapter 12 Biodiversity of Volume 2 of the EIAR notes the following:

" The habitat areas that will be lost as a result of the Proposed Scheme form a relatively small part of larger expanses of similar habitat types and mosaics in the wider locality. Parks and greenspaces form a vital resource for breeding birds within an urban setting. These areas of suitable breeding bird nesting and / or foraging habitat available in the wider locality of the Proposed Scheme (i.e., from approximately 0.3 to 2km from these existing sites located within the footprint of the Proposed Scheme) include:

- *Parks and greenspaces with hedgerow, treeline and / or scrub boundaries such as Corkagh Park, Walkinstown United Football Club pitches, Lansdowne Valley Pitch and Putt, Pearse Park Crumlin, Templeogue Synge Street GAA Club, St. Patrick's Park, Eamonn Ceannt Park, Bunting Park, Beechfield Park, Tymon Park, Bancroft Park, the Priory Institute and playing pitches associated with TUD Tallaght;*
- *Woodland such as that present in Dodder Valley pNHA and beyond;*
- *Wildfowl and waterbird habitat within the Upper Liffey Estuary, Lower Liffey Estuary and wider Dublin Bay area; and*
- *Sections of the Grand Canal, River Camac and River Poddle, both upstream and downstream of the Proposed Scheme.*

None of the habitat areas to be lost are unique to the locality and, either individually or collectively, are not likely to support a significant proportion, or the only population, of any given breeding bird species locally. Although a temporary decline in overall breeding bird abundance could potentially occur at a very local level (i.e., the footprint of the Proposed Scheme), this is unlikely to affect the local range of

the breeding bird species present nor is it likely to affect the ability of these breeding bird populations to maintain their local populations in the long-term.

Mitigation measures will be implemented to reduce the effects of habitat loss on breeding bird species locally".

Section 12.5.1 of Chapter 12 describes the mitigation and monitoring measures required to conduct the work, and supervise and direct ecological measures associated with the Proposed Scheme during the Construction Phase.

Section 12.5.2 of Chapter 12 identifies the mitigation measures required to address potential impacts of the Proposed Scheme on relevant European sites during the operational phase. Mitigation measures that are specifically required to ensure that the Proposed Scheme will not adversely affect the integrity of European sites within the Zone of Influence (ZoI) are presented in Section 8 of the Natura Impact Statement (NIS) provided with the application for the Proposed Scheme.

The NTA are satisfied that the biodiversity assessment has correctly assessed the potential impacts of the Proposed Scheme and has also proposed a comprehensive suite of mitigation measures which will be implemented during the construction phase.

2.1.3.5 Safety of vulnerable pedestrians

Summary of Issue Raised

The submissions expressed concern that the proposed location of the construction compound would pose safety issues for pedestrians passing the site on Greenhills Road and Bancroft Park, in particular;

- Parents and children accessing local Schools, Creche's and childcare facilities.
- Vulnerable adults accessing Cheeverstown facility on Airton Road.
- Members of public accessing Church services, Fitness centre and Athletics Club.
- Members of public accessing shops, eateries and bus services in Tallaght Village.
- Mobility and sensory impaired members of public accessing shops and banks in Tallaght Village.
- Tallaght Village members of public who use existing green space for recreation and dog walking.

Response to Issue Raised

Section 5.8.1 of Chapter 5 Construction of Volume 2 of the EIAR notes the following:

"The measures set out in Section 8.2.8 of the Traffic Signs Manual (Department of Transport, Tourism and Sport 2019) will be implemented, wherever practicable, to ensure the safety of all road users, in particular pedestrians (including able-bodied pedestrians, wheel-chair users, mobility impaired pedestrians, pushchair users) and cyclists. Therefore, where footways or cycle facilities are affected by construction, a safe route will be provided past the works area, and where practicable, provisions for matching existing facilities for pedestrians and cyclists will be made."

Section 6.4.5.4.2 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR notes the following:

"As described in Chapter 5 (Construction), pedestrians may be temporarily impacted by construction activities along the Proposed Scheme corridor. Pedestrian diversions and temporary surface footways will be used to facilitate pedestrian movements around work areas. Access to local amenities, such as to bus stops, traffic crossings, private dwellings, and businesses, may be temporarily altered but access will be maintained.

Due consideration will be given to pedestrian provisions in accordance with Section 8.2.8 of the DTTS Chapter 8, Temporary Traffic Measures and Signs for Roadworks of the Traffic Signs Manual (DTTS 2019a) and the DTTS Temporary Traffic Management Design Guidance (DTTS 2019b), to ensure the safety of all road users, in particular pedestrians (including able-bodied pedestrians, wheel-chair users, mobility impaired pedestrians, pushchair users etc.). Therefore, where footways are affected by construction, a safe route will be provided past the works area, and where practicable, provisions for matching existing facilities for pedestrians. Due consideration will also be given to the need for temporary ramps, and measures for accessible users, where changes in elevation are temporarily

introduced to facilitate works and footway diversions. Entrance points to the construction zone will be controlled as required."

As shown in Figure 2.3.1.2, the proposed access to Site Compound TC2 will be via Greenhills Road and there will be no access to the compound from Bancroft Park for construction vehicles or construction works.

As stated in Section 5.5.2.8 Construction Compounds of Chapter 5 Construction of Volume 2 of the EIAR: *"As part of preparatory works, the Construction Compounds will be set up which will include installation of the necessary facilities including the site office, welfare facilities, etc. Controlled access to the Construction Compounds will be implemented, fencing will be erected, and lighting will be installed. The Construction Compounds will be secured with Closed-Circuit Television (CCTV) to ensure safe storage of all material, plant and equipment."*

The measures described above will include a safe route for pedestrians at this location across the proposed entrance to the compound.

2.1.3.6 Construction Traffic

Summary of Issues Raised

Access / egress

Concern was raised in several submissions relating to the location of the construction compound entrance on a narrow section of Greenhills Road where construction machinery would negatively impact on existing traffic movements on Greenhills Road and the nearby pedestrian crossing at the junction of Greenhills Road and Bancroft Park.

Risk of accidents

The view was expressed that traffic to/from the construction compound will be unsafe for all road users and risk major road traffic accidents resulting from a collision between construction traffic and public traffic, pedestrians and cyclists.

Risk to emergency vehicle response times

The view was expressed that traffic to/from the construction compound will risk disruption to emergency response vehicles (Fire, Ambulance and Garda) at this locality.

Delays / congestion

The submissions asserted that the location a construction compound so close to a major intersection is unsuitable and will add to existing traffic flow difficulties which already causes backup queuing on the N81 in both directions and queuing from Main Road and past St. Mary's Primary School and vehicular traffic in Tallaght Village, impacting associated access roads and bus services.

Response to issues Raised

Section 5.2.1.1 Construction Traffic Management Plan (CTMP) of Appendix A5.1 of Chapter 5 Construction of Volume 2 of the EIAR notes the following:

"The purpose of this CTMP is to demonstrate that the residual impacts to the public road network during the Construction Phase of the Proposed Scheme which have been identified in the application documentation can be minimised and that transport related activities are carried out as safely as possible and with the minimum disruption to other road users. The CTMP has also been prepared for the purpose of identifying feasible, appropriate and safe methods of access for construction traffic to the Proposed Scheme."

Section 5.2.1.2 of the EIAR also notes:

"The objectives of the CTMP are to:

- *Outline minimum road safety measures to be undertaken, including site access / egress locations, during the works;*
- *Provide measures that respond to all road user needs including public transport, pedestrians, cyclists and vehicular traffic;*
- *Ensure disruption is minimised, with access to houses and businesses maintained, as is reasonably practicable in delivering the Proposed Scheme;*

- *Demonstrate to the NTA, the appointed contractor and suppliers, the need to adhere to the relevant guidance documentation for such works; and*
- *Identify objectives and measures for inclusion in the management, design and construction of the Proposed Scheme to control the traffic impacts of construction insofar as it may affect the environment, local residents and the public in the vicinity of the construction works."*

Section 6.4.5.4.6.2 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR notes the following:

"Typical work hours on site are between 07:00 and 23:00 with staff working across early and late shifts, with these hours to be agreed with DCC/SDCC. The adopted shift patterns help minimise travel by personnel during the peak hour periods of 08:00 to 09:00 and 17:00 to 18:00.

The appointed contractor will prepare a Construction Stage Mobility Management Plan (CSMMP) which will be developed prior to construction, as described in Appendix A5.1 CEMP in Volume 4 of this EIAR, to actively discourage personnel from using private vehicles to travel to site. The CSMMP will promote the use of public transport, cycling and walking by personnel. Private parking at the Construction Compound will be limited. Vehicle-sharing will be encouraged, subject to public health guidelines, where travel by private vehicle is a necessity e.g., for transporting heavy equipment. A combination of CSMMP measures, as well as work shift patterns, means that fewer than 10 trips by private vehicle are envisaged to and from site during peak periods.

***Heavy Goods Vehicles (HGVs)**: Additional construction traffic will be generated during the Construction Phase of the Proposed Scheme, for the purpose of the following:*

- *Clearance of existing site material and waste;*
- *Deliveries of construction material; and*
- *Removal of construction waste material.*

Chapter 5 (Construction) of this report provides a breakdown of the expected operation for the construction of the Proposed Scheme during each subsection. It should be noted that the CTMP will control vehicular movement along the construction route, including restrictions on the number of HGVs accessing and egressing the construction works throughout the day to mitigate the impacts to general traffic on the surrounding road network.

Based on construction activities associated with the Proposed Scheme, the maximum number of HGVs expected to be in operation across the Proposed Scheme during peak haulage activities is 28 vehicles.

In a typical hour during peak haulage activity of the Proposed Scheme, 40% of lorries are anticipated to be in operation on the public road network which equates to approximately 11 lorries. A total of 11 two-way lorry movements are therefore expected in a typical hour during peak haulage activity of the Proposed Scheme.

***Overall Peak Hour Impacts**: The contents of Table 6.17 [EIAR Chapter 6] outline the anticipated maximum construction traffic generation by site operatives and HGVs during the AM and PM Peak Hours.*

*Given that the above impacts are minimal and comfortably below the thresholds set out in TII's Guidelines for Transport Assessments, it is considered appropriate to define the general traffic impacts of the Construction Phase to have a **Negative, Slight and Short-term effect**. Therefore, no further analysis is required for the purpose of this assessment.*

It should be noted that further detail on the restrictions to construction vehicle movements during the peak periods of the day will be contained within the appointed contractor's CTMP prior to construction."

Section 6.2.4.5 of Chapter 6 Appendix A6.1 of Chapter 6 of Volume 4 Part 2 of 4 of the EIAR notes the following in relation to maximum peak hour construction traffic generation:

"*Overall Peak Hour Impacts: The contents of Table 6.1 the anticipated maximum construction traffic generation by site operatives and HGVs during the AM and PM Peak Hours.*

Figure 2.1.8 below is an extract from EIAR Appendix A6.1 Section 6.2.4.5 (Table 6.1)

Peak Hour	Arrivals		Departures		Total Two-Way Traffic Flows (pcus)
	Car / Van (1 pcu)	HGV (2.3 pcu)	Car / Van (1 pcu)	HGV (2.3 pcu)	
AM Peak Hour	10	26	0	26	62
PM Peak Hour	0	26	10	26	62

Figure 2.1.8: Anticipated Maximum Construction Traffic Generation during Construction Phase (Table 6.1)

"Given that the above impacts are minimal and comfortably below the thresholds set out in TII's Guidelines for Transport Assessments, it is considered appropriate to define the general traffic impacts of the Construction Phase to have a Low Negative and Short Term impact. Therefore, no further analysis is required for the purpose of this assessment.

It should be noted that further detail on the restrictions to construction vehicle movements during the peak periods of the day will be contained within the appointed contractor's CTMP prior to construction."

Section 6.4.5 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR notes the following:

"As with any construction project, the appointed contractor will be obliged to prepare a comprehensive Construction Traffic Management Plan (CTMP). In preparing the CTMP for the proposed works, the appointed contractor will be required to give consideration where practicable to facilitate and identify opportunities for the maximum movement of people during the construction period through implementing the following hierarchy of transport mode users:

- *Pedestrians;*
- *Cyclists;*
- *Public Transport; and*
- *General Traffic.*

Access will be maintained for emergency vehicles along the Proposed Scheme, throughout the Construction Phase."

Section 5.2.3.18 of Appendix 5.1 Construction Environmental Management Plan of Chapter 5 of Volume 2 of the EIAR notes: *"The appointed contractor shall ensure that unobstructed access is provided to all emergency vehicles along all routes and accesses. The NTA shall provide to the local authorities and emergency services, contact details of the appointed contractor personnel responsible for construction traffic management."*

Section 5.2.3.19 of Appendix 5.1 Construction Environmental Management Plan of Chapter 5 of Volume 2 of the EIAR notes: *"The appointed contractor shall, through the NTA, ensure that close communication with the relevant local authorities and the emergency services shall be maintained throughout the Construction Phase. As discussed in Section 5.1.6, the appointed contractor shall, through the NTA, also ensure that the local community, landowners, and strategic stakeholders are appropriately informed of proposed traffic management measures in advance of their implementation. Contact information for key points of contact will be provided for members of the public to obtain additional information and to provide additional knowledge such as local events, sports fixtures etc. which may conflict with proposed traffic management measures."*

2.1.3.7 Air, noise, vibration and light pollution

Summary of Issues Raised

Concern was raised in several submissions relating to noise, dust, dirt, vibration and light pollution issues resulting from locating the construction compound on the site and the impact on houses in Bancroft Park, Main Road, Tallaght and neighbouring apartments at Greenhills Road.

The submissions were concerned that the proposed construction compound will create loud noises and bright lights etc. potentially disrupting sleep patterns of residents resulting in an environment not conducive with a healthy environment for individuals.

Response to Issues Raised

Air quality – Construction Traffic Dust Assessments

Section 5.7.3 describes the construction compound services and states that appropriate environmental management measures will be implemented at the Construction Compounds.

Chapter 7 Air Quality of the EIAR sets out the methodology adopted to assess the impact on air quality of the Proposed Scheme. Table 7.1 identifies the air quality receptors within the study area with an air quality sensitive area which is predominately residential dwellings including Bancroft Park, located within 30m of the east of the road edge.

Section 7.2.4.4 acknowledges that the greatest potential impact on air quality during the Construction Phase is from construction dust emissions, PM_{10} / $PM_{2.5}$ emissions and the potential for nuisance dust.

As further stated in Section 7.2.4.4 an appraisal has been carried out to assess the risk to sensitive receptors as a result of dust soiling, health impacts and ecology impacts due to the Construction Phase in accordance with the IAQM's Guidance on the Assessment of Dust from Demolition and Construction (IAQM 2014). This appraisal reviews the sensitivity of the site's location with respect to dust nuisance, human health and ecological impacts and then calculates a risk of impact using the magnitude of site activities.

Section 7.4.2.3 of Chapter 7 identifies the predicted changes in concentration and impact on mean annual concentration at each of the ambient receptors in the context of the TII significance criteria (TII 2011) for the construction stage.

Table 7.27 (Predicted Changes in 2024 Construction DN and DS and Impact Significance Criteria at Most Impacted Receptor Locations) of Chapter 7 provides a list of the 27 most impacted receptor locations, none of which includes receptor locations in the vicinity of Bancroft Park (AQ323 at Bancroft Park, AQ31 at St. Mary's National School, AQ322 & AQ366 on Old Greenhills Road, AQ367 & AQ 368 on Main Road and AQ319 on Blessington Road).

Section 1.2.3 of Chapter 7 Appendix 7.1 provides the predicted change in and pollutant concentrations between DM and DS in 2024. Table 2.3 (Predicted Changes in Construction DM and DS and Impact Significance Criteria at all Modelled Receptor Locations) All these locations in the vicinity of Bancroft Park and Tallaght Village are assessed as experiencing a negligible impact due to the Proposed Scheme in terms of the annual mean NO_2 concentration. These are all assessed as experiencing a negligible impact due to the Proposed Scheme in terms of the annual mean PM_{10} and $PM_{2.5}$ concentrations.

Section 7.4.2.3 of Chapter 7 notes: *"The significance of the changes in the concentration of each of the ambient receptors has been determined in the context of the TII significance criteria (TII 2011). As shown in Table 7.27 and Figure 7.6 in Volume 3 of this EIAR, the majority of modelled receptors are estimated to experience a negligible impact due to the Proposed Scheme in terms of the annual mean NO_2 concentration. A slightly beneficial impact is estimated at 48 receptors, a moderate beneficial impact at 30 receptors and substantial beneficial impacts are expected at two receptors. All beneficial impacts are modelled along the Proposed Scheme due to the diversion of traffic off these routes. A slight adverse impact is expected at six receptors. As shown in Table 7.27 and Figure 7.7 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of annual mean PM_{10} concentrations, with all receptors experiencing a negligible impact. As shown in Table 7.27 and Figure*

7.8 in Volume 3 of this EIAR the Proposed Scheme will be overall neutral in terms of the annual mean $PM_{2.5}$ concentration with all receptors experiencing a negligible impact."

Section 7.4.2.3 concludes that in accordance with the EPA Guidelines (EPA 2022) the impacts associated with the Construction Phase traffic emissions are overall neutral and short term.

Section 7.5 of Chapter 7, sets out the mitigation measures that the appointed contractor will implement to ameliorate air quality impacts during the construction phase.

Section 7.6.1 sets out the predicted residual air quality impacts during the construction phase. When the dust minimisation measures detailed in the mitigation section of this Chapter are implemented, fugitive emissions of dust from the site will be insignificant and pose no nuisance at nearby receptors. Thus, there will be no residual Construction Phase dust impacts.

The air dispersion modelling assessment of Construction Phase traffic emissions has found that the Proposed Scheme will be neutral overall in the study area. There are no substantial or moderate adverse effects expected as a result of the Construction Phase of the Proposed Scheme.

Therefore, overall it is considered that the residual effects as a result of the Proposed Scheme's construction are neutral and short-term. No significant residual impacts have been identified during the Construction Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction).

Noise

Within Section 9.2.1 of Chapter 9 Noise & Vibration of the EIAR, Table 9.1 identifies the noise sensitive locations (NSLs) along the Proposed Scheme.

Within the Tallaght to Ballymount study area, the key NSLs are predominately residential NSL's in Belgard Square residential area. These residential NSLs are within 10m of the Proposed Scheme. Other sensitive NSLs in this zone include Tallaght Hospital and TUD Tallaght within 40m to 100m of the road edge. Residential NSLs lining either side of R819 Greenhills Road are within 10m to 100m of the Proposed Scheme.

Section 9.4.3.2 of Chapter 9 considers construction noise and Section 9.4.3.2.5 specifically considers construction noise from "Construction Site Compounds", which is applicable to the works in Bancroft Park. Table 9.40 [EIAR Chapter 9] provides predicted noise levels for Construction Compound TC2 at closest NSLs. The total predicted cumulative construction noise levels (CNL) for TC2 at the closest residential NSLs to south of compound at Greenhills Court (10m) are 78 dB $L_{Aeq, 1hr}$ in the absence of noise mitigation associated with day to day material handling activities. Making reference to Table 9.50 [EIAR Chapter 9], the potential noise impacts at the closest NSLs range between negative, not significant to significant and temporary during the daytime period and negative, not significant to very significant and temporary during the evening and weekend periods in the absence of noise mitigation.

Section 9.5.1 in Chapter 9 sets out the mitigation measures which the Contractor will be required to implement during the Construction Phase.

Section 9.5.1.1 Noise notes the following: *"The appointed contractor will be required to take specific noise abatement measures to the extent required and comply with the recommendations of BS 5228–1 (BSI 2014a) and S.I. No. 241/2006 - European Communities (Noise Emissions by Equipment for Use Outdoors) (Amendment) Regulations 2006. The mitigation measures outlined below for the Construction Phase have also been included in the Construction and Environmental Management Plan (CEMP) in Appendix A5.1 in Volume 4 of this EIAR.*

These measures will ensure that:

- *During the Construction Phase, the appointed contractor will be required to manage the works to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228–1 (BSI 2014a); and*
- *The best means practicable, including proper maintenance of plant and equipment, will be employed to minimise the noise produced by on site operations.*

BS 5228–1 includes guidance on several aspects of construction site practices, which include, but are not limited to:

- *Selection of quiet plant;*
- *Control of noise sources;*
- *Screening;*
- *Hours of work;*
- *Liaison with the public; and*
- *Monitoring."*

Section 9.5.1.2 Vibration, notes the following: *"On review of the likely vibration levels associated with construction activities, it is considered that the construction of the Proposed Scheme is not expected to give rise to vibration that is either significantly intrusive or capable of giving rise to structural or cosmetic damage to buildings.*

Vibration from construction activities will be limited to the values set out in Table 9.14 to avoid any form of potential cosmetic damage to buildings and structures. Monitoring will be undertaken at identified sensitive buildings, where proposed works have the potential to be at or exceed the vibration limit values in Table 9.14.

In the case of vibration levels giving rise to human discomfort, in order to minimise such impacts, the following measures shall be implemented during the Construction Phase:

- *A clear communication programme will be established by the NTA to inform adjacent building occupants in advance of any potential intrusive works which may give rise to vibration levels likely to result in significant effects as per Table 9.15. The nature and duration of the works will be clearly set out in all communication circulars as necessary;*
- *Activities capable of generating significant vibration effects with respect to human response (as per Table 9.15) will be restricted to daytime hours only, as far as practicable; and*
- *Appropriate vibration isolation shall be applied to plant (such as resilient mounts to pumps and generators), where required and where feasible."*

Table 9.55 [EIAR Chapter 9] sets out the predicted construction phase impacts following the implementation of mitigation. The noise impacts associated with Construction Compounds is predicted to be negative, not significant and temporary at NSLs at distances within 10m of Construction Compounds Monday to Friday Daytime (07:00 – 19:00hrs) and negative, not significant and temporary at NSLs at distances within 10m of Construction Compounds and negative, not significant and temporary at NSLs at distances greater than 15m from the Construction Compounds Monday to Friday Evening (19:00 – 23:00hrs) or Saturdays (08:00 – 16:30hrs).

Vibration

Section 9.4.3.2.9 of Chapter 9 Noise & Vibration of Volume 2 of the EIAR notes the following:

"Referring to the vibration magnitudes above and Table 9.15 [EIAR Chapter 9], vibration impacts during ground-breaking activities using heavy breakers have the potential to generate a negative, slight to moderate, temporary effects at distances of 10m from the activity. Beyond 50m from this type of activity, impacts are reduced to not significant to slight and temporary. For all other works, vibration impacts will be below those associated with perceptible vibration and will be imperceptible to not significant and temporary. All construction works are orders of magnitude below limits values associated with any form or cosmetic or structural damage for structurally sound or protected or historical buildings or structures referred to in Table 9.14 [EIAR Chapter 9] even at closer distances to the source. Notwithstanding the above, any construction activities undertaken on the site will be required to operate below the recommended vibration criteria set out in Table 9.14 [EIAR Chapter 9] . No vibration sensitive processes have been identified along the Proposed Scheme."

As stated in Section 9.5.1.2 Vibration of Chapter 9 of the EIAR: *"On review of the likely vibration levels associated with construction activities, it is considered that the construction of the Proposed Scheme*

is not expected to give rise to vibration that is either significantly intrusive or capable of giving rise to structural or cosmetic damage to buildings. Vibration from construction activities will be limited to the values set out in Table 9.14 to avoid any form of potential cosmetic damage to buildings and structures. Monitoring will be undertaken at identified sensitive buildings, where proposed works have the potential to be at or exceed the vibration limit values in Table 9.14. In the case of vibration levels giving rise to human discomfort, in order to minimise such impacts, the following measures shall be implemented during the Construction Phase:

- *A clear communication programme will be established by the NTA to inform adjacent building occupants in advance of any potential intrusive works which may give rise to vibration levels likely to result in significant effects as per Table 9.15. The nature and duration of the works will be clearly set out in all communication circulars as necessary;*
- *Activities capable of generating significant vibration effects with respect to human response (as per Table 9.15) will be restricted to daytime hours only, as far as practicable; and*
- *Appropriate vibration isolation shall be applied to plant (such as resilient mounts to pumps and generators), where required and where feasible."*

In relation to Construction vibration impacts, Figure 2.1.9 below is an extract from the Chapter 9 Noise & Vibration of Volume 2 of the EIAR Table 9.55 Summary of Predicted Construction Phase Impacts Following the Implementation of Mitigation and Monitoring Measures.

Assessment Topic	Period over which Criterion Applies	Potential Impacts (Pre-Mitigation and Monitoring)	Predicted Impact (Post Mitigation and Monitoring)
Construction vibration from general road works and construction activities including bored piling & groundbreaking beyond 50m	All Construction work periods	• Negative, Imperceptible to Not Significant and Temporary	• Negative, Imperceptible to Not Significant and Temporary
Construction vibration from ground-breaking activities within 10m of occupied residential buildings	Groundbreaking during road widening and utility diversion works.	• Negative, Slight to Moderate and Temporary	• Negative, Slight and Temporary

Figure 2.1.9: Extract from EIAR Volume 2 Chapter 9 Table 9.55 Summary of Predicted Construction Phase Impacts Following the Implementation of Mitigation and Monitoring Measures

In summary Section 9.4.3.3 of Chapter 9 Noise & Vibration of Volume 2 of the EIAR notes the following: *"The potential for elevated levels of vibration at sensitive locations during construction activities associated with the Proposed Scheme is typically associated with surface breaking activities used for road widening and utility diversions….. Referring to the vibration magnitudes above and Table 9.15, vibration impacts during ground-breaking activities using heavy breakers have the potential to generate a negative, slight to moderate, temporary effects at distances of 10m from the activity. Beyond 50m from this type of activity, impacts are reduced to not significant to slight and temporary. For all other works, vibration impacts will be below those associated with perceptible vibration and will be imperceptible to not significant and temporary."*

Table 9.55 in Chapter 9 of the EIAR provides a summary of the predicted construction phase impacts following implementation of mitigation. With regard to vibration arising from construction activities the impact is predicted to be no greater than negative, slight and temporary.

Construction Lighting

In respect of any temporary lighting arrangements during construction, Section 5.5.2.9 of Chapter 5 Construction of Volume 2 of the EIAR states the following: *"The majority of the Proposed Scheme is already artificially lit. However temporary lighting will be required at times along the Proposed Scheme at certain locations during the Construction Phase, as necessary. Where it is necessary to disconnect public lighting during the construction works or to undertake works outside of daylight hours where*

existing lighting is low, appropriate temporary lighting will be provided. Temporary lighting will also be installed at the Construction Compounds for the duration of the Construction Phase"

Section 5.5.2.9 goes on to state that: *"The standard of temporary lighting installed during the Construction Phase will meet the standard of the existing carriageway and will be appropriate to the speed and volume of traffic during construction. Temporary construction lighting will generally be provided by tower mounted floodlights, which will be cowled and angled downwards to minimise spillage of light from the site."*

In addition, with regard to biodiversity, Section 12.5.1.4.1.4 in Chapter 12 in Volume 2 of the EIAR includes mitigation measures to reduce light spill.

The NTA is satisfied that the measures outlined above will ensure that any spillage of temporary construction lighting will be minimised.

2.1.3.8 Community care and recreational premises

Summary of Issues Raised

Some submissions stated that the residents/clients of Cheeverstown Community House, Suzanne House (respite care) and 69/71 Bancroft Park (Dominican Sisters) would suffer disruption to established routines, be exposed to loud noise and excessive artificial light.

Response to Issues Raised

Noise and light issues are addressed in Section 2.3.1.7 above.

2.1.3.9 Property values

Summary of Issues Raised

Concern regarding the potential impact on the value of houses in the area, especially those immediately facing the proposed compound.

Response to Issues Raised

As regards the view expressed that the combined impact of all the issues raised would have an adverse and negative impact on the value of properties in the Bancroft Park area, EIAR Chapter 10 Population includes Appendix A10.2 Economic Impact of the Core Bus Corridors. Section 3 on page 14 the appendix discusses the impact of the Proposed Scheme on property prices. The conclusion reached is that in overall terms the public realm improvements planned by the NTA may lead to an increase in value of both residential and retail property prices, especially in the community centres along the corridors, with evidence showing that investing in public realm creates improved spaces that are more desirable for people and business to locate in, thereby increasing the value of properties in the area.

2.1.3.10 Alternative locations

Summary of Issues Raised

A number of alternative locations are available nearby, namely:

- The "Esso site" in Tallaght Village which is located on the Old Greenhills Road where the works will take place; and
- Derelict site currently surrounded by hoarding advertising Elephant Storage on Greenhills Road.

Response to Issues Raised

As described in Section 5.7.1 of Chapter 5 Construction of Volume 2 of the EIAR, *'The Construction Compound locations have been selected due to the amount of available space, their relative locations near to the majority of the Proposed Scheme major works, and access to the National and Regional Road network.*

The proposed alternative location "Esso Site" for a Construction Compound at the junction of Old Greenhills Road and Main Road.

The "Esso Site" fulfils some of the criteria for location of a construction compound stated above, in relation to its relative location near to the majority of the Proposed Scheme major works and access to the National and Regional Road network. However, as this site is in private ownership it would require acceptance from the current owner for use as a construction compound for the duration of

works required for the Proposed Scheme. The current owner Sirio Homes was refused SDCC planning permission for this site on 25th November 2020 (AD20A/0250). As this is a privately owned site prior agreement would be required with the owner for use as a temporary site compound for the construction timeframe commencing 1 to 3 years from the time of the ABP submission. It is unknown if the owner of this site may again apply for a revised planning application to develop this site in the future and it cannot be assumed that the site would be available for use by the Proposed Scheme in the future.

The proposed alternative location on Greenhills Road opposite Airton Road junction (hoarding advertising Elephant Storage) is subject to a Strategic Housing Development Planning Application to SDCC.

This site located on Greenhills Road opposite the Airton Road junction fulfils some of the criteria for location of a construction compound stated above in relation to its relative location near to the majority of the Proposed Scheme major works and access to the National and Regional Road network. However, Greenhills Living Limited has submitted a planning application for a Strategic Housing Development on this site which is under consideration by SDCC (SHD3ABP-313590-22). If this planning application is granted the site would not be available to the Proposed Scheme for use as a construction Compound.

Discussions were held with South Dublin County Council (SDCC) in relation to the potential locations for construction compounds on SDCC lands along the full route of the Proposed Scheme, including one at Greenhills Road adjacent to Astropark Tallaght. However, in consultation with SDCC that site was considered inappropriate and the site at Bancroft Park was identified as a preferable location. The proposed compound was sized to minimise impacts on the existing treeline and to leave a section of the existing green area remain available for local residents.

Bancroft Park fulfils all of the criteria as there is adequate space available on publicly owned lands, it is well located near to the majority of the Proposed Scheme major works, and provides access to the National and Regional Road network. As such, the lands at Bancroft Park are the optimum location for this temporary construction compound.

2.1.3.11 Lack of consultation

Summary of Issues Raised

A number of submissions stated the review of the site suitability was undertaken as a desktop review only without any specific or significant consultation with residents which they believe is not acceptable.

Response to Issues Raised

As described in Section 5.7.1 of Chapter 5 Construction of Volume 2 of the EIAR, *'The Construction Compound locations have been selected due to the amount of Available space, their relative locations near to the majority of the Proposed Scheme major works, and access to the National and Regional Road network.*

In relation to the proposed Construction Compound at Bancroft Park, as with all the proposed compound locations an initial desktop review of possible locations was carried out where the location was assessed for criteria above and subsequently desktop assessments were carried out to determine potential impacts (Environmental, traffic, pedestrian, commercial etc.) at the proposed Construction Compound location.

As with all proposed construction compound locations, where possible the site owner was contacted to establish availability of site and agree layout of proposed compound for temporary acquisition of land. In addition discussions were held with South Dublin County Council (SDCC) in relation to the potential locations for construction compounds on SDCC lands along the full route of the Proposed Scheme.

In relation to the use of the green area at the Bancroft Park residential area site for a construction compound, the liaison held with SDCC in relation to potential locations for a construction compound on SDCC lands discussed a location at the entrance to Bancroft Public Park on the Greenhills Road between the car parks for Westpark Fitness and Astropark Tallaght. However, the impact on the entrance to the public park was considered unacceptable and the site at Bancroft Park residential area was identified as a preferable location. The proposed compound was sized to minimise impacts on the existing treeline and to leave a section of the existing green area remain available for local residents. SDCC indicated that this area had been previously used as a temporary construction area. Reinstatement of the park on completion of the Proposed Scheme would also provide additional planting and an improved urban realm green area at this location.

2.1.3.12 Drainage

Summary of Issues Raised

Existing green area provides valuable soakage and drainage during wet spells or heavy rain.

Response to Issues Raised

As described in Section 5.4.4.1.1 Construction Compounds of Appendix 5.1 of Volume 4 of the EIAR *"The general measures for Construction Compounds will apply, however as most of the compounds are located on greenfield sites with no retaining wall to prevent overland flows of polluting substances to local surface water drains, additional measures are required. Site fencing will include a silt fence for the perimeter of the site to prevent over land flows. Surface water drains at access points will be covered."*

Further, Section 5.4.5.1.1 Construction Compound Establishment of Appendix 5.1 of Volume 4 of the EIAR notes *"All surface water runoff will be intercepted and directed to appropriate treatment systems / settlement facilities for the removal of pollutants prior to discharge. Further information of the Construction Compounds is provided in Section 5.7 in Chapter 5 (Construction) in Volume 2 of this EIAR."*

Section 5.3.1 of EIAR Chapter 5 Construction describes the construction works in the various sub-sections of Section 1 of the Proposed Scheme between Tallaght and Ballymount. It is anticipated that Site Compound TC2 will be used in connection with sub-section 1j (70m along Blessington Road between its junction with Belgard Square East and the junction with Belgard Road, with an expected construction duration of approximately one month), sub-section 1k (Belgard Road / Blessington Road junction, with an expected construction duration of approximately two months), sub-section 1l (450m along Blessington Road, between the Belgard Road junction and the Courthouse Square Apartments, with an expected construction duration of approximately one month), sub-section 1m (approximately 300m along Main Road, with an expected construction duration of approximately one month), sub-section 1n (approximately 200m along Old Greenhill Road, between the Main Road and Bancroft Park junctions, with an expected construction duration of approximately six weeks) and sub-section 1o (1750m along Greenhills Road from Bancroft Park to the M50 bridge with and expected construction duration of approximately five months).

As stated earlier enhanced landscaping proposals for the green area will be implemented once the temporary construction compound is removed.

Figure 2.1.3.4 above in Section 2.1.3.1 Visual impact, is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR and shows the proposed enhanced landscaping proposals for the green area that will be implemented once the temporary construction compound is removed.

These enhanced landscaping proposals will return the vast majority of the green permeable green to pre-construction drainage catchment area with the exception of proposed pathway through the park which covers an additional impermeable area of 358m^2 which is approximately 5.2% of the total area (6,900m^2) of the green area at Bancroft Park. The pathway paved area will drain to the surrounding Bancroft park green space.

Figure 2.1.10 is an extract from Proposed Surface Water Drainage Works Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR and shows the additional impermeable area for the proposed path through the green area at Bancroft Park that will be in place once the temporary construction compound is removed.

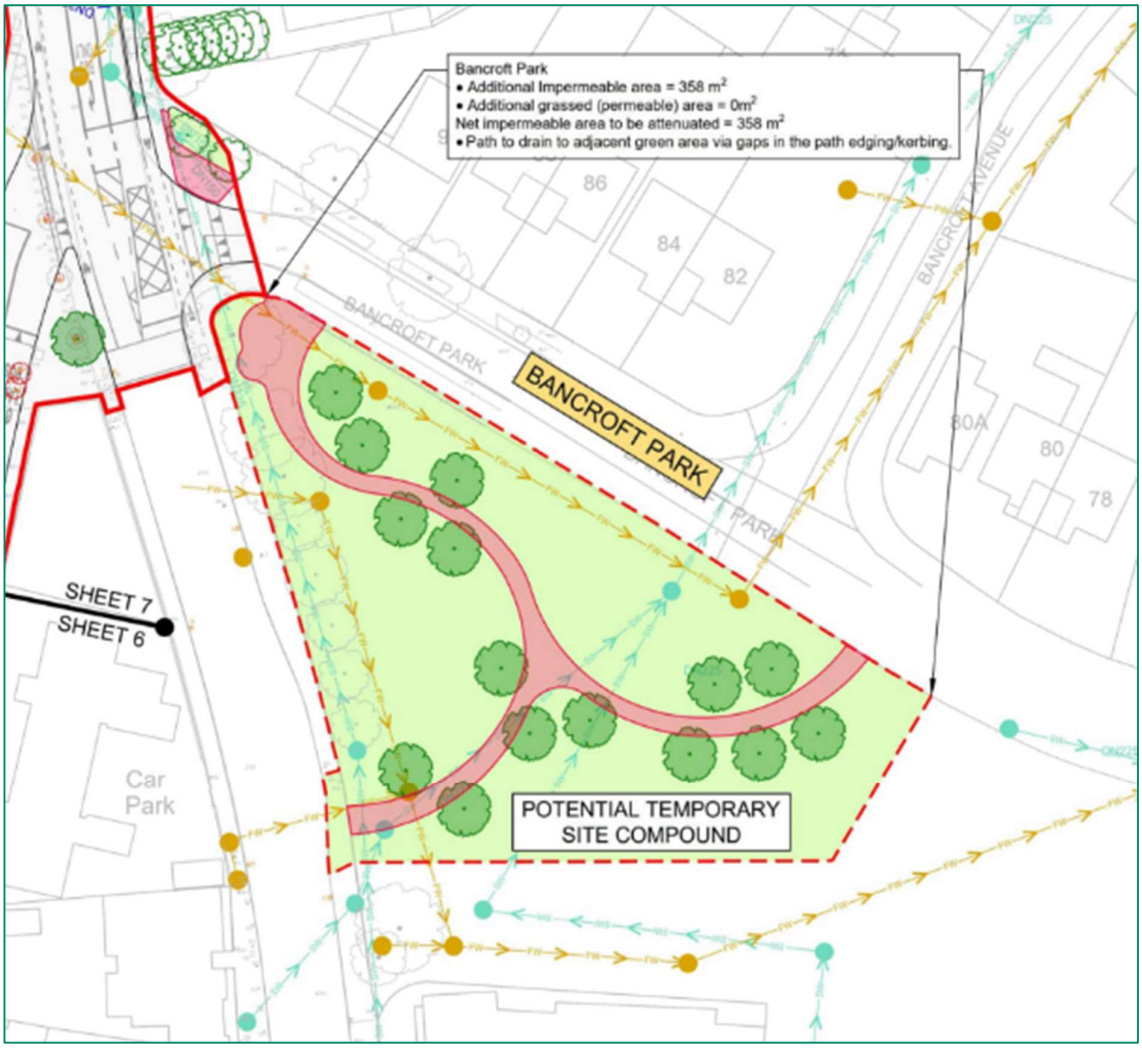


Figure 2.1.10: Extract from Proposed Surface Water Drainage Works Drawings from Figures: Part 2 of 3 of Volume 3 of the EIAR (Sheet 6)

Section 9.7.2 Flood Risk Assessment in the Preliminary Design Report included in the Supplementary Information provided with the application for the Proposed Scheme notes the following:

"There are a number of historic flood events are noted in the vicinity of the Proposed Scheme. The Proposed Scheme is largely on existing roads and will result in minimal additional paved areas and will therefore not increase the risk of these events reoccurring compared to the current scenario.

No tidal flood risk has been identified to the proposed schemes together with no risk of coastal flooding to the site in the present, or future climate change scenario.

The groundwater vulnerability varies along the Proposed Scheme. As most of the Proposed Scheme is on existing roads with no known flooding specifically due to groundwater, it is not expected that this risk will increase with the construction of the Proposed Scheme. In order to accurately assess the site specific risk of groundwater flooding, a geotechnical site investigation will be carried out as part of the final design in order to confirm the groundwater conditions along the Proposed Scheme.

There are sections of the proposed schemes where there is a risk of fluvial flooding. These are: Tallaght to City Centre Section:

- *Area 1: Section at Dolphins Barn on the R110 lies within Flood Zone A (1 in 100-year fluvial flood extents),*

- *Area 2: Section on Clogher Road near St. Kevin's College lies within Flood Zone A (1 in 100-year fluvial flood extents),*
- *Area 3: Section at the junction between R110 and R137 (near St. Patrick's Cathedral lies within Flood Zone A (1 in 100-year fluvial flood extents), • The rest of the route is at low risk of flooding from rivers and the coast and is therefore located within Flood Zone C.*

…… The risk of pluvial flooding along most of the Proposed Scheme is considered to be medium.

The above risks exist in the current scenario and will be reduced as a result of the Proposed Scheme, as where new surface water sewers are being proposed along the development, these networks shall be designed to provide attenuation for return period of up to 30 years where practicable. This would be an improvement on the existing historical drainage network infrastructure and will reduce the overall risk of pluvial flooding. New drainage infrastructure will be provided including Sustainable (Urban) Drainage Systems (SuDS) such as rain gardens, swales, and tree pits where practicable. These SuDS features will provide source control measures and reduce the risk of pluvial flooding."

In summary, the measures outlined above during the construction and operational phases will ensure that the use of the site as a construction compound will not create any risk of fluvial or pluvial flooding.

2.1.3.13 Other Issues Raised

1. Loss of educational resource

Summary of Issues Raised

One submission raised the concern that the removal of this green space which offers a unique outdoor classroom experience, fostering an understanding of biodiversity, environmental conservation and ecological balance, would deprive students of an essential learning environment and hinder their overall development.

Response to Issues Raised

The Construction Compound will be fenced off during the construction phase (see section 5.5.2.8 in Chapter 5 of Volume 2 of the EIAR). As shown in Figure 2.1.3.5 Section 2.1.3.2 response to submission, the temporary compound will occupy the south-western portion of the wider green area, the eastern portion of the of the green area will remain available to the community at all times.

As shown in Figure 2.1.3.2 Section 2.1.3.1 response to submission, is an aerial photography image at Bancroft Park with the proposed layout of the site construction compound overlaid showing the proposed access point, office, parking, welfare, storage and extents (blue line). This shows that the compound has been positioned to avoid impacting existing trees, both along Greenhills Road and within the green space itself. The area of the compound has been kept to the smallest practicable extent to minimise the land take on this area.

2. Noise impact on students

Summary of Issues Raised

One submission raised the concern that the disturbance caused by increased traffic, construction, and other associated activities would result in significant increase in noise levels, which may negatively impact students' ability to focus and concentrate during school hours.

Response to Issues Raised

Noise issues are addressed in Section 2.1.3.7 Noise response above.

Table 9.55 [EIAR Chapter 9] sets out the predicted construction phase impacts following the implementation of mitigation. The noise impacts associated with Construction Compounds is predicted to be negative, not significant and temporary at Noise Sensitive Locations [NSLs] at distances within 10m of Construction Compounds Monday to Friday Daytime (07:00 – 19:00hrs) and negative, not significant and temporary at NSLs at distances within 10m of Construction Compounds and negative, not significant and temporary at NSLs at distances greater than 15m from the Construction Compounds Monday to Friday Evening (19:00 – 23:00hrs) or Saturdays (08:00 – 16:30hrs).

3. Support for the scheme

Summary of Issue Raised

Submission 02 noted they are very much in favour of BusConnects and the compound at Bancroft Park.

Response to Issues Raised

The NTA welcomes the support from the resident for the Proposed Scheme and use of the green area as a temporary construction compound.

2.2 Proposed Scheme at Tallaght Village

2.2.1 Description of the Proposed Scheme at this Location

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.1.1 of Chapter 4 of Volume 1 of the EIAR, Proposed Scheme Description, from Belgard Square East the route continues via Blessington Road and Main Street to Greenhills Road. To avoid traffic congestion on Greenhills Road it is proposed for buses to use the Old Greenhills Road alignment and create a new bus only junction at the location of the existing cul-de-sac opposite Bancroft Park Road, to facilitate bus only turn movements to Greenhills Road (R819). This will aid the bus in avoiding congestion at the Main Street / Greenhills Road (R819) junction. Stone paving will be used in the area and localised planting will be implemented to retain the character of the existing cul-de-sac treatment.

Extract from General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR are included in Figure 2.2.1.

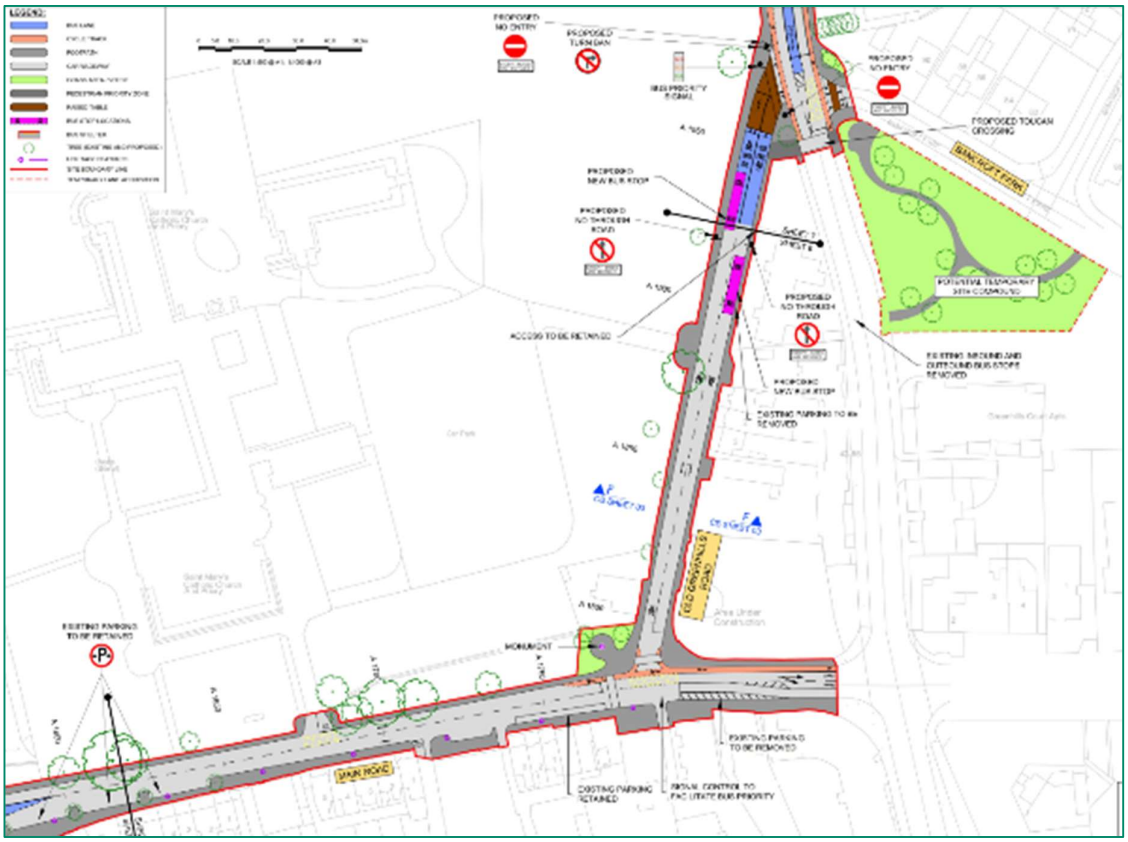


Figure 2.2.1: Extract 1 from General Arrangement Drawing (Sheet 6)

2.2.2 Overview of Submissions Received

Table 2.2.2.1 below lists the 7 submissions within which issues were raised in respect of the Proposed Scheme at Bancroft Park.

Table 2.2.2.1: Submissions Made in Respect of Tallaght Village

No	Name	No	Name	No	Name
05	Lynn Broderick	26	Cllr. Teresa Costello	39	Sean Crowe TD
15	Debbie Gray	28	Cllr. Kieran Mahon		
17	Collette Hardiman	33	Tallaght Community Council		

Of the 7 submissions, 3 were from residents, 1 from a community organisation and 3 were from elected representatives supporting the residents.

A number of issues were raised, and these are listed below and described in Section 2.1.3 below.

Common Issues Raised

1. Archaeological and cultural heritage
    a. Priory Walls ACA not included in analysis
2. Loss of community plaza
    a. Community event venue
    b. Loss of trees
    c. No assessment of bat habitat
3. Alternative route available
    a. Deficiencies in MCA scoring of alternatives

Other Issues Raised

1. Loss of on-street parking
2. Loss of cul-de-sac and traffic congestion

2.2.3 Common Issues Raised and Responses

2.2.3.1 Archaeological and cultural heritage

Summary of Issue Raised

A number of submissions expressed their concern that the routing of the Proposed Scheme would pass through a zone of archaeological potential associated with the historic village of Tallaght and highlighting that Tallaght was a significant ecclesiastical settlement founded in the early medieval period which should be protected.

It was also suggested that the Priory Walls are a protected structure, and this was not assessed/included in scheme proposal as a protected structure.

Response to issue Raised

Archaeological and cultural Heritage

In relation to Archaeological Heritage in the Tallaght to Ballymount section of the Proposed Scheme,

Section 15.3.2.2 Recorded Archaeological Monuments (RMP / SMR Sites) of Chapter 15 Archaeological & Cultural Heritage of Volume 2 of the EIAR states the following: *"This section of the Proposed Scheme will run through the ZAP associated with the historic village (RMP DU021- 037 and DU022-018) (Image 15.11 and Appendix A15.2 (Inventory of Archaeological and Cultural Heritage Sites) in Volume 4 of this EIAR; Sheets 2 and 3 of 27, Figure 15.1 in Volume 3 of this EIAR), which has its origins as an important early medieval ecclesiastical settlement. There are 14 individual RMP sites recorded within the historic town, associated with the early medieval and medieval history of the village, of which nine are located within c. 50m of the Proposed Scheme (Table 15.5 and Table 15.6):*

- *Eight sites are clustered in St. Maelruain's Church grounds, bounded by Blessington Road to the north and east (along which the Proposed Scheme will travel), comprising the church, graveyard, an ecclesiastical enclosure, several fonts and tombs, and a cross (RMP DU021-037002 to 006, DU021- 037009, DU021-037018, DU021-037019) (Appendix A15.2 (Inventory of Archaeological and Cultural Heritage Sites) in Volume 4 of this EIAR and Sheet 2 of 27, Figure 15.1 in Volume 3 of this EIAR). The ecclesiastical enclosure has been identified through archaeological excavation to the west and southwest of the churchyard, confirming that the line of the graveyard boundary on this side was almost certainly the inner enclosure of the monastic complex. Excavation to the north-east indicates that the enclosure once extended across the Blessington Road, which appears to have been a later intrusion; and*
- *An unclassified mill site (RMP DU021-037007) (Appendix A15.2 (Inventory of Archaeological and Cultural Heritage Sites) in Volume 4 of this EIAR and Sheet 2 of 27, Figure 15.1 in*

Volume 3 of this EIAR). There is documented evidence of a mill at the monastic site (NMS 2021) and it is possible that the millrace depicted on the first edition OS six-inch map (1843) may follow the course of the earlier millrace. It runs east-west to the south of the churchyard, continuing within the grounds of the Dominican Priory, north of the Proposed Scheme where it will run along Main Road. It is culverted beneath Blessington Road and Old Greenhills Road, where a bridge parapet wall survives on the east side.

An additional three sites are located over 50m north of the Proposed Scheme in the Dominican Priory grounds, a gatehouse, castle site, and holy tree traditionally associated with St. Maelruain (RMP DU021-037020, DU021- 037010 and DU021-037012). The gatehouse is incorporated into the present Priory and is all that survives of the later medieval Archbishop's palace. The original castle complex appears to have been extensive, with an enclosing fosse (Bradley and King 1987; NMS 2021; Handcock 1899). As Main Road functioned as the route from Dublin and appears on the historic mapping from as early as the mid-17th century, it is unlikely that the castle complex ever extended southwards beyond it. A medieval tower house site (RMP DU022-018001) is also recorded on the west side of the village beneath the present R819 Greenhills Road, the remains of which stood until the 1950s, approximately 60m west of the Proposed Scheme. Descriptions for these four sites are contained in the entry RMP DU021-037 and DU022-018 in Appendix A15.2 (Inventory of Archaeological and Cultural Heritage Sites) in Volume 4 of this EIAR"

Section 15.3.2.6 Cultural heritage of Chapter 15 Archaeological & Cultural Heritage of Volume 2 of the EIAR states the following: *"Only one site of cultural heritage interest was identified within this section of the Proposed Scheme, a memorial to local literary figure Katharine Tynan in Tallaght village centre (CBC0809CH001) (Appendix A15.2 (Inventory of Archaeological and Cultural Heritage Sites) in Volume 4 of this EIAR; Sheet 3 of 27, Figure 15.1 in Volume 3 of this EIAR). In addition to this, there are some less tangible elements of cultural heritage recorded through wall plaques, none of which will be affected by the Proposed Scheme. One such plaque on Trustus House (No.2 Main Road) is dedicated to the memory of Fr Paul Hynes who created the Tallaght Welfare Society in 1969, while another was erected in 1967 to the memory of 'The bold Fenian men who fought the Battle of Tallaght, March 1867' "*

Architectural Heritage

Section 16.3.1.4.1 Tallaght Village Architectural Conservation Area (ACA) of Chapter 16 Architectural Heritage of Volume 2 of the EIAR notes the following: *"Tallaght ACA covers all of the buildings on Blessington Road, Main Street and most of the buildings on Greenhills Road in Tallaght Village. The ACA also lies within the zone of archaeological potential associated with the historic town of Tallaght (RMP DU021-037). The village is of early Medieval origin, as indicated by the presence of the enclosure and graveyard associated with St. Maelruain's Church of Ireland Church on Blessington Road (RMP DU021-037003, SDCC RPS 271). Tallaght was part of the See lands of the Archbishop of Dublin Laurence O'Toole in 12th century. The archbishops founded a borough by 1326. The archbishop's palace lay on the N side of the Main Street in what is now the Dominican Priory (RMP DU021-037010, SDCC RPS 273). It was one of the most important ecclesiastical manors in County Dublin throughout the Middle Ages. The street pattern of the medieval borough was linear and appears to have consisted simply of Main Street which expanded at its west end to form the market place, at the junction of Blessington Road and Oldbawn Road. The protected structures and other historic buildings along Blessington Road, Main Street and Greenhills Road are principally of 19th and early to mid-20th century construction. Within the Urban Realm there are a large number of items of street furniture of architectural heritage interest including Reproduction lamps and sculptures which contribute Positively to the character of the Main Street."*

Section 16.3.7.2 Lamp Posts of Chapter 16 Architectural Heritage of Volume 2 of the EIAR notes the following:*" 27 locations were identified where lamp posts of Local Importance and Low Sensitivity will be retained in position and will not be directly impacted by the Proposed Scheme. These are:*

- *13 reproduction Lamp posts on Blessington Road (CBC0809LP001 to CBC0809LP013); and*
- *14 reproduction lamp posts on Main Street Tallaght (CBC0809LP014 to CBC0809LP027).*

The proximity of the construction works, including the replacement of the ground surfaces on which the lamp posts sit means that there is the potential for damage to the lamps during construction. The magnitude of impact is Medium. The potential Construction Phase impact Is Indirect, Negative, Slight and Temporary."

Section 16.4.3.2 Architectural Conservation Areas of Chapter 16 Architectural Heritage of Volume 2 of the EIAR notes the following: *"The installation of the proposed paving, landscaping and urban realm works on Blessington Road, Main Street and Greenhills Road will not directly impact the buildings or street furniture within Tallaght ACA, however, there is potential for damage during construction. The magnitude of impact is Medium. The Tallaght ACA is of Regional Importance and Medium Sensitivity. The potential Construction Phase impact on the ACA will be Indirect, Negative, Moderate and Temporary."*

Table 16.17 Summary of Potential Construction Phase Impacts of Chapter 16 Architectural Heritage of Volume 2 of the EIAR describes the Construction Phase potential impact for Victor's sculpture and Dancer's sculpture, Tallaght as Indirect, Negative, Moderate and Temporary.

Construction Phase Tallaght to Ballymount

In respect of National Monuments Construction Phase, Section 15.4.3.1.1.1 of Chapter 15 Archaeological & Cultural Heritage of Volume 2 of the EIAR states the following: *"No national monuments will be impacted by this section of the Proposed Scheme."*

In respect of Recorded Archaeological Sites / Monuments (RMP / SMR sites) Construction Phase where the proposed Scheme runs through the zone of archaeological potential (ZAP), Section 15.4.3.1.1.2 of Chapter 15 Archaeological & Cultural Heritage of Volume 2 of the EIAR states the following: *"This section of the Proposed Scheme runs through the ZAP associated with the historic village of Tallaght (RMP DU021-037 / DU022-018), which has its origins as an important early medieval ecclesiastical settlement. Groundbreaking works within the ZAP will result in an impact on any features that may survive below ground. The proposed works within the ZAP will be limited to some minor utility diversions and / or protections. The RMP ZAP has a medium sensitivity value, and the magnitude of impact is low, therefore the potential impact is Negative, Slight and Permanent.*

In addition to the potential for the discovery of previously unknown archaeological features within the ZAP, two of the individual RMP sites recorded within the historic town will be directly impacted by the Proposed Scheme:

- *The ecclesiastical enclosure (RMP DU021-037002) associated with St. Maelruain's Church has been identified through archaeological excavation to the west and south-west of the churchyard. Excavation to the north-east indicates that the enclosure once extended across the Blessington Road, which appears to have been a later intrusion. Available evidence suggests that the burial ground of the early medieval ecclesiastical site was located in the south-western quadrant of the inner enclosure (i.e., ecclesiastical enclosure DU021-037002) and there is no indication that burials extend to east / north-east of the existing church. Ground-breaking works along Blessington Road where it curves around the churchyard will impact on any surviving remains of the ecclesiastical enclosure or other associated features that may be present below ground. However, the proposed works within the ZAP will be limited to some minor utility diversions and / or protections. The RMP site has a medium sensitivity value, and the magnitude of impact is low, therefore the potential impact is Negative, Slight and Permanent; and*
- *A mill race shown on the first edition OS six-inch map (1843) may follow the course of the earlier mill race associated with the recorded mill site (RMP DU021-037007). Ground-breaking works along Blessington Road and Old Greenhills Road, where the mill race has been culverted, will impact on any features that may survive below ground. The proposed works within the ZAP will be limited to some minor utility diversions and / or protections. The RMP site has a medium sensitivity value, and the magnitude of impact is low, as only a small part of the site may be impacted, therefore the potential impact is Negative, Slight and Permanent…..*

…. The results of the investigations within the ZAP to date and the evidence for previous disturbance across the area indicate that there is only a slight potential that archaeological features or deposits

survive sub-surface. Groundbreaking works will impact on part of the recorded ecclesiastical enclosure or any associated features, should they survive below ground. Given the trial-pit and other monitoring results, however, it is likely that any remains that do survive will be truncated or otherwise disturbed. The RMP site has a medium sensitivity value, and the magnitude of impact is low, and given the level of disturbance in this area, therefore the potential impact is Negative, Slight and Permanent."

In respect of Cultural Heritage Construction Phase, Section 15.4.3.1.2 of Chapter 15 Archaeological & Cultural Heritage of Volume 2 of the EIAR states the following: *"An impact was identified for one site of cultural heritage interest during landscaping works; a memorial statue to local literary figure Katharine Tynan in Tallaght village centre (CBC0809CH001). There will be a temporary impact on the setting of the memorial statue during landscaping works. The memorial statue will require protection from any adverse impacts for the duration of the works and if necessary, it can be temporarily removed to ensure its protection. The memorial statue has a low sensitivity value, and the magnitude of impact is low, therefore the potential impact is Negative, Slight and Temporary."*

Construction Phase Mitigation

In respect of Construction Phase mitigation and Monitoring Measures,

Section 15.5.1.1 Archaeological Heritage of Chapter 15 Archaeological & Cultural Heritage of Volume 2 of the EIAR states the following: *"Archaeological mitigation measures can avoid, prevent, reduce or offset negative effects and these are achieved by preservation in situ, by design and / or by record. The appointed contractor will make provision for archaeological monitoring to be carried out under licence to the DHLGH and the NMI, and will ensure the full recognition of, and the proper excavation and recording of, all archaeological soils, features, finds and deposits which may be disturbed below the ground surface. All archaeological issues will be resolved to the satisfaction of the DHLGH and the NMI. The appointed contractor will ensure that the archaeologist will have the power to inspect all excavation to formation level for the proposed works and to temporarily halt the excavation work, if and as necessary, having conferred with the NTA. They will be given the power to ensure the temporary protection of any features of archaeological importance identified. The archaeologist will be afforded sufficient time and resources to record and remove any such features identified in accordance with the licensing requirements agreed."*

[DHLGH - Department of Housing, Local Government and Heritage]

[NMI – National Museum of Ireland]

Section 15.5.1.2 Cultural Heritage of Chapter 15 Archaeological & Cultural Heritage of Volume 2 of the EIAR states the following: *"Features of a cultural heritage interest that are required to be removed on a temporary basis or for a short-term period, will be removed under archaeological supervision and in accordance with a method statement in consultation with the NTA and the relevant statutory authorities. This will protect the heritage asset from any adverse impacts and ensure that it is stored safely at an agreed location prior to its reinstatement."*

Further archaeological mitigation is set out in Section 15.5.1.3.1 in Chapter 15 of Volume 2:

" Archaeological monitoring (as defined in Section 15.5.1.1) under licence will take place, where any preparatory ground-breaking or ground reduction works are required (as defined in Section 15.4.1), at the following locations:

- *Within the designated ZAP for the Historic village of Tallaght (RMP DU021-037 / DU022-018), which includes the recorded ecclesiastical enclosure (DU021-037002) and recorded mill site (DU021-037007) (Sheets 2 and 3 of 27, Figure 15.1 in Volume 3 of this EIAR); and*
- *Within the designated ZAP for the ecclesiastical enclosure (RMP DU022-005005, Sheet 5 of 27, Figure 15.1 in Volume 3 of this EIAR), to include the full extent of land take for the proposed road realignment. The monitoring of topsoil-stripping across this whole area will be carried out as an archaeological exercise.*

It is in these areas that there is a possibility to disturb intact archaeological layers and material. Licensed archaeological excavation, in full or in part, of any identified archaeological remains (preservation by record) or preservation in situ will be undertaken."

In Section 15.5.1.3.2 mitigation is set out with respect to the Katharine Tynan memorial statue:

"The Katharine Tynan memorial statue (CBC0809CH001, Sheet 3 of 27, Figure 15.1 in Volume 3 of this EIAR) will be appropriately protected for the duration of the works. The proximity of the construction works, including the replacement of the ground surfaces on which the street furniture sits, means that there is a potential for damage to the street furniture during construction. The potential pre-mitigation Construction Phase impact is Indirect, Negative, Moderate and Temporary. Mitigation consists of the recording, protection and monitoring prior to and during the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor and in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of the EIAR, reducing the magnitude of the risk from Medium to Low. The predicted post-mitigation Construction Phase impact is Indirect, Negative, Slight and Temporary (as set out in Chapter 16, Architectural Heritage)."

As set out in in Section 15.6.1 in Chapter 15 in Volume 2, all archaeological and cultural heritage issues will be resolved by mitigation during the pre-Construction Phase or Construction Phase, in advance of the Operational Phase, therefore no residual negative impacts have been identified.

Priory wall

St. Mary's Priory has been considered in the EIAR. It is identified in Table 16.7 in Chapter 16 of Volume 2 of the EIAR, where it has been classified as of regional importance and medium sensitivity. The Tallaght Village ACA is described in Section 16.3.1.4.1 in Chapter 16 of Volume 2 of the EIAR. The Priory and ACA are also identified in Figure 16.1 (sheet 3 of 27) in Volume 3 of the EIAR

Section 16.5 1.2 describes the potential impact, mitigation and predicted impact on the ACA:

" The installation of the proposed paving, landscaping and urban realm works on Blessington Road, Main Street and Greenhills Road will not directly impact the buildings or street furniture within Tallaght ACA but there is potential for damage within the Conservation Area during the Construction Phase. The Tallaght ACA is of Regional Importance and Medium Sensitivity. The pre-mitigation Construction Phase impact will be Indirect, Negative, Moderate and Temporary. The proposed mitigation is the recording, overseeing and protective measures and monitoring of sensitive fabric by an appropriate architectural heritage specialist engaged by the appointed contractor, prior to the Construction Phase, in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. This mitigation will reduce the magnitude of the impact from Medium to Negligible. The predicted post-mitigation impact is Indirect, Negative, Not Significant and Temporary….."

The potential for vibration impact during the operational phase of the Proposed Scheme has been considered in Section 9.4.4.2 of Chapter 9 in Volume 2 of the EIAR:

" Once operational, buses will use the dedicated bus lanes for the Proposed Scheme. Analysis of traffic data for the Proposed Scheme, however, indicates a reduction in overall AADT traffic flows along the core bus corridor. Reference to the monitoring results in Table 9.28 and Table 9.29 confirms that vibration levels associated with passing buses and other vehicular traffic at distances of 2.5 to 10m from the road edge are negligible in terms of human perception and building response. Vibration levels associated with a passing bus were recorded at 0.1mm/s PPV or less under the monitored scenarios. These values are below the normal range of perceptible human response to vibration and would not pose any significant impact. A review of the traffic data for the Proposed Scheme indicates that the maximum number of buses travelling in-bound or outbound is 545 over the 16hr daytime period along the Drimnagh Road. Using this number and the highest VDV event measured during a bus pass at a reference distance of 5m from the road edge (0.0033 $m/s^{1.75}$), the daytime $VDV_{,b,day}$ value is calculated as 0.016 $m/s^{1.75}$. Reference to Table 9.20 confirms this value is orders of magnitude below those associated with a low probability of adverse comment. The overall impact is neutral, negligible and long term."

In respect of the Priory wall on Old Greenhills Road, Section 15.3.2.7.2 of Chapter 15 Archaeological & Cultural Heritage of Volume 2 of the EIAR states the following: *"One non-designated archaeological site was identified at the boundary to the Proposed Scheme on Old Greenhills Road (CBC0809AH001, Appendix A15.2 (Inventory of Archaeological and Cultural Heritage Sites) in Volume 4 of this EIAR; Sheet 3 of 27, Figure 15.1 in Volume 3 of this EIAR). A stretch of wall runs along the east side of the Dominican Priory grounds, to the north of the gate on Old Greenhills Road. The stone wall has a distinct batter to its base and was noted during the field survey. It is not clear whether the batter represents additional support applied to a later boundary wall or if the unusual construction indicates an earlier date and possible association with the original boundary to the Archiepiscopal palace complex along its eastern side. The wall will not be affected by the Proposed Scheme."*

In summary, Section 16.4.4.2 Architectural Conservation Areas of Chapter 16 Architectural Heritage of Volume 2 of the EIAR states the following: *"Fingerpost bus stops are proposed in front of St. Mary's Dominican Priory (RMP DU021-037010, RMP DU021- 037020, SDCC RPS 273) and in front of St. Basil's Training Centre (SDCC RPS 268) on the Greenhills Road Tallaght, both of which lie within the Tallaght Architectural Conservation Area which is of Regional Importance and Medium Sensitivity. There are no bus stops in these locations currently. The Magnitude of impact will be Low. The potential Operational Phase impact is an Indirect, Negative, Negligible, Long-term visual impact on the streetscape of the Architectural Conservation Area during the Operational Phase."*

2.2.3.2 Loss of community plaza

Summary of Issues Raised

1. Community event venue

It was highlighted by the submissions that Tallaght Village has very little publicly owned open spaces to allow events, gathering and socialising and the Old Greenhills Road Plaza is the largest of the three SDCC pocket plazas in the area. Removing the Old Greenhills Road Plaza would reduce village plaza amenity space by 39% and damage the visual amenity of the area.

The proposed removal of the Old Greenhills Plaza will also result in two busy roads in the area instead on the existing single busy road (Greenhills Road).

This plaza plays a pivotal role in public village festivals, such as "Talafest", creating a reasonable safe place to enjoy outdoor activities.

Loss of trees

The submissions believed that the Proposed Scheme route removing the cul-de-sac plaza will result in the loss of nine existing trees of character.

No assessment of bat habitat

The submissions stated that there did not appear to be any impact assessment on the bat habitat in the Priory lands, also adjacent to the Old Greenhills Road.

Response to Issues Raised

Community event venue

The proposed removal of the cul-de-sac at the junction of Old Greenhills Road and R819 Greenhills Road will provide a raised table junction comprising of high-quality paving surfacing. In addition, public realm improvements are proposed directly opposite the Old Greenhills Road Plaza within the Bancroft Park residential area public green space as part of the reinstatement of Temporary Construction Compound TC2. These are shown on extracts from Landscaping General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR are included in Figure 2.2.2.

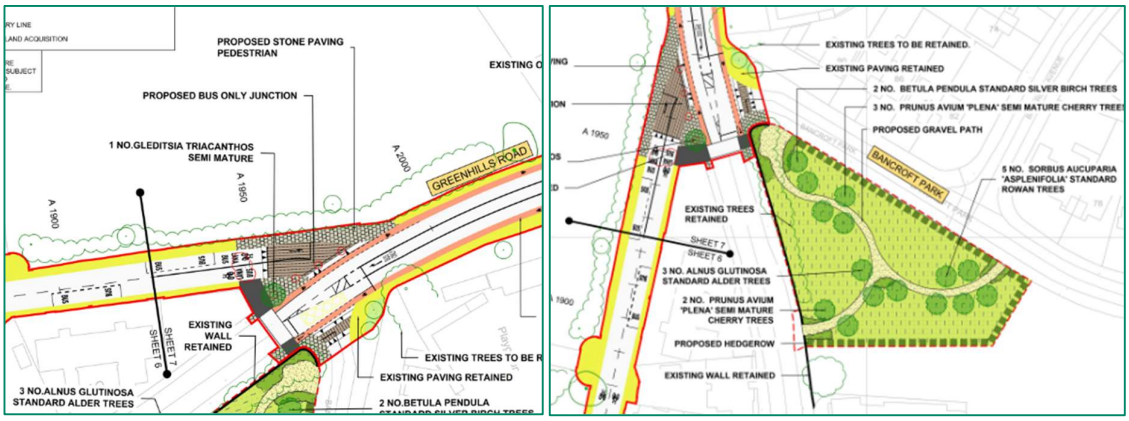


Figure 2.2.2: Extract from Landscaping General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR

As described in Section 4.5.1.1 general overview of the Proposed Scheme of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR *"From Belgard Square East the route continues via Blessington Road and Main Street to Greenhills Road. To avoid traffic congestion on Greenhills Road it is proposed for buses to use the Old Greenhills Road alignment and create a new bus only junction at the location of the existing cul-de-sac opposite Bancroft Park Road, to facilitate bus only turn movements to Greenhills Road (R819). This will aid the bus in avoiding congestion at the Main Street/ Greenhills Road (R819) junction. Stone paving will be used in the area and localised planting will be implemented to retain the character of the existing cul-de-sac treatment."*

Loss of trees

Section 3.5.3 of the Preferred Route Option Report included in the Supplementary Information submitted as part of the application notes the following in relation to routing of Section 1 of the Proposed Scheme:

"From Belgard Square East the Preferred Route Option differs from the EPR Option and diverts around TUD Tallaght via Blessington Road and Main Street to R819 Greenhills Road. This route largely aligns with the existing bus route for the area and minimises impacts on the existing TUD campus infrastructure and operational procedures. A change from the EPR Option to avoid traffic congestion on R819 Greenhills Road is for buses to use the Old Greenhills Road alignment and create a new junction with signal-controlled priority at the location of the existing cul-de-sac, to facilitate bus only turn movements at the R819 Greenhills Road. This will aid the bus in avoiding congestion at the Main Street/Greenhills Road junction. Stone paving will be used in the area and localised planting will be implemented to retain the character of the existing cul-de-sac treatment."

In EIAR Chapter 17 Landscape (Townscape) and Visual, Section 17.1 confirms that the assessment has been carried out according to best practice and guidelines relating to landscape (townscape) and visual assessment, and in the context of similar large-scale infrastructural projects. In relation to the Tallaght Village, the following sections of Chapter 17 are relevant and demonstrate that a detailed and comprehensive assessment has been undertaken of the impacts associated with the Construction and Operational Phase of the Proposed Scheme.

Section 17.4.3 reports the assessment of the Construction Phase and Section17.4.3.1.1 provides the impact on Townscape and Streetscape Character. It states that: *"There will be an impact on a pedestrianised area at the northern end of Old Greenhills Road, with acquisition of area for new bus-only access route.*

The construction works will have a substantial effect on the existing streetscape / townscape character at the Blessington Road compound, at Bancroft Park and Birchview / Parkview where there will be a considerable temporary / short-term loss of amenity."

In summary for the construction phase Section 17.4.3.1.1 states that *"The potential townscape / streetscape impact of the Construction Phase on this section is assessed to be Negative, Very Significant and Temporary / Short-Term."*

Figure 2.2.2 above is an extract from Landscaping General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR which shows the proposed landscaping for the junction at Old Greenhills Road / Greenhills Road / Bancroft Park.

Extract from Tree Clearance Plan Drawings at Old Greenhills Road / Bancroft Park junction which are provided as an appendix to Chapter 17 Landscape (Townscape) & Visual in Part 4 of 4 of Volume 4 of the EIAR is included in Figure 2.2.3.

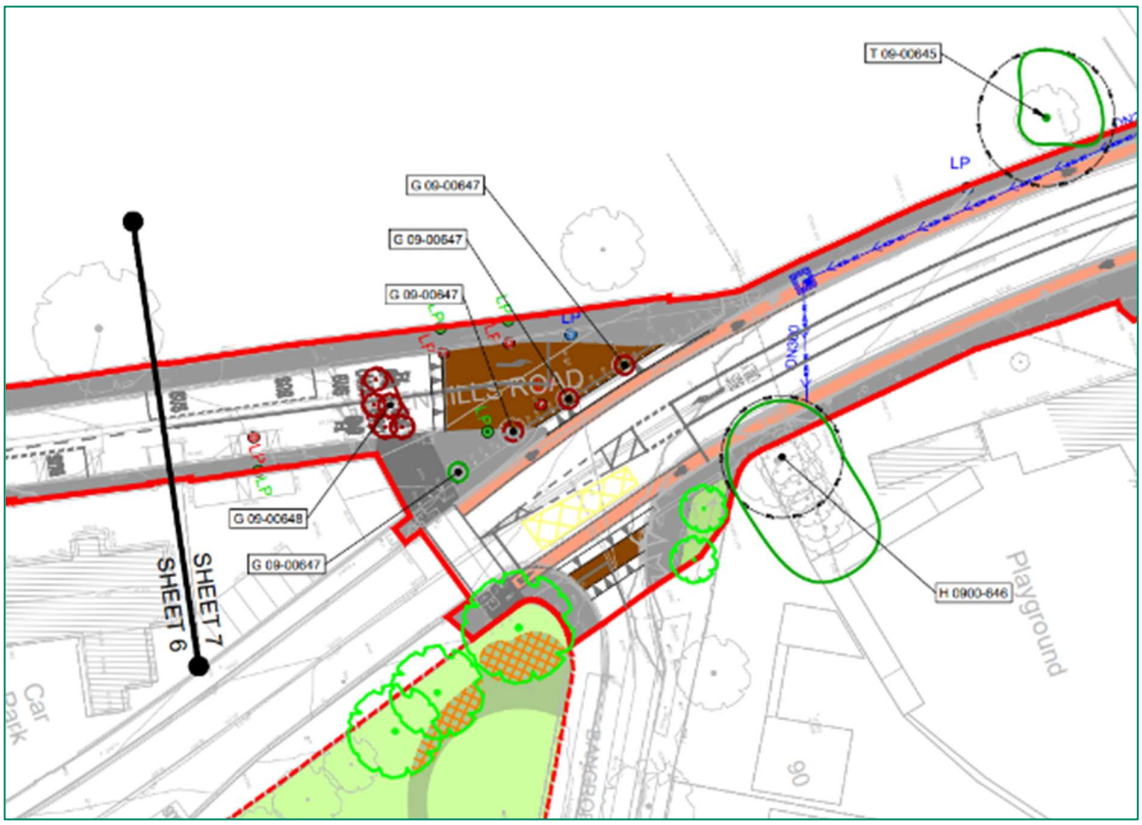


Figure 2.2.3: Extract from Tree Clearance Plan Drawings from Appendix A17.1 of Chapter 17 of Volume 4 Part 4 of 4 of the EIAR

Tree labels G09-00647 (Turkish Hazel) are assessed as Category C1 trees in Fair condition

Tree Label G09-00648 (Himalayan Birch) are assessed as Category C1 trees in Fair, Dead condition with excessive deadwood

Category C is low quality/value minimum 10 years/stem diameter less than 150mm

Category 1 is Arboricultural quality/value

To mitigate the loss of 9 trees at the Old Greenhills Road Plaza cul-de-sac Section 17.4.1.4.1 notes the following for key landscape measures proposed in this section: *"Provision of appropriate replacement paving scheme and tree planting at new bus-only junction at Old Greenhills Road / Greenhills Road junction (Ch. A1940 to Ch.1990);"*

In addition, 15 new trees are proposed directly opposite the Old Greenhills Road Plaza within the Bancroft Park residential area public green space as part of the reinstatement of Temporary Construction Compound TC2.

For the Tallaght to Ballymount section of the Proposed Scheme Section 17.4.4 reports the assessment of the operational phase and Section 17.4.4.1.1 considers the impact on Townscape and Streetscape character in which it states *"The baseline townscape is of generally of medium sensitivity and also locally very high sensitivity at Tallaght Village. The operation of the Proposed Scheme involves limited changes to the existing road infrastructure within Tallaght Village but some substantial changes in Tallaght Town Centre with the provision of a new bus interchange at Belgard / Road West / Tallaght Town Centre, and changes to adjacent public open space, where existing planting is removed and boundaries are setback. There will be substantial replacement and additional tree planting within this section, particularly at the open space at Blessington Road, at Belgard Square West, industrial sections of Greenhills Road, and at open spaces at Birchview / Parkview / Treepark, which will aid in reducing some of the negative effects, and in some cases will result in localised positive effects over the long-term as the trees mature. The introduction of ornamental planting on Belgard Square East and Blessington Road will help soften and improve the amenity of the existing streetscape. Improved paving schemes are proposed to sections of footpaths within Tallaght Town Centre and at the southwest entrance to Tymon Park which will provide localised improvements to streetscape amenity"*

In summary for the operational phase Section 17.4.4.1.1 states that *"The potential townscape / streetscape and visual impact of the Operational Phase on this section is assessed to be Negative, Significant and Short-Term becoming Neutral, Moderate, Long-Term."*

No assessment of bat habitat

In EIAR Chapter 12 Biodiversity, Section 12.2 confirms that the assessment has been carried out in accordance with the requirements of Directive 2014 / 52 / EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011 / 92 / EU on the assessment of the effects of certain public and private projects on the environment (hereafter referred to as "the EIA Directive"), Chapter 12 of the EIAR identifies, describes and assesses the likely direct and indirect significant effects of the Proposed Scheme on biodiversity, with particular attention to species and habitats protected under both European Union (EU) and Irish law.

As set out in Section 12.2.3.5.2 of Chapter 12, trees located within the footprint of the Proposed Scheme were assessed for their potential to support roosting bats (i.e., to contain Potential Roost Features (PRFs)) as part of the multidisciplinary walkover surveys.

As described in Section 12.4.3.4.1.1 Roost Loss of Chapter 12 Biodiversity of Volume 2 of the EIAR *"There are no confirmed bat roosts located within the footprint of the Proposed Scheme. Seven trees with Potential Roosting Features (PRFs) were identified within or adjacent to the footprint of the Proposed Scheme (see Figure 12.7.2 in Volume 3 of this EIAR). These are located along the R819 Greenhills Road between the Airton Road intersection and Junction 10 Ballymount M50 flyover. However, the Proposed Scheme will result in direct impacts to these trees as they are being removed. The construction of the Proposed Scheme will not result in the loss of breeding / resting sites for any bat species and, therefore, there is no potential for impacts on bat roosts as a result of the construction of the Proposed Scheme."*

Section 12.4.3.4.1.2 states *"… Notwithstanding the fact that there is evidence of bats foraging and commuting within the study area of the Proposed Scheme, particularly at the Priory Institute and along the River Poddle in Bancroft Park (CBC0809BT004), a wooded area along R819 Greenhills Road (CBC0809BT003) and the R134 New Nangor Road near Diageo (CBC0809BT001), and that all parts of the Proposed Scheme which contain suitable habitat are likely to be within the CSZ of at least one bat roost, considering the type of works proposed (e.g., upgrading of existing infrastructure for the most part), there is limited potential for the Proposed Scheme to act as a barrier to flight paths for bat species."*

In summary Section 12.5.2.3.1.1 Habitat Loss and Loss of Breeding / Resting Sites reports *"The operation of the Proposed Scheme is not predicted to result in any significant effects to bats in the vicinity of the Proposed Scheme, particularly given that the bulk of the corridor is characterised by streetscape planting which offers limited roosting potential. There are a number of areas characterised by mixed age / mature planting adjacent to the Proposed Scheme and these areas are*

directly avoided by retaining them and their connectivity to the wider landscape and suitable potential bat foraging territory is largely maintained. Notwithstanding this, mitigation which has been proposed as part of the bat mitigation strategy and may be implemented dependent on the outcome of survey and / or licenced conditions will continue into Operational Phase of the Proposed Scheme for some time. Replanting by the appointed contractor will be as per detailed in Section 12.5.1.2.1. In line with the maintenance contract the appointed contractor will carry out annual post construction monitoring, over a two-year period to ensure the successful re-establishment of vegetation within the Proposed Scheme."

As set out in in Table 12.17 in Section 12.6.1 in Chapter 12 no residual effects on bats are predicted as a result of the construction of the Proposed Scheme.

2.2.3.3 Alternative route available

Summary of Issue Raised

The submissions assert that the EIAR for the Proposed Scheme does not provide adequate detail as to why the alternative route through TU Tallaght is not considered further. The submissions state that the analysis provided shows that this route is the best route with no community losses of amenity space or residential parking.

The submissions argue that facilitating a bus lane through the campus connecting Belgard Road to Greenhills Road would not involve a massive change in campus opening times, stating that TUD Tallaght is currently open until 10pm Monday to Friday and adding that the cost of keeping it open longer will be offset by keeping the integrity of the village and the opportunity of easier access to a seat of higher learning.

The submissions argue that the scoring system fails to take account for the disadvantages of route BG2 and the advantages of route BG5 and cite the Preferred Route Option Report (PRO) as follows:

> TU Dublin route *"As a result, this route option is considered to have good journey time reliability"*
>
> BG5 route *"Lack of bus lanes through this section would affect reliability of services running along it"*

The submission argue that the key measurement of a transport system is its reliability, and therefore BG5 should be penalised for this. BG2 is superior on what they perceive as the most important metric.

The submissions also expressed the opinion that for Key Trip Attractors sub-criteria in the MCA the TUD Tallaght campus would allow more students and staff to avail of public transport, hence reducing CO2 emissions.

Response to issue Raised

As described in Section 3.4.1.1.1 of EIAR Chapter 3 Reasonable Alternatives Considered, the Emerging Preferred Route (EPR) commenced on Belgard Square West at the junction with Cookstown Way and continued along Belgard Square West before turning right onto Belgard Square North. It then continued into the TUD Tallaght campus, exiting at the TUD Tallaght junction on R819 Greenhills Road.

Section 3.4.1.1.1 goes on to explain that the draft Preferred Route Option (PRO) proposed a route alteration to pass through Tallaght village rather than TUD Tallaght (necessitating 24 hr. / 365 day access through the TUD Campus), which will require the reopening of Old Greenhills Road to form a new bus only junction with R819 Greenhills Road.

The Preferred Route Option Report (PRO) provided as part of the Supplementary Information details the assessment of this route alteration.

Section 5.2.7 of PRO Report Appendix I1 Greenhills to City Centre CBC – Feasibility and Options Assessment Main Report sets out that the route option through TUD Tallaght was considered from Feasibility stage of the design, and this route was proposed as part of the Emerging Preferred Route. The Route Options Assessment notes *"Based on the assessment undertaken, route option BG2 appears to offer more benefits over other options. Route option **BG2** is therefore preferred for the Tallaght area for the following reasons:*

- *It's comparatively low capital cost coupled with the opportunity for journey time reliability and bus service efficiency;*
- *It serves large residential catchments as well as directly serving Institute of Technology Tallaght;*
- *It is the most direct route offering faster and reliable journey times (4 – 5 minutes); and*
- *It has comparatively lower potential to impact on the environment across most sub criteria (with the exception of Flora and Fauna).*

However, the Route Options Assessment also notes that "*The above route option is subject to reaching satisfactory agreement with ITT on the operational arrangements for routing buses through the campus. In the absence of such an agreement route option BG1 offers a viable alternative.*"

BG2 is the route through TUD Tallaght, BG1 is the route via Old Greenhills Road and BG3 is the route via Airton Road.

Figure 2.2.4 and Figure 2.2.5 are extracts from PRO Appendix J1 Greenhills to City Centre Core Bus Corridor – 1st Non-Statutory Public Consultation – Brochure Map 5 and Map 6: Emerging Preferred Route showing proposed route through ITT / TUD Tallaght.

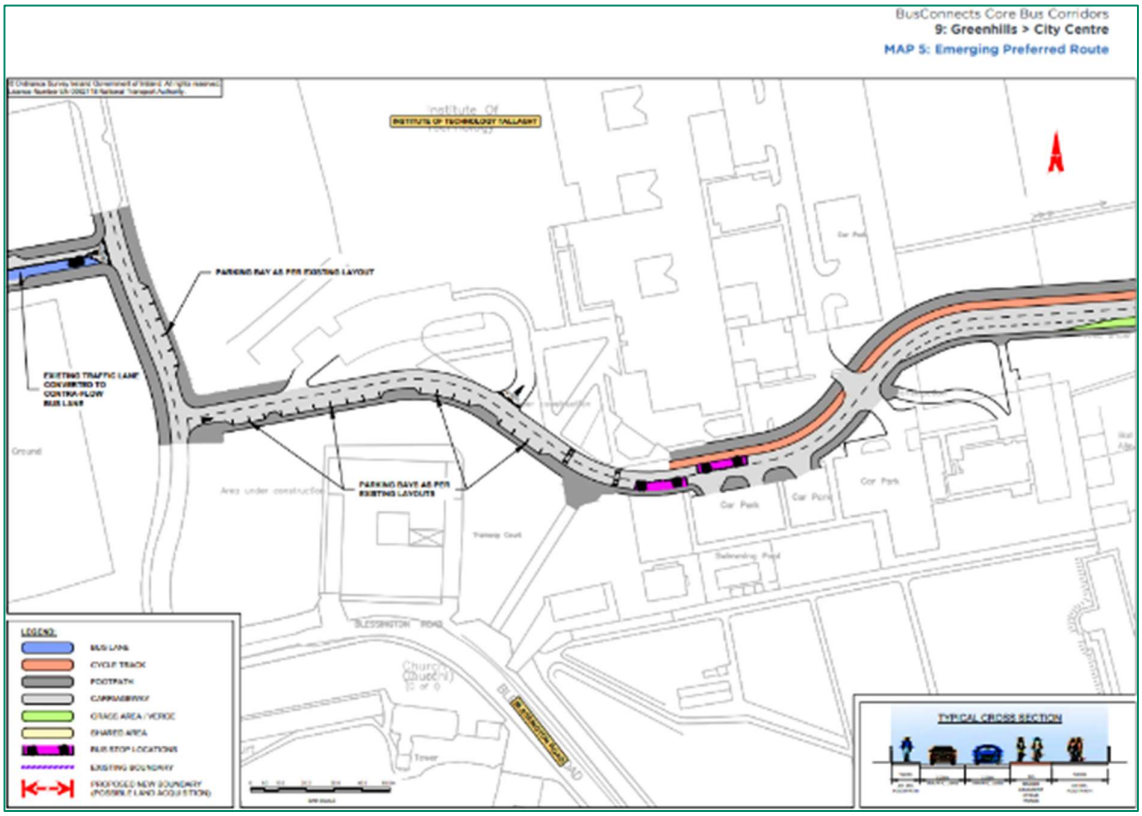


Figure 2.2.4: Extract from 1st Non-Statutory Public Consultation – Brochure Map 5: Emerging Preferred Route

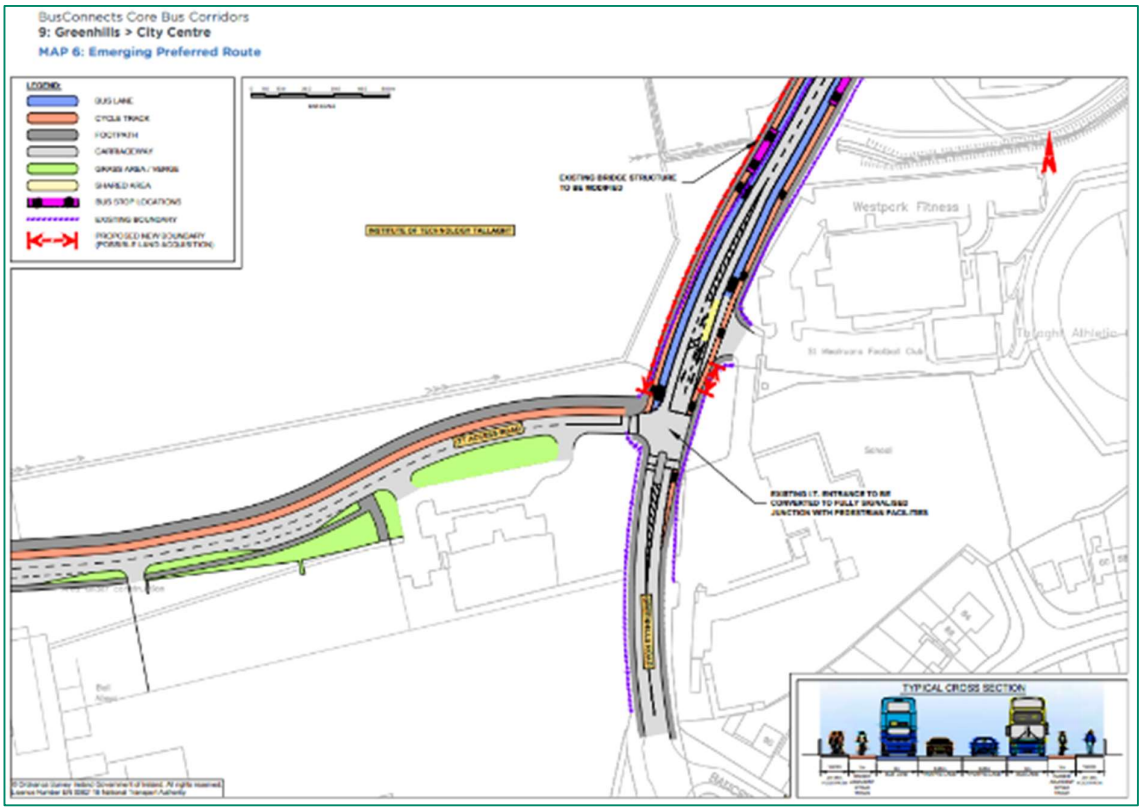


Figure 2.2.5: Extract from 1st Non-Statutory Public Consultation – Brochure Map 6: Emerging Preferred Route

As highlighted in Section 3.4.1.1.1 of EIAR Chapter 3, following the first Non-Statutory Public Consultation, a review was undertaken of the scheme proposals along the route. As part of this review, several new design options were developed for consideration in specific areas where issues were identified. As part of this review the route was amended to exclude use of TUD Tallaght campus roads.

The reason for this exclusion is outlined in the Preferred Route Option Report review of the Emerging Preferred Route Section 3.4.1.1 Route Options Considered – Belgard Square West to Greenhills Road which notes *"In the Greenhills to City Centre Feasibility and Options Assessment Report the EPR Option (BG2) made use of the existing through road the TUD campus. Following public consultation feedback, review of more detailed topographical information, and the required agreements for permanent access through the campus it was concluded that this part of the route required review. It was concluded that the extensive work that would be required within the campus, which had not been considered previously, and the requirement to have 24 hour/365 day access would make this route option difficult to deliver. Therefore, it was determined that a more favourable route was required to be taken forward as the Preferred Route Option."*

Multi-Criteria Analysis (MCA) scoring

The Preferred Route Option report notes *"Where key changes have been made to the design, since the publication of the Emerging Preferred Route (EPR) Option in January 2019, options have been assessed using a Multi-Criteria Analysist (MCA) to determine the Preferred Route Option (PRO). The methodology used is consistent with that carried out during the initial route optioneering work which informed the EPR Option. This additional assessment does not supersede work done during earlier stages but rather compliments it and is a direct response to issues raised by the public during the non-statutory public consultation process and further design development. This assessment has also been carried out in the context of more detailed information now available, including topographical survey."*

As noted, to be consistent with the previous Feasibility and Options Assessment Report, the criteria used were as set out in the 'Common Appraisal Framework for Transport Projects and Programmes' published by the Department of Transport, Tourism and Sport (DTTAS), March 2016, requires schemes to undergo a 'Multi-Criteria Analysis' (MCA) namely;

- *Economy;*
- *Integration;*
- *Accessibility and Social Inclusion;*
- *Safety; and*
- *Environment;*

The above MCA assessment criteria evaluation headings were also used for assessments carried out in Chapter 3 Consideration of Reasonable Alternatives in Volume 2 of the EIAR.

For each individual assessment criterion considered, routes were compared against each other based on a five point scale, ranging from having significant advantages to having significant disadvantages compared to other route options. For illustrative purposes, this five point scale is colour coded with advantageous routes graded as dark green and disadvantaged routes graded as dark red as presented in Table 4.4 of Appendix I1of the Preferred Route Options (PRO) Report included in the Supplementary Information provided with the application for the Proposed Scheme.

Table 4.4: Route Options Colour Coded Ranking Scale

Colour	Description
	Significant advantages over the other options
	Some advantages over other options
	Neutral compared to other options
	Some disadvantages over other options
	Significant disadvantages compared to other options

Figure 2.2.6: Table 4.4 Extract from PRO Report

As stated earlier, the key changes from the Emerging Preferred Route Option arose "*Following public consultation feedback, review of more detailed topographical information, and the required agreements for permanent access through the campus".*

This was considered in the PRO MCA which proposed BG5 as noted in PRO Section 3.4.1.1.1 Alternative Options Considered *"Following reassessment of the various route options it is concluded that BG5 has sufficient advantages over the other route options, particularly in the context that BG2 is challenging to deliver. While the other routes are less expensive, they serve relatively low-density employment areas and as a result have a lower effective catchment areas. The additional priority provided for buses on the approach to Blessington Road with option BG5, and the realignment of the route away from mature trees on R819 Greenhills Road gives this route option an advantage over BG1 and is therefore the optimum routing in this area."*

Comparing BG2 to BG5 in this updated MCA scoring:

Economy

Capital cost
similar scoring
Transport reliability and quality of service
BG2 scores better due to bus lane provision over more of route with good journey time reliability.

Integration

Land use integration
BG5 scores better due to route serving Tallaght Village directly and local business growth
BG2 serves TUD Tallaght directly
Residential population and employment catchments
BG5 scores better for both catchment criteria.
Transport network integration
BG5 scores better due to coincidence with existing bus routes and potential for interchange with other Dublin Bus services.
BG2 route does not provide any opportunities for interchange with other public transport services.
Cycling Integration
BG2 scores better as campus roads are low speed and low volume which is considered acceptable provision for cyclists.
BG5 requires cyclists to share with general traffic along Main Street.

Accessibility & Social Inclusion

Key trip attractors
BG5 scores better mainly due to retail trip attractors
BG2 has similar trip attractors to BG5 for leisure, employment and education.
Deprived Geographic Areas
Similar scoring

Safety

Road and Pedestrian Safety
Similar scoring

Environment

Archaeology and Cultural Heritage
Similar scoring
Architectural Heritage
Similar scoring
Flora and Fauna
BG5 scores better mainly due to road works required at entrance to ITT / TUD Tallaght.
Soils and Geology
Similar scoring
Hydrology
Similar scoring
Landscape and Visual
Similar scoring
Air Quality
Similar scoring
Noise & Vibration
Similar scoring
Land Use Character
Similar scoring

In relation to the assessment of bus journey time reliability, this was considered under the sub-criteria Transport Reliability and Quality of Service of the Economy (Cost Assessment and Transport Economic Indicators) when comparing Route BG2 to Route BG5. The summary of the assessment is presented in the MCA Table A1 provided in the PRO Appendix D criteria is shown in Figure 2.2.7

Assessment Criteria	BG1	BG2	BG3	BG4	BG5
Economy					
Integration					
Accessibility & Social Inclusion					
Safety					
Environment					
Overall Rating					

Figure 2.2.7: Extract from PRO Section 3.4.1.1.2 Options Assessment Table 3-3: Revised Options Assessment Section 1

Section 3.4.1.1.2 of the PRO notes the following in summary: *"Following reassessment of the various route options it is concluded that BG5 has sufficient advantages over the other route options, particularly in the context that BG2 is challenging to deliver. While the other routes are less expensive, they serve relatively low-density employment areas and as a result have a lower effective catchment areas. The additional priority provided for buses on the approach to Blessington Road with option BG5, and the realignment of the route away from mature trees on R819 Greenhills Road gives this route option an advantage over BG1 and is therefore the optimum routing in this area."*

As highlighted above BG2 did score better in relation to Economy based on the Transport Reliability and Quality of Service sub-criteria but did score lower in relation to Integration, Accessibility & Social Inclusion and Environment criteria.

Under the Key Trip Attractors sub-criteria BG5 scores better as it has an advantage over BG2 in that it provides better access to the retail attractors in the area, both BG2 and BG5 provide access to TUD Tallaght and the Priory Institute.

The summary conclusion considers all five criteria (Economy, Integration, Accessibility & Social Inclusion, Safety and Environment) as per the Common Appraisal Framework for Transport Projects and Programmes published by the Department of Transport, Tourism and Sport (DTTAS), March 2016. Physical Activity was scoped out of the MCA at this stage as all route options carried forward, promote physical activity equally, physical activity is not considered to be a key differentiator between route options.

The proposed removal of the cul-de-sac at the junction of Old Greenhills Road and R819 Greenhills Road will provide a raised table junction comprising of high-quality paving surfacing. The proposed paving finishes at this junction will allow retention of character of the existing cul-de-sac treatment to cater for occasional community events which could be accommodated.

2.2.3.4 Other Issues Raised

Summary of Issues Raised

1. Loss of on-street parking

The submissions highlighted that the conversion of Old Greenhills Road to a two-way bus route with removal of existing on-street parallel parking bays will result in the loss of 20 on street car parking spaces (1 disabled space) which residents rely on for their sole source of secure parking for themselves and visitors, home deliveries.

The submissions state that nearby offices and businesses also rely on these adjacent spaces for their commercial viability, and that the proposal undermines the residents and business access to reliable, cost effective parking.

2. Loss-of cul-de-sac and traffic congestion

Some submissions expressed the view that on Old Greenhills Road all the properties have enjoyed a low traffic environment for many years. Opening this cul-de-sac will dramatically alter their day to day lives. Their argue that their properties will no longer be on a cul-de-sac, but now a high frequency bus lane with 2 bus stops.

The submissions noted that there are often large funerals at St. Mary's Priory. One entrance to the car park is on the Old Greenhills Road. The submissions expressed concern that if a new bus corridor is placed here it will cause significant congestion for large funerals.

Response to Issues Raised

1. Loss of on-street parking

In relation to the Proposed Scheme at this location considering bus reliability on Route BG5 via Blessington Road and Old Greenhills Road, Section 3.5.3 of the Preferred Route Option Report (PRO) included in the Supplementary Information provided with the application notes: *"This route largely aligns with the existing bus route for the area and minimises impacts on the existing TUD campus infrastructure and operational procedures. A change from the EPR Option to avoid traffic congestion on R819 Greenhills Road is for buses to use the Old Greenhills Road alignment and create a new junction with signal-controlled priority at the location of the existing cul-de-sac, to facilitate bus only turn movements at the R819 Greenhills Road. This will aid the bus in avoiding congestion at the Main Street/Greenhills Road junction."*

Section 3.7.1 Bus Journey Times of the PRO notes the following: *"Through the provision of increased bus priority infrastructure, the Tallaght to City Centre section of the Proposed Scheme will improve both the overall journey times for buses along the route and their journey time reliability. This will help to realise the objectives of the Proposed Scheme as set out in Section 2.4 of this report. The facilitation of bus priority along the Tallaght to City Centre section of the Proposed Scheme, through the delivery of dedicated bus lanes and bus priority traffic signals, is forecast to reduce bus journey times along the CBC. In addition to this, journey reliability is forecast to be improved, by largely removing interaction between bus traffic and general traffic."*

Section 1.2 of Chapter 1 of Volume 2 of the EIAR states the following:

"The aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe and integrated sustainable transport movement along the corridor. The objectives of the Proposed Scheme are to:

- *Enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through the provision of bus lanes and other measures to provide priority to bus movement over general traffic movements;*
- *Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable;*
- *Support the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets;*
- *Enable compact growth, regeneration opportunities and more effective use of land in Dublin, for present and future generations, through the provision of safe and efficient sustainable transport networks;*
- *Improve accessibility to jobs, education and other social and economic opportunities through the provision of improved sustainable connectivity and integration with other public transport services; and*
- *Ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible."*

As noted in Section 6.4.6.1.1.4 of Chapter 6 of Volume 2 of the EIAR:

"The impacts of the Proposed Scheme on parking and loading provision have been assessed through a comparison of the availability of spaces or lengths of bay in the Do Minimum (baseline environment) and Do Something scenarios. The assessment has taken the parking information and considers the impact of any changes on the general availability of parking and loading in the vicinity of the Proposed Scheme. It classifies parking into the following categories:

- *Designated Paid Parking;*
- *Permit Parking;*
- *Disabled Permit Parking;*
- *Loading / Unloading (in designated Loading Bays)*
- *Loading / Unloading (outside designated Loading Bays)*
- *Taxi Parking (Taxi Ranks);*
- *Commercial vehicles parked for display (car sales); and*
- *Informal Parking (i.e. parking alongside the kerb which is unrestricted).*

This qualitative assessment has also taken account of adjacent parking on side streets which is defined as alternative parking locations along side roads within 200 – 250m of the Proposed Scheme. Significance ratings for the impacts of any changes in parking provision have been generated for each specific instance of change and for each section of the Proposed Scheme. The ratings are based upon professional judgement and experience and consider:

- *The magnitude of change in parking availability;*
- *The availability of alternative parking; and*
- *Nearby land uses, such as businesses.*

Note that the parking and loading assessment has been undertaken as a qualitative analysis based on the above criteria and does not generate a resulting LoS rating"

The Do Something scenario represents the likely conditions of the direct and indirect study areas with the Proposed Scheme in place.

The Do Minimum scenarios (in both 2028 and 2043) include all other elements of the BusConnects Programme of projects (apart from the CBC Infrastructure Works elements) i.e. the new BusConnects routes and services (as part of the revised Dublin Area bus network), new bus fleet, the Next Generation Ticketing and integrated fare structure proposals are included in the Do Minimum scenarios.

As noted in Section 6.4.2 of Chapter 6:

"With regards to this Traffic and Transport chapter, the 'Do Nothing' scenario means there would be no changes to existing transport infrastructure, so infrastructure provision for buses, pedestrians and cyclists would remain the same. The streetscape would continue to be based around the movement and parking requirements of private cars instead of people. High levels of traffic are associated with discouraging pedestrian and cyclist activity and this activity would be further discouraged as traffic congestion remains the same or increases. The baseline situation of congestion and journey time reliability issues for buses would also continue, and potentially be exacerbated over time as traffic congestion increases in line with travel demand growth."

Section 6.4.6.3 of Chapter 6 also notes the following:

"In the absence of the Proposed Scheme bus services will be operating in a more congested environment, leading to higher journey times for and lower reliability for bus journeys. This limits their attractiveness to users which will lead to reduced levels of public transport use, making the bus system less resilient to higher levels of growth and leading to increased levels of car use and congestion. The absence of walking and cycling measures that the Proposed Scheme provides will also significantly limit the potential to grow those modes into the future.

On the whole, the Proposed Scheme will make a significant contribution to the overall aims of BusConnects, the GDA Transport Strategy and allow the city to grow sustainably into the future, which would not be possible in the absence of the Proposed Scheme."

In respect of this section between Main Street and Old Greenhills Road, Section 6.4.6.1.2.4 of EIAR Chapter 6 Traffic and Transport concludes that the overall impact on parking is considered to have a Negative, Slight and Long-term effect.

The NTA are satisfied that the impact on parking has been appropriately assessed and that the overall impact at this location is considered to be slight.

2. Loss of cul-de-sac and traffic congestion

Section 6.4.6.2.9.3 of EIAR Chapter 6 Traffic and Transport discusses the difference in flow of general traffic in the AM peak hour as a result of the Proposed Scheme. The differences are illustrated in Diagram 6.40 and the road links listed in Table 6.73 where there is a reduction in combined flow of >100. These are shown in Figure 2.2.8.

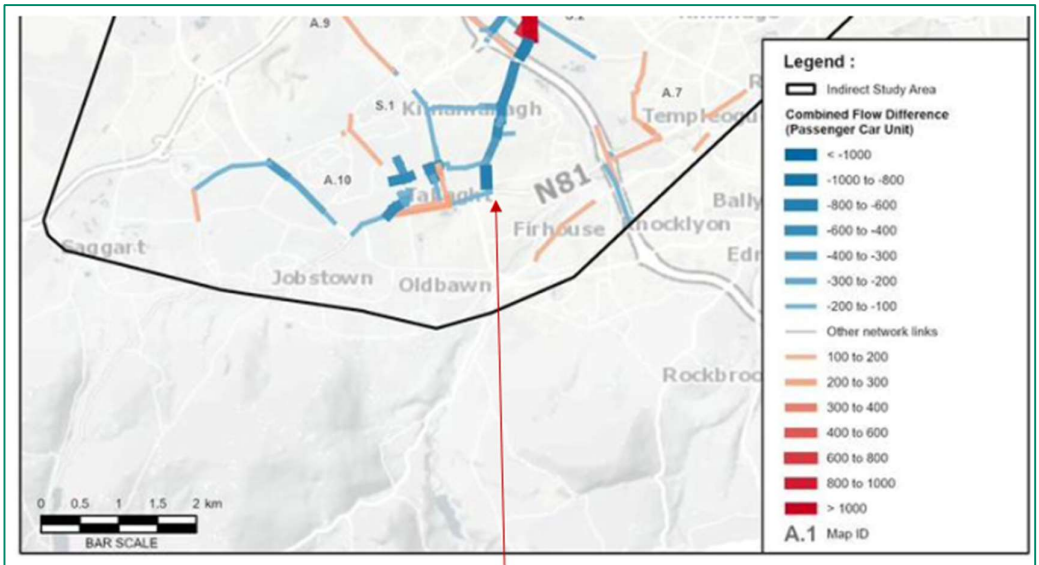


Diagram 6.40: Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year

Table 6.73: Road Links that Experience a Reduction of ≥ 100 Combined Flows during AM Peak Hour (Direct Study Area)

Orientation	Map ID	Road Name	Do Minimum Flows	Do Something Flows	Flow Difference
North of N81, West of M50	S1	Belgard Square East	565	126	-439
	S1	Belgard Square West	403	200	-203
	S1	Belgard Square North	1186	648	-537
	S1	Blessington Road	413	297	-116
	S1	Cookstown Way	1311	832	-479
	S1	Greenhills Road	1650	133	-1516
	S1	Old Blessington Road	692	251	-441

Figure 2.2.8: Extracts from EIAR Chapter 6: Diagram 6.40 ad Table 6.73

Section 6.4.6.2.9.4 of EIAR Chapter 6 Traffic and Transport discusses the difference in flow of general traffic in the PM peak hour as a result of the Proposed Scheme. The differences are illustrated in Diagram 6.41 and the road links listed in Table 6.78 where there is a reduction in combined flow of >100. These are shown in Figure 2.2.9.



Diagram 6.41: Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak, 2028 Opening Year

Table 6.78: Road Links that Experience a Reduction of ≥100 Combined Flows during PM Peak Hour (Direct Study Area)

Orientation	Map ID	Road Name	Do Minimum Flows	Do Something Flows	Flow Difference
North of N81, West of M50	S1	Belgard Square East	891	145	-746
	S1	Belgard Square South	850	695	-154
	S1	Greenhills Road	1614	106	-1508
	S1	Old Blessington Road	492	216	-276

Figure 2.2.9: Extracts from EIAR Chapter 6: Diagram 6.41 ad Table 6.78

As shown above, the Proposed Scheme will lead to an overall reduction of general traffic along the Greenhills Road at this location.

Page 93 and page 94 of the junction assessment presented in the Junction Design Report contained in Appendix A6.3 of Volume 4 Part 2 of 4 of the EIAR notes the following:

"A bus lane is proposed up to the stop line for both inbound and outbound directions. The bus gate is proposed at the existing cul de sac end, to provide a route for buses to travel along Old Greenhills Road, to avoid Greenhills Road / Main Street junction.

Bus priority is proposed in the outbound direction, with a dedicated right turning lane.

… The proposed junction design has evolved on the BusConnects project from initial Concept Design, Emerging Preferred Route, Public Consultation 2, Public Consultation 3 up to the Current Design. The junction design iterations have been undertaken to optimise pedestrian, cyclist and bus priority infrastructure on the scheme."

2.3 Proposed Scheme at Parkview

2.3.1 Description of the Proposed Scheme at this Location

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.1.1 of Chapter 4 of Volume 1 of the EIAR, Proposed Scheme Description, between Mayberry Road and Tymon Lane, it is proposed to reconfigure the local road network.

SDCC had previously identified this section of Greenhills Road for upgrade through the provision of new roads under their County Development Plan and received Part 8 Planning Approval in 2007. The Proposed Scheme seeks to align with the principles of the Part 8 scheme with a significantly reduced cross section that caters for sustainable modes only (i.e., bus / cycling / pedestrian) to minimise impacts on the adjacent properties and surrounding environment.

General traffic will remain on the existing Greenhills Road. Bus Priority signalling will be used to prioritise bus movements in the outbound direction via the new approximately 620m long sustainable link road that will run parallel to Birchview Avenue and Treepark Road. Inbound D5 spine services and X47 services from Castletymon Road will also be provided with a priority bus only link that adjoins the new link road. As part of the proposal, improved cycling facilities including new two-way cycling and pedestrian links will be incorporated to improve access to Tymon Park and surrounding amenities. Significant new landscaping and Sustainable Drainage Systems enhancements will also be provided in these areas.

Extract from General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR are included in Figure 2.3.1and Figure 2.3.2.

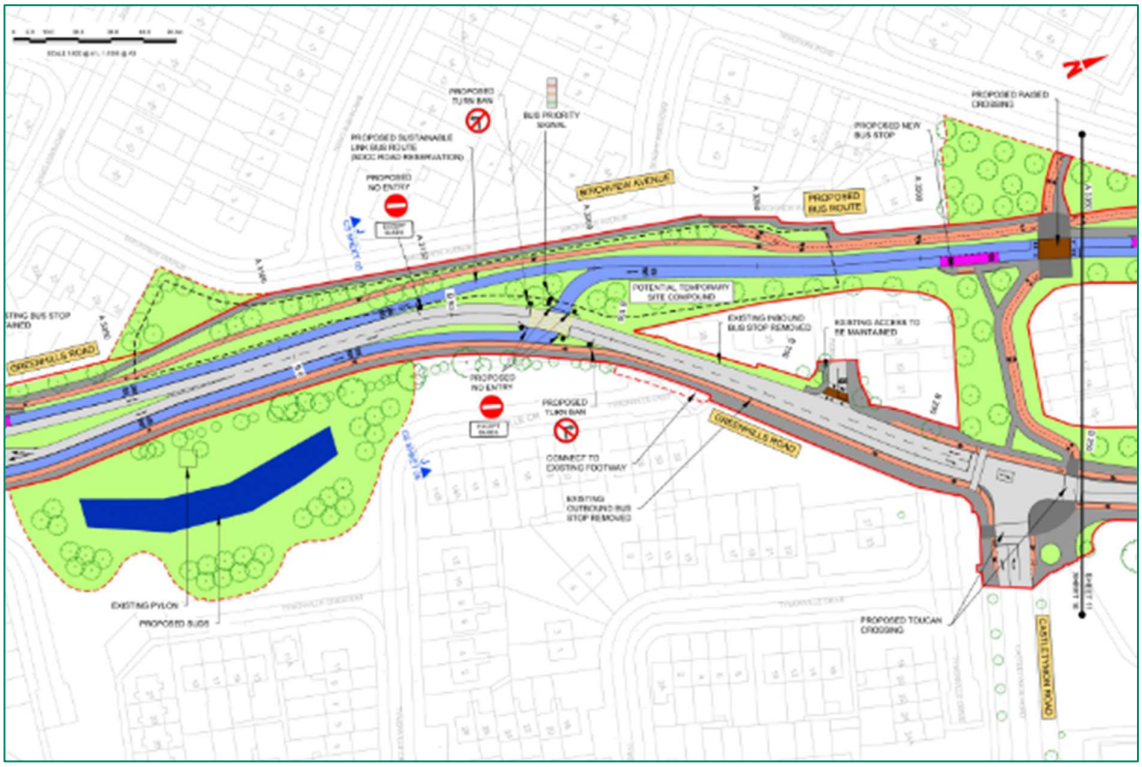


Figure 2.3.1: Extract from General Arrangement Drawing (Sheet 10)

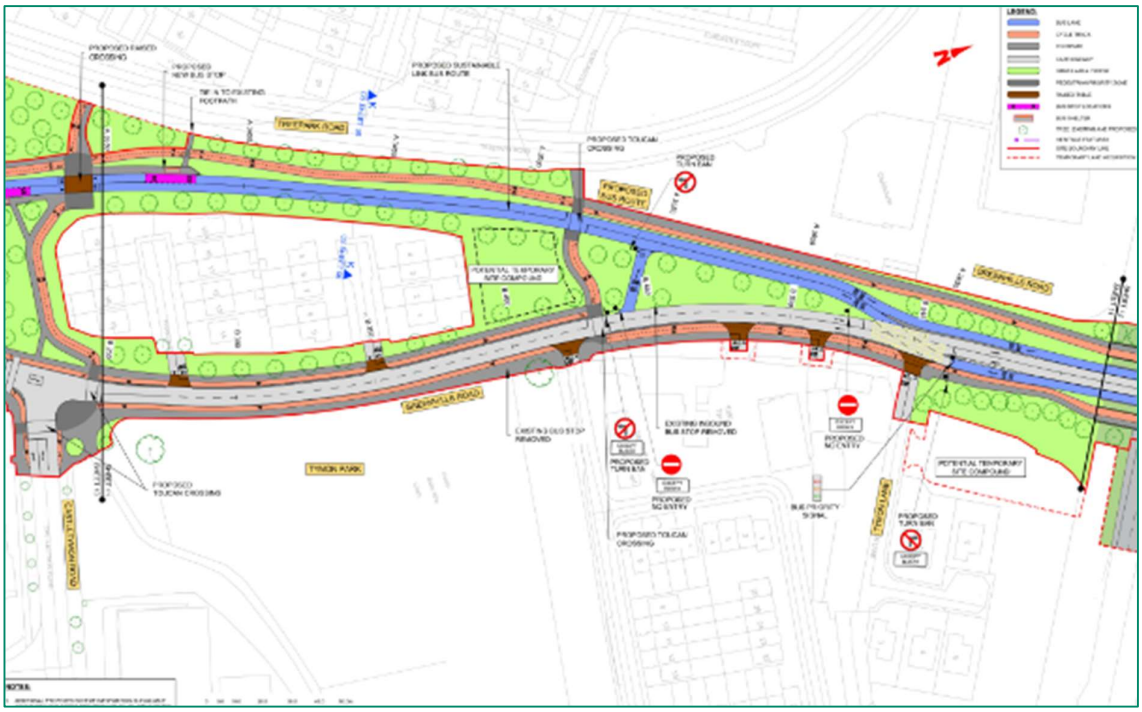


Figure 2.3.2: Extract from General Arrangement Drawing (Sheet 11)

2.3.2 Overview of Submissions Received

Table 2.3.2.1 below lists the 14 submissions within which issues were raised in respect of the Proposed Scheme at Parkview.

Table 2.3.2.1: Submissions Made in Respect of Parkview

No	Name	No	Name	No	Name
08	David and Pamela Smullen	21	Darren Mohan and Wendy Lyons	39	Sean Crowe TD
09	Marian and William Healy and others	28	Cllr Kieran Mahon	51	Michelle and John-Paul Lyons
16	Cllr. Mick Duff	29	Aidan and Claire Griffin and others	54	James and Charlotte Acton
18	John and Miriam McDonagh	30	Glenda and Stephen Smullen	58	Cllr. Charlie O'Connor
20	Siobhan McBride and Kilnamanagh Residents	36	Aoife and Anthony Hanly and others		

Of the 14 submissions, 6 were from residents, 4 from a community organisation and 4 were from elected representatives supporting the residents.

A number of issues were raised, and these are listed below and described in Section 2.3.3 below.

Common Issues Raised

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Environmental impacts
    a. Bees

    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact
6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
9. Property values
10. Bus stops
    a. Relocation
    b. Anti-social behaviour
11. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

Other Issues Raised

The following issues relating to Parkview were raised in individual submissions:

1. Damage to house foundations – Submission 09
2. Taxis / private coaches / private cars using bus route – Submission – 20
3. Single bus route – Submission – 51
4. Light pollution – Submissions – 28 & 39
5. Removes social and ecological potential due to car usage decrease – Submission – 28
6. Plan out of date for current traffic volumes – Submission – 29
7. Residents exiting estate will face challenges – Submission –39

2.3.3 Common Issues Raised and Responses

2.3.3.1 Loss of green space

Summary of Issues Raised

1. a) Amenity
2. b) Traffic
3. c) Air, noise and vibration

Concerns were raised about the deterioration of the community in Parkview and residential enjoyment of the area as a result of the Proposed Scheme, asserting that the proposals will result in loss of community social, recreation and leisure activities due to reduction in green space. The submissions also expressed concern that there will be a significant increase in traffic, noise and pollution caused by proposed bus route.

Response to Issues Raised

4. a) Loss of Amenity

Section 3.3.4 of EIAR Chapter 3 Consideration of Reasonable Alternatives describes the Emerging Preferred Route for the Proposed Scheme (referred to as the Greenhills Core Bus Corridor at that time) and states that *"It is proposed to realign the existing Greenhills Road in two locations on this section: along an existing road reservation between Parkview and Treepark Road, and through Ballymount Industrial Estate by way of extending both Ballymount Avenue and Calmount Avenue to connect to Greenhills Road at new signalised junctions."*

The "*existing road reservation between Parkview and Treepark Road*" referred to above is described further in Section 3.4.1.2 of the Preferred Route Option Report included in the Supplementary Information provided with the application: *"The EPR proposal to the north of Mayberry Road was to*

provide a new road alignment, with bus and cycle lanes in each direction, through the green area between Parkview and Treepark Road. This route is identified as a Road Objective in the South Dublin County Council County Development Plan and has a previously approved alignment (SDCC Part 8, 2007).”

Extract from SDCC Part 8 Scheme drawings superimposed on extract from the General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR is shown in Figure 2.3.3.

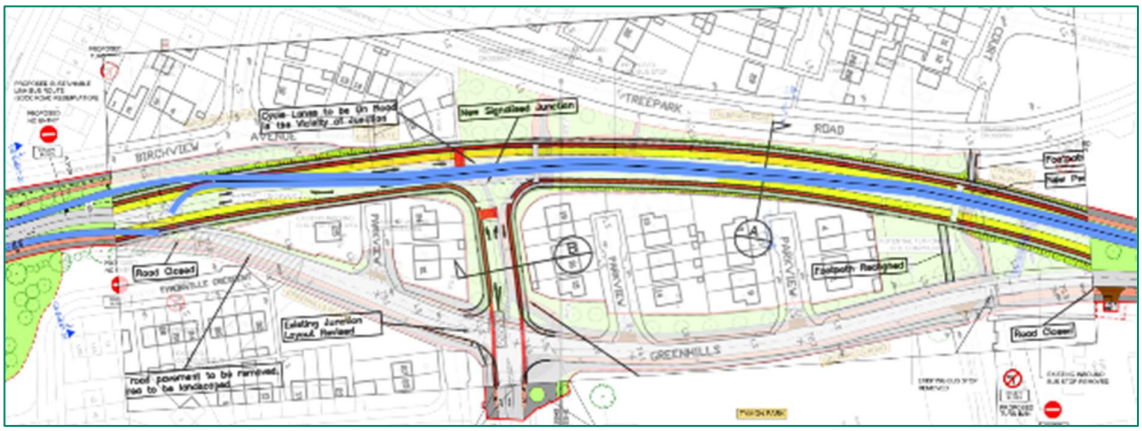


Figure 2.3.3: SDCC Approved Part 8 Scheme superimposed on Proposed Scheme GA’s

Section 10.4.4.1.2.2 of Chapter 10 Population of Volume 2 of the EIAR considers accessibility and notes the following:

“The purpose of the Proposed Scheme is to improve the accessibility for all users in and out of the City Centre. It is therefore expected that during operation there will be beneficial impacts. Chapter 6 (Traffic & Transport) identified a significant residual Positive, Moderate to Very Significant and Long-Term impact on pedestrian infrastructure and a Positive, Moderate to Significant Long-Term impact on cycling infrastructure along the Proposed Scheme. The beneficial impacts on walking and cycling infrastructure is expected to lead to improvements in access to community facilities along the Proposed Scheme for those choosing to walk or cycle as there will be increased provision for those modes of travel.

Chapter 6 (Traffic & Transport) identified a Positive, Very Significant and Long-Term impact on bus network performance indicators (which includes journey times and journey time reliability), as such, ease of access to community facilities via bus is also likely to improve along the Proposed Scheme. Chapter 6 (Traffic & Transport) also identified a residual Positive, Moderate to Very Significant and Long-Term impact on bus infrastructure along the Proposed Scheme

The impacts described above are expected to be experienced by community areas located predominately along the length of the Proposed Scheme and where there is Quiet Street Treatment, as these are the locations of the improved footpaths, cycle paths and bus lanes. The community areas that are expected to experience a Positive, Moderate to Very Significant and Long-Term impact on walking and bus users and a Positive, Moderate to Significant and Long-Term impact on cyclists are Tallaght Village, Tallaght Tymon, Kilnamanagh, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street, Meath Street and Merchants Quay, Clondalkin and Bluebell.”

Aligning with the above, the Proposed Scheme has assessed potential operational phase impacts and meet the Project Ireland 2040 National Planning Framework National Strategic Outcomes (NSO’s) relevant to the scheme as noted in Table 2.4 of Section 2.3.3.4 Chapter 2 Need for the Proposed Scheme of the EIAR which states in relation to NSO7:

“The overall landscape and urban realm design strategy for the Proposed Scheme aims to create attractive, consistent, functional, and accessible places for people alongside the core bus and cycle facilities. It aims to mitigate any adverse effects that the proposals may have on the streets, spaces, local areas, and landscape through the use of appropriate design responses. In addition, opportunities have been sought to enhance the public realm and landscape design where possible. Furthermore, built, and natural heritage have been key considerations in the design of the Proposed Scheme in compliance with the objectives of NSO7.”

Section 6 of Volume 1 Non Technical Summary of the EIAR notes the following:

"The design of the Proposed Scheme has evolved through comprehensive design iteration with particular emphasis on minimising the potential for environmental impacts, where practicable, whilst ensuring the objectives of the Proposed Scheme are attained. In addition, feedback received from the comprehensive consultation programme undertaken throughout the option selection and design development process has been incorporated where appropriate."

Section 10.4.4.1.1 of Chapter 10 Population of Volume 2 of the EIAR, considers operational phase community amenity impacts and notes the following:

"Community amenity impacts arise from a combination of traffic, air quality, noise and visual impacts, as discussed in Section 10.2.4.1.1.

Chapter 6 (Traffic & Transport) identified a Positive, Moderate and Long-Term impact from a reduction in general traffic along the Proposed Scheme and a Negative, Moderate and Long-Term impact from redistributed traffic along the surrounding road network.

Chapter 7 (Air Quality) identified a residual Neutral and Long-Term impact on local human receptors from road traffic impacts during the Operational Phase.

Chapter 9 (Noise & Vibration) identified a Positive, Imperceptible to Slight and Short to Medium Term to Negative, Slight and Short to Medium-Term impact from traffic noise along the Proposed Scheme and a Positive, Imperceptible to Slight and Short to Medium Term to Negative, Moderate and Short to Medium-Term impact and in the surrounding road network."

Table 10.15 in Section 10.6.2 of Chapter 10 summarises the predicted impacts (same as residual impacts) of the population assessment during the Operational Phase of the Proposed Scheme. This includes all community and economic assessment topics, including the stated environmental impacts which have been considered together to identify if there will be an in-combination of impacts acting upon the same community facilities.

Table 10.15 shows no significant residual impacts on Community Amenity areas at Tallaght Tymon and Kilnamanagh. The table however does show the following areas are subject to Negative, Not Significant and Long-Term community land take impacts at Kilnamanagh and Tallaght Tymon.

The proposed bus route at Parkview consists of a two-way 6.0m wide road carriageway and a 3.25m wide off-road cycle track with an intermittent 2.0m wide footway linking to Birchview Avenue, Treepark Road and Greenhills Road as shown in extract from EIAR Chapter 4 Appendix 4 Volume 3 Figures Part 1 of 3 Typical Cross Sections Figure 2.3.4 below.

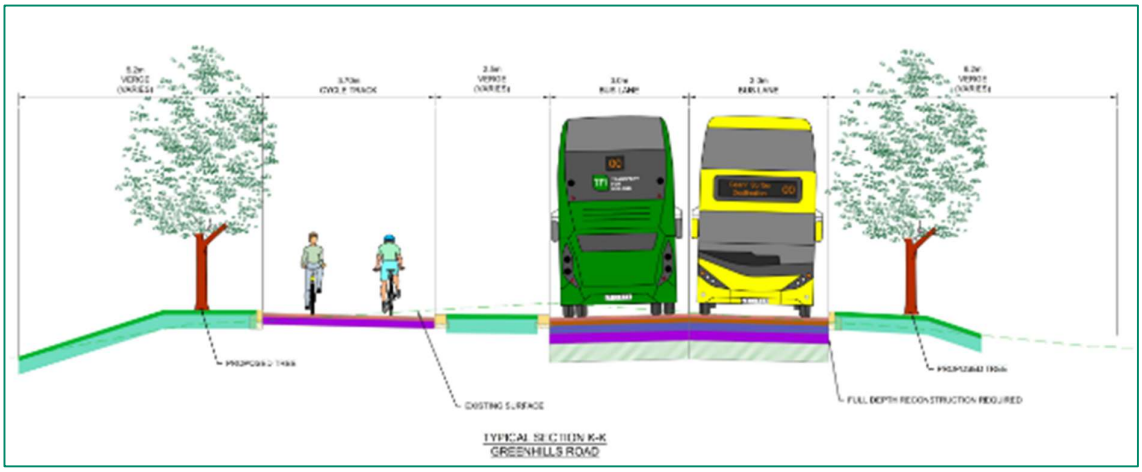


Figure 2.3.4: Extract from EIAR Typical Cross Sections Drawings (Sheet 6)

The approved SDCC Part 8 scheme at Parkview consists of a two-way 13.0m wide carriageway, catering for general traffic and bus lanes in both directions and a 3.2m wide cycletrack/footpath on

either side of the carriageway as shown in extract from SDCC Part 8 Display Drawings Figure 2.3.5 below.

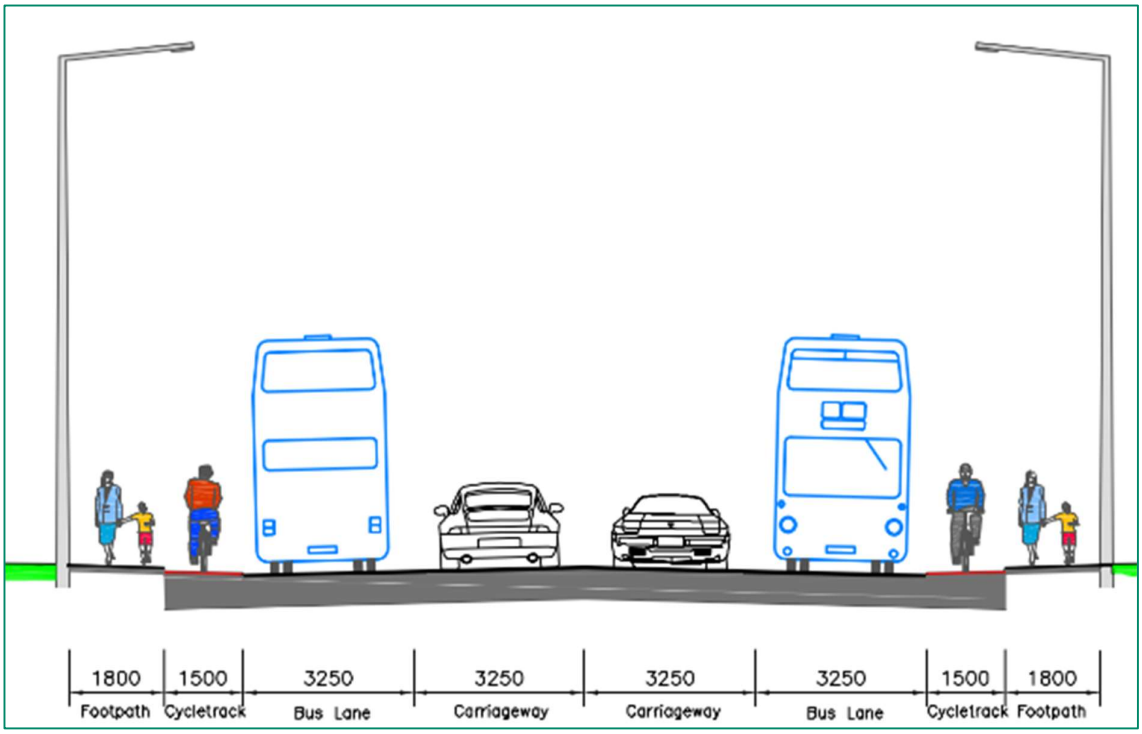


Figure 2.3.5: Extract from SDCC Part 8 Display Drawings Greenhills Road Realignment at Parkview (Section A)

The reduced carriageway cross section of 6.0m width for the Proposed Scheme compared to the 13.0m carriageway width for the SDCC Part 8 Planning Application will minimise impacts on the adjacent properties and surrounding environment due to the physically narrower carriageway cross section which results in a lower landtake requirement for trafficked carriageway and increased offset distances between the carriageway edge and residential properties in the area.

b) Traffic

As set out in Section 2.1 of EIAR Chapter 2 Need for the Scheme, *"The Proposed Scheme is needed in order to enable and deliver efficient, safe and integrated sustainable transport movement along the corridor through the provision of enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region."*

The Proposed Scheme aims to provide an attractive alternative to the private car and promote a modal shift to public transport, walking and cycling on this key access corridor in the Dublin region. Section 6.4.6.2.9.7 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR states that: *"Overall, it has been determined that the potential impact of the reduction in general traffic flows along the Proposed Scheme will be Positive, Moderate and Long-term whilst the potential impact of the redistributed general traffic along the surrounding road network will be Negative, Sight and Long-term."*

In meeting its objectives, the Proposed Scheme will deliver strong positive impacts in terms of promoting active travel and sustainable transport. It is noted that the modelled forecasts for the 2028 opening year indicate that one of the impacts of the proposed Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme is that there is a reduction of 33% in the number of people travelling via car along the Proposed Scheme towards the city centre at AM peak hour. Similarly, in the PM peak hour, there is a reduction of 38% in the number of people travelling outbound via car, as shown in Figure 2.3.6 and Figure 2.3.7 (reproduced from diagrams 6.6 and 6.7 in Chapter 6). This will reduce the overall traffic movement along the Greenhills Road.

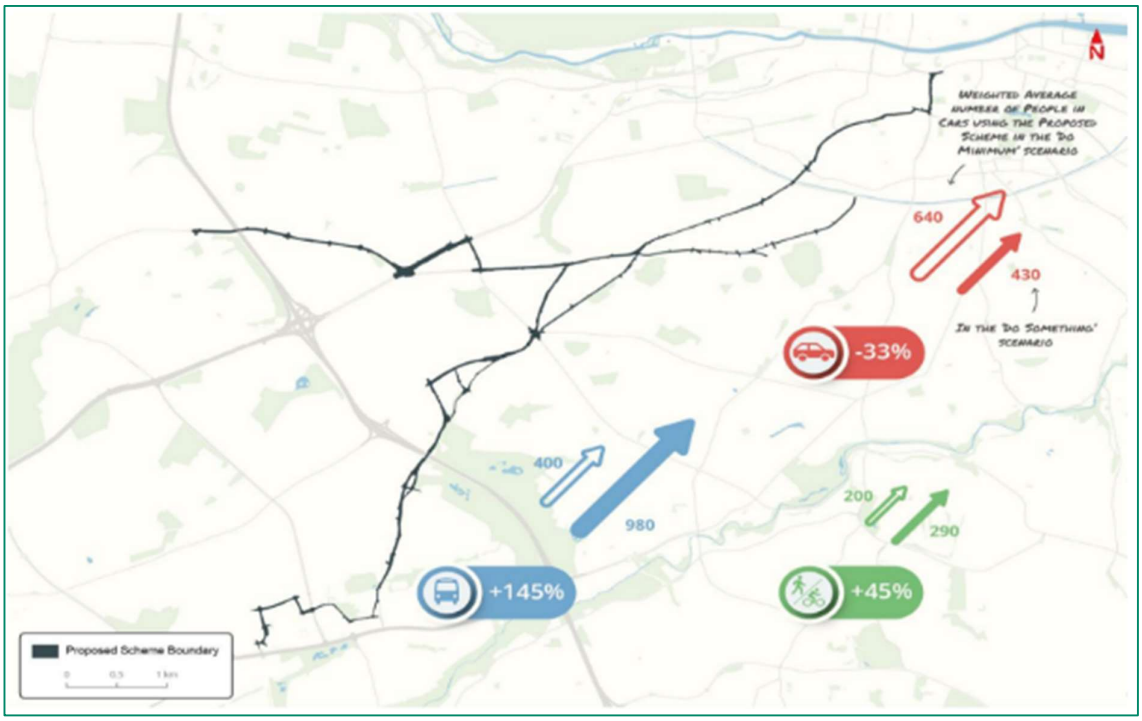


Figure 2.3.6: People Movement by Mode travelling along the Proposed Scheme during 2028 AM Peak Hour (Diagram 6.6 in EIAR Chapter 6)

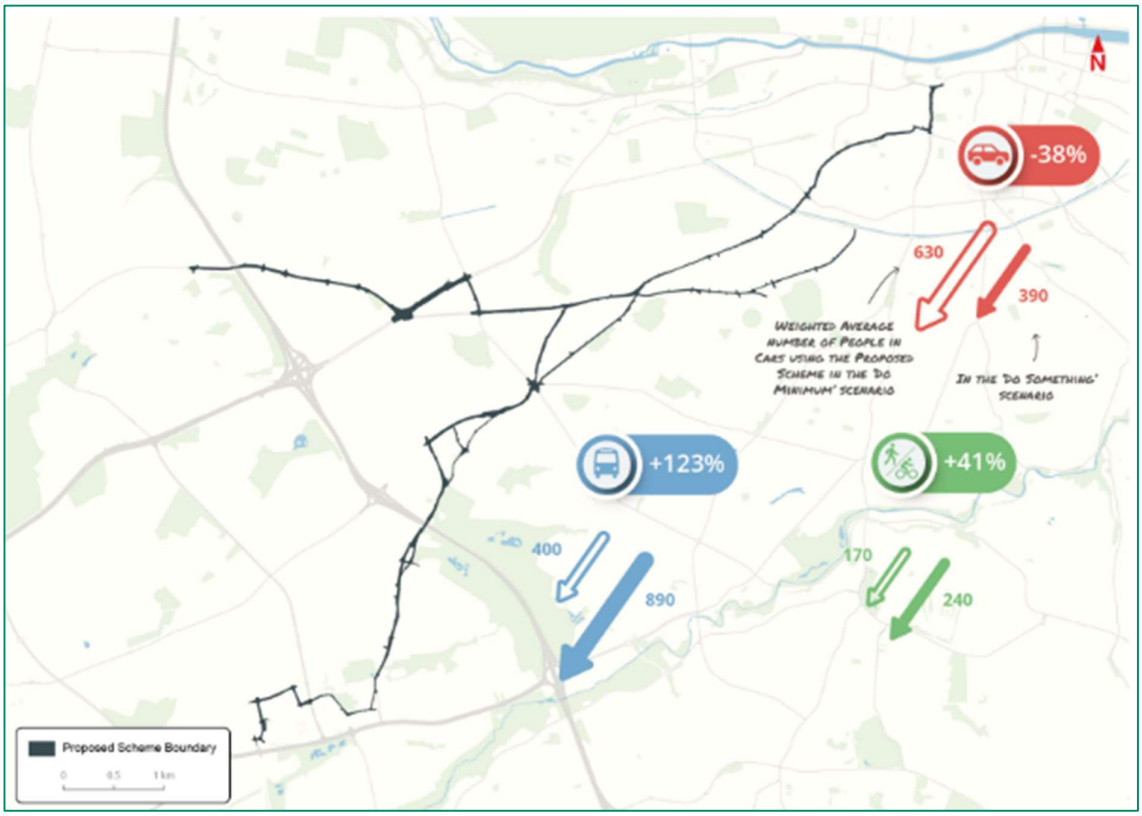


Figure 2.3.7: People Movement by Mode travelling along the Proposed Scheme during 2028 PM Peak Hour (Diagram 6.7 in EIAR Chapter 6)

Section 6.4.6.2.9.3 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR notes the following:
"Direct Reductions in General Traffic: The LAM indicates that, during the 2028 Opening Year scenario, there are reductions in general traffic noted along the Proposed Scheme during the AM Peak Hour, as illustrated by the blue lines in Diagram 6.40, which indicates where a reduction of at least -100 combined traffic flows occur."

Extract from Section 6.4.6.2.9.3 Diagram 6.40 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR which illustrates the predicted difference in traffic flows on the road links in the AM Peak Hour for the 2028 Opening Year is shown in Figure 2.3.8.

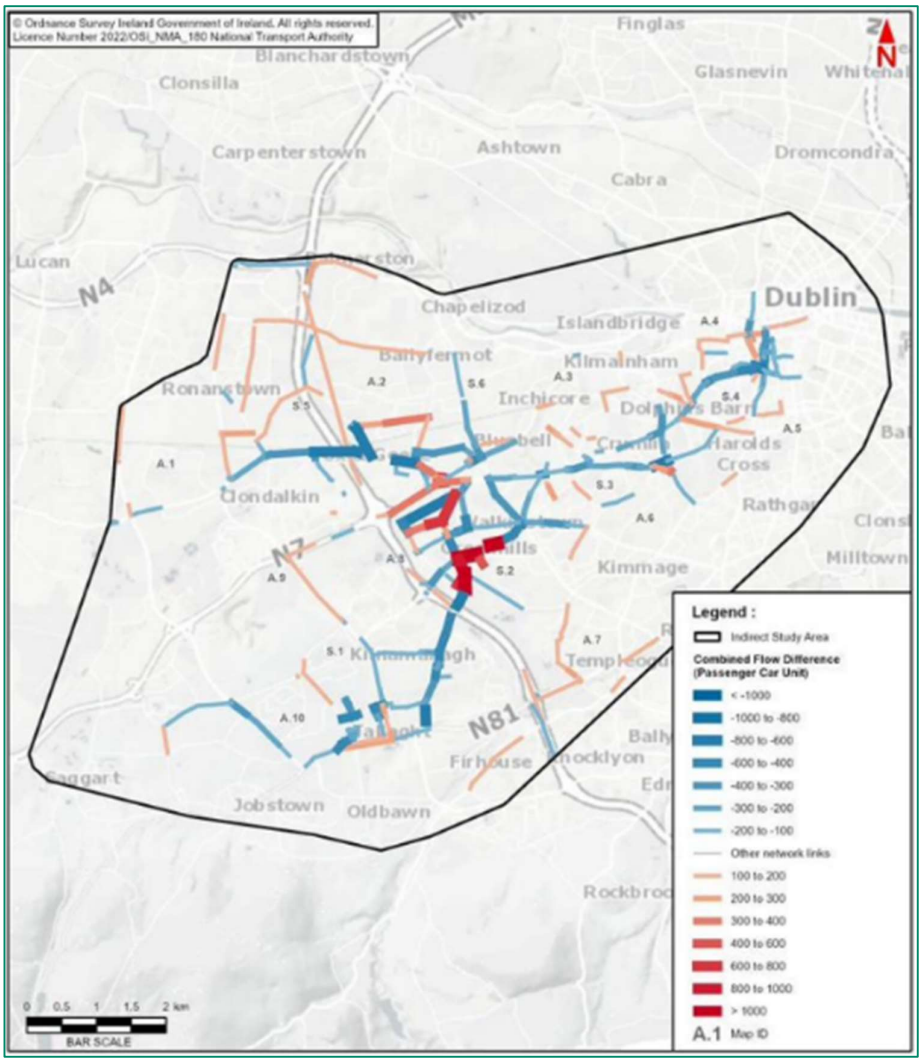


Figure 2.3.8: Extract from the EIAR Section 6.4.6.2.9.3 Diagram 6.40: Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year

The reduction in traffic along Greenhills Road for combined flows (Passenger Car Units per hour in two directions) expected in the AM Peak Hour 2028 Opening Year scenario is noted in Table 6.73, page 153 of Chapter 6 in Volume 2 of the EIAR as minus 1516 PCU (Passenger Car Unit).

Table 6.74, page 174 of Chapter 6 in Volume 2 of the EIAR shows a predicted increase in traffic flow along Greenhills Road (New Link) of plus 1462 PCU in the AM Peak Hour 2028 Opening Year north of the M50 and notes the following: *"When compared to Table 6.73, Table 6.74 shows that the scheme will generally reduce traffic levels along the corridor, with increases in traffic flow only predicted on four links, three of which relate to the closing off of a section of Greenhills Road, and redirection of traffic along Calmount Road via a new link along Ballymount Avenue. Most of this traffic will be transferred from the existing Greenhill Road."*

Section 6.4.6.2.9.4 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR notes the following: *"Direct Reductions in General Traffic Flows: The LAM indicates that during the 2028 Opening Year scenario, there are key reductions in general traffic noted along the Proposed Scheme during the PM Peak Hour, as illustrated by the blue lines in Diagram 6.41, which indicates where a reduction of at least -100 combined traffic flows occurs."*

Extract from Section 6.4.6.2.9.4 Diagram 6.41 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR which illustrates the predicted difference in traffic flows on the road links in the PM Peak Hour for the 2028 Opening Year is shown in Figure 2.3.9.

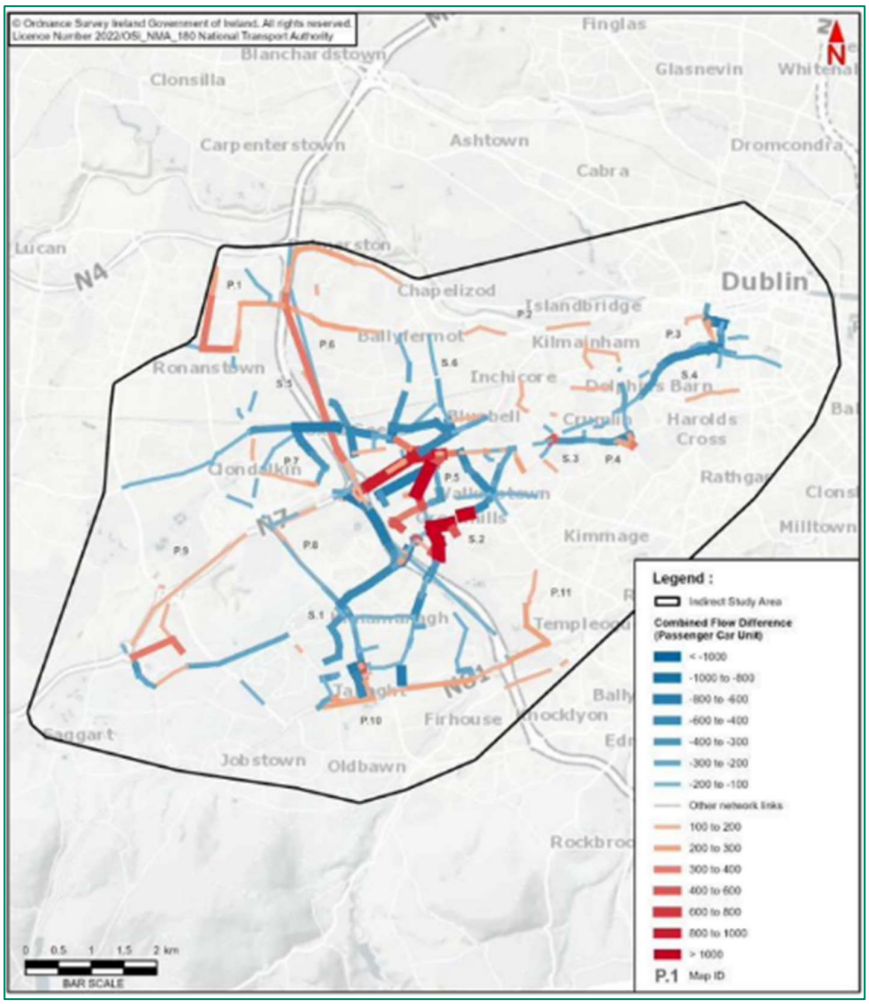


Figure 2.3.9: Extract from the EIAR Section 6.4.6.2.9.3 Diagram 6.41: Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year

The reduction in traffic along Greenhills Road for combined flows (Passenger Car Units per hour in two directions) expected in the PM Peak Hour 2028 Opening Year scenario is noted in Table 6.78, page 160 of Chapter 6 in Volume 2 of the EIAR as minus 1508 PCU (Passenger Car Unit).

Table 6.79, page 160 of Chapter 6 in Volume 2 of the EIAR shows a predicted increase in traffic flow along Greenhills Road (New Link) of plus 1081 PCU in the PM Peak Hour 2028 Opening Year north of the M50 and notes the following: *"When compared to Table 6.78, Table 6.79 shows that the scheme will generally reduce traffic levels along the corridor, with increases in traffic flow only predicted on four links, three of which relate to the closing off of a section of Greenhills Road, and redirection of traffic along Calmount Road via a new link along Ballymount Avenue. Most of this traffic will be transferred from the existing Greenhill Road."*Air, noise and vibration

5. c) Air, noise and vibration

Air Quality

Chapter 7 Air Quality of the EIAR sets out the methodology adopted to assess the impact on air quality of the Proposed Scheme. Table 7.1 identifies the air quality receptors within the study area from Tallaght to Ballymount.

Construction phase air quality

For the Construction Phase Section 7.4.2.2.3 of Chapter 7 identifies the significance of the changes in the concentration of each of the ambient receptors in the context of the TII significance criteria (TII 2011). Table 7.27 of Chapter 7 provides a list of the most impacted receptor locations, which does not include locations AQ45 at Parkview and AQ46 at Temple Court on Greenhills Road. Along with the majority of modelled receptors, AQ45 and AQ46 are assessed as experiencing a negligible impact due to the Proposed Scheme in terms of the annual mean NO_2 concentration.

As shown in Table 7.27 and Figure 7.7 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of annual mean PM_{10} concentrations, with all receptors experiencing a negligible impact.

As shown in Table 7.27 and Figure 7.8 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of the annual mean $PM_{2.5}$ concentration with all receptors experiencing a negligible impact.

In accordance with the EPA Guidelines (EPA 2022), the impacts associated with the Construction Phase traffic emissions pre-mitigation are overall neutral and long-term.

Section 7.6.1 Construction Phase notes the following: *"When the dust minimisation measures detailed in the mitigation section of this Chapter are implemented, fugitive emissions of dust from the site will be insignificant and pose no nuisance at nearby receptors. Thus, there will be no significant residual Construction Phase dust impacts.*

The air dispersion modelling assessment of Construction Phase traffic emissions has found that the Proposed Scheme will be neutral overall in the study area. There are no substantial or moderate adverse effects expected as a result of the Construction Phase of the Proposed Scheme.

Therefore, overall, it is considered that the residual effects as a result of the Proposed Scheme's construction are Neutral and Short-term. No significant residual impacts have been identified during the Construction Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."

Operational phase air quality

For the Operational Phase Section 7.4.3.3 of Chapter 7 identifies the significance of the changes in the concentration of each of the ambient receptors in the context of the TII significance criteria (TII 2011). Table 7.33 of Chapter 7 provides a list of the most impacted receptor locations, which includes locations AQ45 at Parkview and AQ46 at Temple Court on Greenhills Road. AQ45 is assessed as experiencing a negligible impact (slight beneficial) due to the Proposed Scheme in terms of the annual mean NO_2 concentration, AQ46 is assessed as experiencing a slight adverse impact due to the Proposed Scheme in terms of the annual mean NO_2 concentration.

As shown in Table 7.33 and Figure 7.4 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of annual mean PM_{10} concentrations, with all receptors experiencing a negligible impact.

As shown in Table 7.33 and Figure 7.5 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of the annual mean $PM_{2.5}$ concentration with all receptors experiencing a negligible impact.

In accordance with the EPA Guidelines (EPA 2022), the impacts associated with the Operational Phase traffic emissions pre-mitigation are overall neutral and long-term.

Section 7.4.3.3 goes on to note that the predictions reported are based on conservative assumptions regarding background pollutant concentrations and the improvement in vehicle emission rates. 2019 background pollutant concentrations have been used to represent 2028 and are likely be lower by the opening year than in 2019. Older fleet projections were used in the absence of a fleet that incorporates the effects of 2023 Climate Action Plan measures – a larger proportion of electric vehicles is planned by the opening year than has been modelled. In reality, total concentrations (and magnitude of change) are likely to be lower than those reported in the EIAR.

Section 7.6.2 describes the residual impacts for the Operational Phase: *"The air dispersion modelling assessment has found that the Proposed Scheme will be neutral overall in the study area. The*

number of receptors where an exceedance of the NO_2 limit value is predicted reduces from 24 in the Do Minimum scenario to 12 as a result of the Proposed Scheme. In 2043, all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the Do Something (and Do Minimum) scenario. There are no substantial or moderate adverse effects expected as a result of the Operational Phase of the Proposed Scheme. Therefore, overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are Neutral and Long-term. No significant residual impacts have been identified during the Operational Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."

Section 7.6.2 Operational Phase notes the following: *"The air dispersion modelling assessment has found that the Proposed Scheme will be neutral overall in the study area. The number of receptors where an exceedance of the NO2 limit value is predicted reduces from 24 in the Do Minimum scenario to 12 as a result of the Proposed Scheme. In 2043, all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the Do Something (and Do Minimum) scenario. There are no substantial or moderate adverse effects expected as a result of the Operational Phase of the Proposed Scheme.*

Therefore, overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are Neutral and Long-term. No significant residual impacts have been identified during the Operational Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."

In summary, the EIAR demonstrates that there will be no significant impact on air quality as a result of the operation of the Proposed Scheme.

Noise & Vibration

The potential Noise and Vibration impacts, as a result of the Proposed Scheme has been assessed in the EIAR. The process of assessment and the results have been described in Chapter 9 (Noise & Vibration) in Volume 2 of the EIAR.

Construction phase noise

Section 9.4.3.2 of Chapter 9 considers construction noise and Table 9.34 provides the predicted noise levels for Road Widening, Road Construction, Road Upgrade and Utility Diversion Construction Noise Calculations at Nearest NSLs. The total predicted cumulative CNL for these works at the nearest Residential NSL's to the west and east of greenfield site between Treepark Road and R819 Greenhills Road (<10m) and at the Residential NSL's at Parkview Estate (10m) are 83 dB LAeq,1hr in the absence of any noise mitigation. Making reference to the CNLs in Table 9.34 the potential noise impacts at the closest NSLs are assessed to range between Negative, Not Significant to Very Significant, and Temporary during the daytime evening and weekend periods in the absence of noise mitigation.

The calculations are based on six plant items with an average noise level of 75 dB LAeq,T at 10m operating simultaneously, in the absence of any noise mitigation, along a given section of road. The average plant noise level has been calculated on the basis that plant will be operating at varying distances from a NSL at any one time. Reference to Table 9.30 indicates that highest noise levels will occur when breaking, excavators and road planers are operating at the closest distance to NSLs. During specific periods when these activities are operating outside NSL's, higher noise levels will occur compared to those discussed in Table 9.34. These activities will occur, however, for intermittent periods of time at any one location over the course of a working day."

The EIAR contains a comprehensive set of mitigation measures to minimise construction phase impacts, including noise impacts. Construction noise mitigation measures are set out in Chapter 9 in Volume 2 of the EIAR (and are also summarised in Appendix A5.1 Construction Environmental Management Plan in Volume 4 of the EIAR).

Section 9.5.1.1 of the EIAR Chapter 9 states the following:

"The appointed contractor will be required to take specific noise abatement measures to the extent required and comply with the recommendations of BS 5228–1 (BSI 2014a) and S.I. No. 241/2006 - European Communities (Noise Emissions by Equipment for Use Outdoors) (Amendment) Regulations

2006. The mitigation measures outlined below for the Construction Phase have also been included in the Construction and Environmental Management Plan (CEMP) in Appendix A5.1 in Volume 4 of this EIAR.

These measures will ensure that:

- *During the Construction Phase, the appointed contractor will be required to manage the works to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228–1 (BSI 2014a); and*
- *The best means practicable, including proper maintenance of plant and equipment, will be employed to minimise the noise produced by on site operations.*

BS 5228–1 includes guidance on several aspects of construction site practices, which include, but are not limited to:

- *Selection of quiet plant;*
- *Control of noise sources;*
- *Screening;*
- *Hours of work;*
- *Liaison with the public; and*
- *Monitoring.*

…….The appointed contractor will put in place the most appropriate noise control measures depending on the level of noise reduction required at individual working areas (i.e. based on the construction threshold values for noise and vibration set out in Table 9.11 and Table 9.14). Reference to Table 9.50 indicates that intrusive works occurring within 75m of NSLs with a direct line of sight to work will need specific noise control measures to reduce impacts depending on time period over which they will occur (i.e., daytime or evening).”

Section 9.5.1.1.4 od Chapter 9 sets out the proposed working hours and states:

“It is envisaged that generally construction working hours will be between 07:00hrs and 23:00hrs on weekdays, and between 08:00hrs and 16.30hrs on Saturdays. Night-time and Sunday working will be required during certain periods to facilitate street works that cannot be undertaken under daytime / evening time conditions. The planning of such works will take consideration of sensitive receptors, in particular any nearby residential areas.

Construction activities will be scheduled in a manner that reflects the location of the site and the nature of neighbouring properties. Construction activities / plant items will be considered with respect to their potential to exceed construction noise thresholds at NSLs and will be scheduled according to their noise level, proximity to sensitive locations and possible options for noise control. In situations where an activity with potential for exceedance of construction noise thresholds is scheduled (e.g., road widening and utility diversions or activities with similar noise levels identified in Table 9.50), other construction activities will be scheduled to not result in significant cumulative noise levels.”

In summary the NTA is satisfied that the noise abatement measures set out in the EIAR that the appointed contractor will be required to put in place to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228-1 will result in appropriate and adequate mitigation measures in respect of construction noise impact at this location.

Operational phase noise

Specifically, Section 9.4.4.1.1.6 New Sustainable Transport Link Road mentions:
“In Section 1 of the Proposed Scheme (Tallaght to Ballymount), it is proposed to reconfigure the local road network between Mayberry Road and Tymon Lane. A new approximately 620m long sustainable link road will run parallel to Birchview Avenue and Treepark Road as part of this re-configuration. A previous version of this new road section received Part 8 Planning Approval in 2007 which involved a more substantial cross section to accommodate a full carriageway for private and public vehicles. The Proposed Scheme seeks to align with the principles of the Part 8 scheme, but with a significantly

reduced cross section that caters for sustainable modes only (i.e. bus / cycling / pedestrian) to minimise impacts on the adjacent properties and surrounding environment. The total volume of buses travelling along the new road is up to 245 over a 24 hour period in the year of opening 2028 and in the Design Year (2043). The design speed along the road link is 50 km/hr.

Traffic noise levels have been calculated at the nearest properties along Birchview Avenue and Treepark Road for the Do Minimum and Do Something scenarios for the Opening Year 2028 to determine the potential change in traffic noise levels at these properties. The calculations take account of traffic along the existing Greenhills Road, Treepark Road, Castletymon Road and Mayberry Road during both scenarios, in addition to existing walls along properties boundaries, where they provide screening from the road, where relevant. Table 9.53 presents the calculated noise impact at the most affected properties along Treepark Road, Parkview and Birchview Avenue"

Extract from Section 9.4.1.1.6 Table 9.53 of Chapter 9 Noise & Vibration of Volume 2 of the EIAR Summary of Traffic Noise Impacts along Sustainable Link Road is shown in Figure 2.3.10.

Road	Do Minimum, dB $L_{Aeq,16hr}$	Do Minimum, dB L_{den}	Do Something, dB $L_{Aeq,16hr}$	Do Something, dB $L_{Aeq,Lden}$	Traffic Noise increase, dB	Potential Impact
Treepark Road	56	58	57	60	+2	Direct, Negative, Slight, Short-Long-term
24 Parkview	55	57	55	58	+1	Direct, Negative, Not Significant, Short-Long-term
10A Parkview (upper floor level)	53	56	54	56	+1	Direct, Negative, Not Significant, Short-Long-term
15 Birchview Avenue	54	57	55	58	+1	Indirect, Negative, Slight, Long-term

Figure 2.3.10: Extract from the EIAR Section 9.4.1.1.6 Table 9.53: Summary of Traffic Noise Impacts along Sustainable Link Road

Section 9.4.4.1.1.6 in summary notes: *"The resultant traffic noise levels associated with the reconfigured sustainable link road is determined to be Not Significant to Slight at the closest NSLs (i.e. properties along Treepark Road, Parkview, and Birchview Avenue) when added to the surrounding traffic noise. The resultant impact is determined to be Direct, Negative, Not Significant to Slight and Short to Long term. The small increase is due to the low traffic volumes along the new link road, the screening provided by existing property boundaries and the existing traffic noise levels from the surrounding road network."*

In relation to proposed new bus stops at Parkview, Section 9.4.4.3 Bus Stops notes the following:

"As discussed in Section 9.4.4.1.1.4, during the proposed year of opening, 2028, the NTA forecast for 94% of the city bus fleet to be electric vehicles (EVs) or hybrid electric vehicles (HEVs). For the Design Year 2043, the city bus fleet is forecast to be 100% electric. The operation of electric and hybrid buses eliminates ICE [Internal Combustion Engine] *noise from buses accelerating, decelerating and idling at bus stops which is the dominant noise source. In addition, the characteristic of noise from electric vehicles is subjectively less intrusive compared to those with ICE's and is masked to a much greater extent by surrounding road traffic……*

The closest noise sensitive locations (residential dwellings) to the new bus stop locations along the Proposed Scheme are close to the existing road edge and are exposed to road traffic noise levels typically between 65 and 69dB LAeq,16hr, which will dominate noise levels at these locations. As noted above, the forecast for an electric bus fleet will result in a reduction in noise emissions from buses accelerating, decelerating and idling at bus stops which is the dominant noise source.

It is noted that the bus stops along the Proposed Scheme will be used by other bus operators which may not transition to EV and HEVs over the same period as the city bus fleet. The volume of these buses along the Proposed Scheme will, however, be significantly less than the city bus fleet and hence, noise levels associated with these areas will not generate significant noise levels over the

prevailing noise environment. Taking into consideration the location of NSL [Noise Sensitive Locations] *relevant to the proposed bus stops in addition to the lower noise emissions from the proposed future bus fleet, the overall impact is determined to be Negative, Not Significant and Long Term"*

Operational phase vibration

Section 9.4.4.2 Operational Vibration Impact Assessment mentions:

"Once operational, buses will use the dedicated bus lanes for the Proposed Scheme. Analysis of traffic data for the Proposed Scheme, however, indicates a reduction in overall AADT [Annual Average Daily Traffic] *traffic flows along the core bus corridor.*

Reference to the monitoring results in Table 9.28 and Table 9.29 confirms that vibration levels associated with passing buses and other vehicular traffic at distances of 2.5 to 10m from the road edge are negligible in terms of human perception and building response. Vibration levels associated with a passing bus were recorded at 0.1mm/s PPV [Peak Particle Velocity] *or less under the monitored scenarios. These values are below the normal range of perceptible human response to vibration and would not pose any significant impact.*

A review of the traffic data for the Proposed Scheme indicates that the maximum number of buses travelling inbound or outbound is 545 over the 16hr daytime period along the Drimnagh Road. Using this number and the highest VDV [Vibration Dose Value] *event measured during a bus pass at a reference distance of 5m from the road edge (0.0033 m/s1.75), the daytime VDV,b,day value is calculated as 0.016 m/s1.75. Reference to Table 9.20 confirms this value is orders of magnitude below those associated with a low probability of adverse comment. The overall impact is neutral, negligible and long term."*

In relation to the Proposed Scheme residual impacts for the Operational Phase Section 9.6.2 notes the following: *"There are no significant residual Operational Phase noise or vibration impacts associated with the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."*

Construction phase vibration

Section 9.4.3.3 notes the following:

"The potential for elevated levels of vibration at sensitive locations during construction activities associated with the Proposed Scheme is typically associated with surface breaking activities used for road widening and utility diversions. Depending on the method and equipment used, there is the potential for minor vibration levels relating to piling operations……

…vibration impacts during ground-breaking activities using heavy breakers have the potential to generate a negative, slight to moderate, temporary effects at distances of 10m from the activity. Beyond 50m from this type of activity, impacts are reduced to not significant to slight and temporary. For all other works, vibration impacts will be below those associated with perceptible vibration and will be imperceptible to not significant and temporary. All construction works are orders of magnitude below limits values associated with any form or cosmetic or structural damage for structurally sound or protected or historical buildings or structures referred to in Table 9.14 even at closer distances to the source. Notwithstanding the above, any construction activities undertaken on the site will be required to operate below the recommended vibration criteria set out in Table 9.14. No vibration sensitive processes have been identified along the Proposed Scheme."

Extract from Section 9.2.4.1.3.1 Table 9.14 of Chapter 9 Noise & Vibration of Volume 2 of the EIAR Recommended Construction Vibration Thresholds for Buildings Figure 2.3.11.

Vibration Limits for Buildings (PPV) at the Closest Part of the Building to the Source of Vibration, at a Frequency of 4Hz		
Building Type	Transient Vibration	Continuous Vibration
Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s	25 mm/s
Unreinforced or light framed structures. Residential or light commercial-type buildings	15 mm/s	7.5 mm/s
Protected and Historic Buildings *Note 1	6 mm/s – 15 mm/s	3 mm/s – 7 mm/s
Identified Potentially Vulnerable Structures and Buildings with Low Vibration Threshold	3 mm/s	

Note 1: The relevant threshold value to be determined on a case by case basis. Where sufficient structural information is unavailable at the time of assessment, the lower values within the range will be used, depending on the specific vibration frequency.

Figure 2.3.11: Extract from the EIAR Section 9.2.4.1.3.1 Table 9.14: Recommended Construction Vibration Thresholds for Buildings

In relation to the Proposed Scheme residual impacts for the Construction Phase Section 9.6.1 notes the following: *"The assessment has indicated that the use of standard construction activities can operate comfortably within the recommended vibration limits for standard residential and other light-framed buildings. With the adoption of best practice methodologies, vibration impacts at the most sensitive premises can be adequately mitigated to within acceptable levels relating to disturbance, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."*

2.3.3.2 Environmental impacts

Summary of Issues Raised

6. Wildflower and native flower plant destruction for Bee pollination – violation SDCC pollinator action plan 2021-2025.
7. Natural light loss due to higher walls

Response to issues Raised

Bees

Section 12.3.13.4 Other Invertebrates of Chapter 12 Biodiversity notes the following in relation to Ireland Red and Regional Red List of Irish Bees 2006:

"Bees favour sites with lots of flowers in unimproved grasslands and hay meadows. Improved agricultural grassland (GA1) habitats were not identified along the Proposed Scheme. Agricultural lands are located approximately 3km to the west of the Proposed Scheme. The preferred foodplants for bees are native species with white, blue or yellow flowers (Fitzpatrick 2006). Small, fragmented sites where suitable floral species were recorded along the Proposed Scheme include areas of ornamental flower beds (BC4) within residential gardens; parkland with scattered trees (WD5) and amenity grasslands (GA2). Bumblebees may have large ranges and require large areas with varied habitats providing long flowering periods to support viable populations. Bees do not cope well with habitat fragmentation which can isolate species, ultimately reducing gene flow and genetic diversity, increasing their vulnerability to other stressors such as disease and internal parasites. Species with specialist foodplants or limited dispersal abilities can be particularly vulnerable to habitat loss and degradation (Biesmeijer et al., 2006), leading to increasing dominance by a smaller number of generalist species.

The majority of these other invertebrate species favour species rich semi-natural grasslands and meadows, upland heath and sand dunes. Habitats within close proximity to the Proposed Scheme which correspond to species requirements include species poor dry meadows and grassy verges, and areas of ornamental planting along roadsides, parkland, and gardens. Such habitats are fragmented and highly disturbed and are therefore deemed unsuitable for significant populations of red-listed invertebrates (Biesmeijer et al., 2006; Öckinger et al., 2010). As such, other invertebrates are not considered further in the assessment."

Section 12.5.1.2 Habitats of Chapter 12 Biodiversity notes the following in relation to Habitat Loss and Fragmentation:

"To mitigate loss of habitat, proposed planting incorporated into the Proposed Scheme will be implemented by the appointed contractor, as listed below and displayed on the Landscaping General Arrangement drawings (BCIDAACM-ENV_LA-0809_XX_00-DR-LL-9001) in Volume 3 of this EIAR:

- *1055 no. trees planted;*
- *590m of proposed hedgerow;*
- *20,560m2 of proposed species rich grassland;*
- *3,450m2 of proposed ornamental planting;*
- *5,525m2 of proposed native planting; and,*
- *43,140m2 of proposed amenity grassland planting."*

Figure 2.3.12 and Figure 2.3.13 are extracts from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed planting at Parkview / Birchview Avenue / Treepark Road.

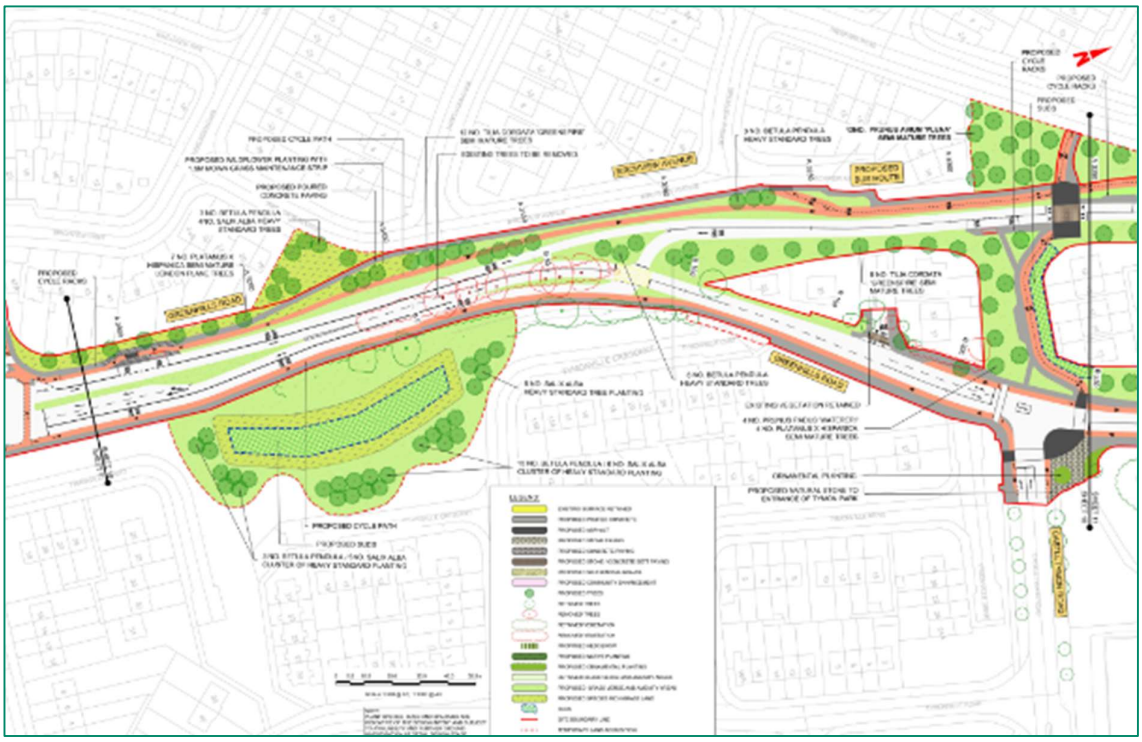


Figure 2.3.12: Extract from Landscape General Arrangement Drawing (Sheet 10)

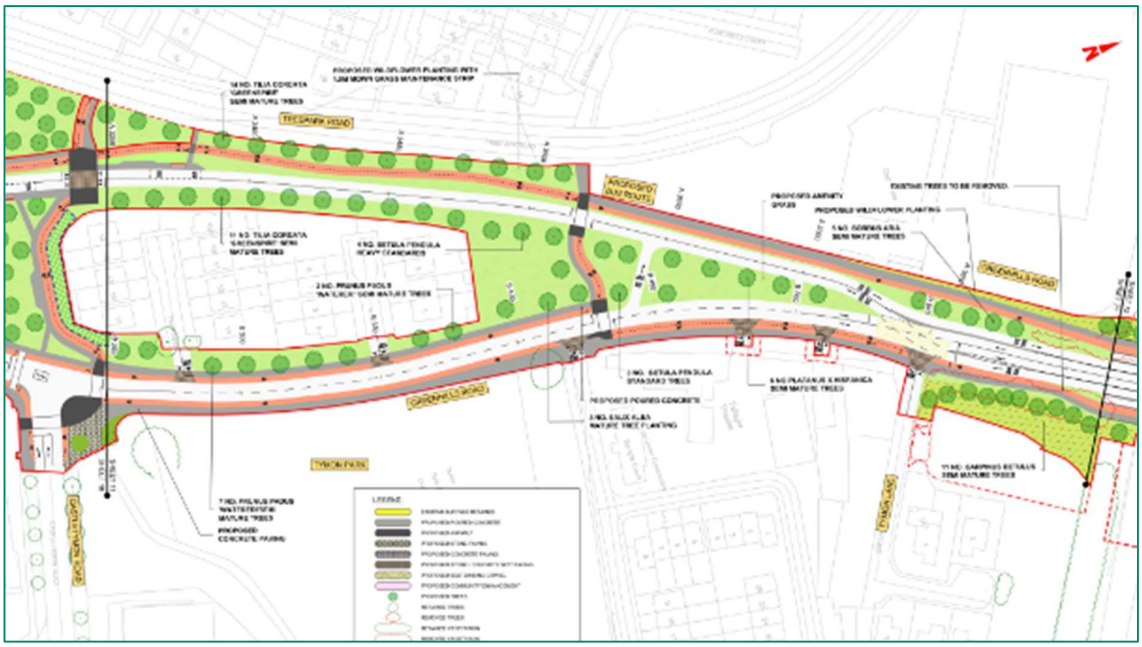


Figure 2.3.13: Extract from Landscape General Arrangement Drawing (Sheet 11)

Habitat surveys were undertaken on the Proposed Scheme. The habitat types encountered are shown in Figure 12.5 in Volume 3 Part 3 of 3 of the EIAR. Figure 2.3.14 below is an extract from the drawing, the area in which Parkview between Mayberry Road and M50 can be seen.

The habitat types recorded at this location are shown in Figure 2.3.14 and listed below.



Figure 2.3.14: Habitat Survey Results Sheet 3 of 11 (Figure 12.5) from Figures: Part 1 of 3 of Volume 3 of the EIAR

List of habitat types recorded.

- Buildings and artificial surfaces (BL3)
- Spoil and bare ground (ED2)
- Amenity Grassland (improved) (GA2)
- Dry meadows and grassy verges (GS2) (Key Ecological Receptor)
- Hedgerows (WL1) (Key Ecological Receptor)
- Treelines (WL2) (Key Ecological Receptor)

- Scrub (WS1)
- Ornamental / non-native shrub (WS3)
- Residential (Res)

Section 12.6.1 Construction Phase of Chapter 12 Biodiversity notes the following in relation to Residual Impacts: *"Following the implementation of the mitigation measures outlined in Section 12.5, the Proposed Scheme will not result in any significant residual effects above the local scale on the KERs identified (see Table 12.17) on its own, or cumulatively together with other proposed developments during the Construction Phase."*

Table 12.17: Summary of Construction Phase Residual Impacts of the EIAR describes the significant residual impact (post mitigation and monitoring) of the following Ecological Receptors GS2 found at this location as *'No significant residual effect'* and for WL1 & WL2 as *'Likely significant effect'* at the local geographical scale.

Section 12.6.2 Operational Phase of Chapter 12 Biodiversity notes the following in relation to Residual Impacts: *"Following the implementation of the mitigation measures outlined in Section 12.5, the Proposed Scheme will not result in any significant residual effects on the KERs identified (Table 12-18) on its own, or cumulatively together with other proposed developments during the Operational Phase."*

Table 12.18: Summary of Operational Phase Residual Impacts of the EIAR describes the significant residual impact (post mitigation and monitoring) of the following Ecological Receptors for Local Biodiversity Areas as *'No significant residual effect'* for South Dublin County Green Infrastructure.

Natural Light

Higher walls are not proposed as part of the Proposed Scheme at Parkview / Birchview Avenue / Treepark Road.

EIAR Chapter 17 Figure 17.2.4.2 Photomontage in Volume 3 Part 3 of 3 includes views at 3 location in the vicinity of Parkview as shown in Figure 2.3.15.



Figure 2.3.15: Extract from EIAR Figure 17.2 Photomontage – Location of Views at Parkview

Figure 2.3.16 and 2.3.17 are extracts from EIAR Chapter 17 Figure 17.2.4.2 Photomontage View 04 As Existing and As Proposed. These show the view at Treepark Road looking north where the interface between the proposed bus route between Treepark Road and Parkview is green verge with new tree planting. Figure 2.3.12 and Figure 2.3.13 above also show Proposed Scheme landscaping at this area without proposed walls at Parkview / Birchview Avenue / Treepark Road.



Figure 2.3.16: Extract from EIAR Figure 17.2 Photomontage View 04 As Existing



Figure 2.3.16: Extract from EIAR Figure 17.2 Photomontage View 04 As Proposed

2.3.3.3 Safety of children / students / residents

Summary of Issues Raised

The submissions stated that the open space between Treepark Road and Greenhills Road is used by residents in the locality to access bus stops, local theatre, betting office, pub, Castletymon Library and Tymon Park, as well as students from Kilnamanagh who use this green area to access Collaiste De Hide on Castletymon Road. The submissions believed that the safety of users would be compromised as a result of the Proposed Scheme.

Response to issues Raised

The safety implications of the Proposed Scheme have been considered by the designer

The following provisions are included for the safety and comfort of all pedestrians at the Proposed Scheme at Parkview:

- Signalised Toucan crossings are included on both the new bus route and Greenhills Road to enable pedestrians and cyclists to cross the roads safely and at greater convenience.
- Proposed cycle tracks throughout the Parkview area are segregated wherever practicable avoiding pedestrian / cyclist conflicts.
- As noted in response to traffic concerns in this submission there predicted to be an overall reduction in traffic flows as a result of the Proposed Scheme:
- *The reduction in traffic along Greenhills Road for combined flows (Passenger Car Units per hour in two directions) expected in the AM Peak Hour 2028 Opening Year scenario is noted in Table 6.73, page 153 of Chapter 6 in Volume 2 of the EIAR as minus 1516 PCU (Passenger Car Unit).*
- *The reduction in traffic along Greenhills Road for combined flows (Passenger Car Units per hour in two directions) expected in the PM Peak Hour 2028 Opening Year scenario is noted in Table 6.78, page 160 of Chapter 6 in Volume 2 of the EIAR as minus 1508 PCU (Passenger Car Unit).*

The safety implications have also been assessed by an independent auditor as part of the Road Safety Audit carried out on the Proposed Scheme and included in Appendix M of the Preliminary Design Report provided in the Supplementary Information. No concerns were raised relating to additional bus route between Birchview Avenue / Treepark Road and Greenhills Road west of the M50, in the Road Safety Audit.

2.3.3.4 Loss of privacy / security concerns

Summary of Issues Raised

The submission raised concerns about the proposed bus route bringing double-decker buses closer to residential properties where bus passengers would be afforded views into private properties which they submissions believed would negatively affecting the privacy of residents and security concerns where bus passengers could establish if properties were occupied.

Response to issues Raised

In relation to the concern raised about loss of privacy, Figure 2.3.18 and Figure 2.3.20 below, shows that the Proposed Scheme does not include any changes to the existing property boundaries for the proposed bus route at Birchview Avenue / Treepark Road / Parkview. Substantial tree planting is proposed for this area as can be seen in Figure 2.3.18 and Figure 2.3.20 extracts from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed planting at Parkview / Birchview Avenue / Treepark Road.

As described in Section 3.4.1.2 of the Preferred Route Option Report included in the Supplementary Information provided with the application: *"The EPR proposal to the north of Mayberry Road was to provide a new road alignment, with bus and cycle lanes in each direction, through the green area between Parkview and Treepark Road. This route is identified as a Road Objective in the South Dublin County Council County Development Plan and has a previously approved alignment (SDCC Part 8, 2007)."*

Figure 2.3.17 Extract from SDCC Part 8 Scheme drawings below show that the Proposed BusConnects scheme has road cross section narrower that the road cross section proposed for the SDCC Part 8 scheme and the proposed BusConnects bus route at this location is no closer to residential properties here than the SDCC Part 8 Scheme.

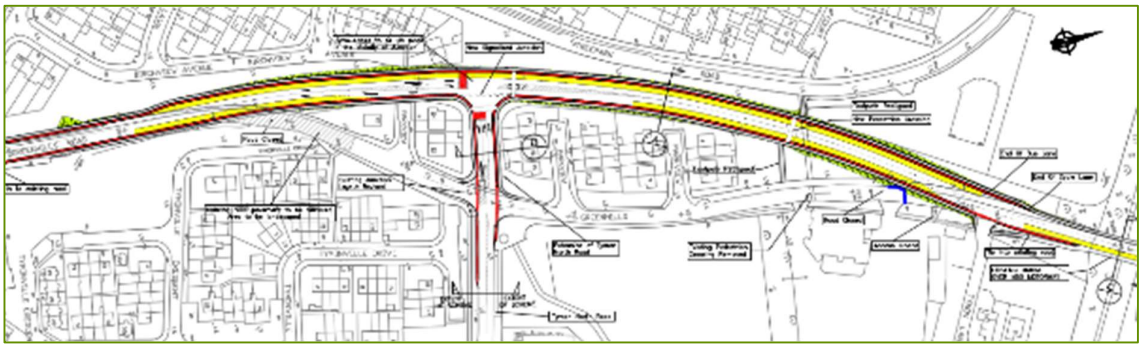


Figure 2.3.17: Extract from SDCC Part 8 Planning Application Drawing (Part 8 Display Public Consultation)

Section 10.2.1 of the EIAR Chapter 10 Population, and Appendix A10.2 to Chapter 10, assesses the Economic Impact of the Core Bus Corridors, which includes consideration of the impact of transport infrastructure on criminal activity. The conclusion reached on page 25 is that *"the new infrastructure improvements should have a direct and immediate impact on crime along the corridors. It will provide better, safer and more visible bus stops whilst also improving the wider public realm infrastructure through investments such as improved street lighting. This will act as a direct deterrent to criminal activity and result in a reduction in crime. This in turn has been shown to encourage people onto the streets into the evening which will also support the night time economy in community centres."*

Additional information in relation to the potential community impacts arising from crime and antisocial behaviour is set out in EIAR Chapter 10 Population Appendix A10.2 Economic Impact of the Core Bus Corridors, which notes the following on page 25:

- *Good infrastructure has also been shown to have a positive impact on levels of crime, particularly low level crimes such as theft and vandalism. There is evidence from a wide range of studies that redesigned public realm, especially those which are better lit and more visible, see significant reductions in the level of crime.*
- *A study from Los Angeles in the late 1990s discovered that the location and visibility of bus stops can have an impact on crime. Where bus stops were clearly visible, offered shelter to the user and were on streets with high levels of vehicle traffic, criminal activity was less common. In contrast, crime rates were found to be higher if the bus stop was at an intersection with an alley, next to off-licences, cashpoint services, vacant buildings or on-street parking, or in areas where there was a lot of graffiti and litter.*

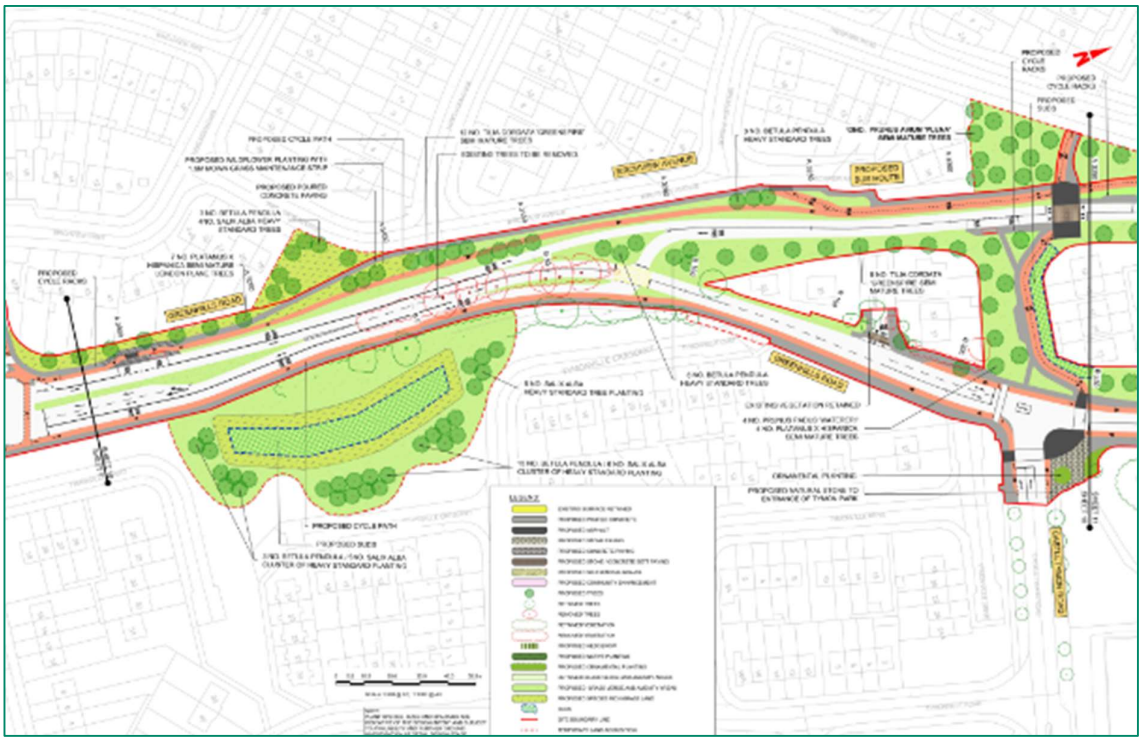


Figure 2.3.18: Extract from Landscape General Arrangement Drawing (Sheet 10)

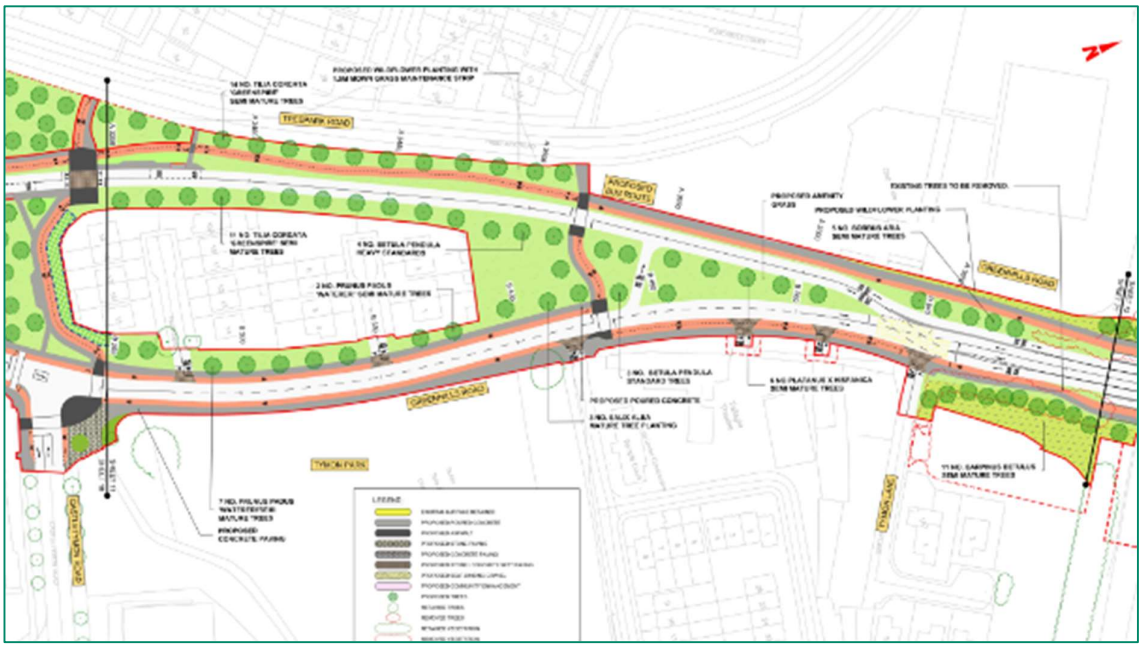


Figure 2.3.20: Extract from Landscape General Arrangement Drawing (Sheet 11)

2.3.3.5 Negative visual impact

Summary of Issues Raised

The submissions expressed the view that the Proposed Scheme would result in the Parkview / Greenhills Road estate becoming an island surrounded by three major roads, with the loss of mature trees and hedging, and the loss of recently provided footpath and street lighting.

Response to issues Raised

Chapter 17 Landscape (Townscape) & Visual of Volume 2 of the EIAR recognises that major changes and substantial effects that the Proposed Scheme will have on the green space at Parkview. However, this green space has been subject to a long-standing future road objective in the current and previous South Dublin Development Plan. The Proposed Scheme includes for three integrated pedestrian / cycle crossings of the new bus route in this area and the proposed landscape measures, which include significant new tree planting, will assist in the medium and longer-term integration of the Proposed Scheme. The tree planting will also reduce and screen potential for viewing of private areas.

Section 17.4.4.1.1 of Chapter 17 Landscape (Townscape) & Visual of Volume 2 of the EIAR considers operational phase townscape and visual effects of the scheme and notes the following:

"The Operational Phase will have a substantial effect on the existing streetscape character at Birchview / Parkview / Treepark where there will be a considerable loss of amenity in the short-term, with a reduction in negative effects over the long term as replacement and additional planting matures. Some other areas of the section will experience localised, positive short-term effects with the introduction of improved paving and longterm effects as tree planting matures. The overall townscape character of the section will not be noticeably affected. The magnitude of change in the baseline environment is high (excluding very high sensitivity areas of Tallaght Village which will have a slight magnitude of change).

The potential townscape / streetscape and visual impact of the Operational Phase on this section is assessed to be Negative, Significant and Short-Term becoming Neutral, Moderate, Long-Term."

Figure 2.3.18 and Figure 2.3.2020 in Section 2.3.3.4 above are extracts from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed landscaping layout at Parkview / Birchview Avenue / Treepark Road.

Figure 2.3.19 to Figure 2.3.246 are extracts from EIAR Chapter 17 Figure 17.2.4.2 Photomontage Views 02, 03 and 04 As Existing and As Proposed showing the existing and the intended scheme visuals at Birchview Avenue, Greenhills Road / Castletymon Road Junction and Treepark Road.



Figure 2.3.19: View 02 As Existing View from South West along Birchview Avenue



Figure 2.3.20: View 02 As Proposed View from South West along Birchview Avenue



Figure 2.3.21: View 03 As Existing View from East at Greenhills Road / Castletymon Road Junction



Figure 2.3.22: View 03 As Proposed View from East at Greenhills Road / Castletymon Road Junction



Figure 2.3.23: View 04 As Existing View from South along Treepark Road



Figure 2.3.24: View 04 As Proposed View from South along Treepark Road

As stated in response to submission concerns relating to loss of green space Section 2.3.3.1 above;

The proposed bus route at Parkview consists of a two-way 6.0m wide road carriageway and a 3.25m wide off-road cycle track with an intermittent 2.0m wide footway linking to Birchview Avenue, Treepark Road and Greenhills Road as shown in extract from EIAR Chapter 4 Appendix 4 Volume 3 Figures Part 1 of 3 Typical Cross Sections Figure 2.3.4.

The approved SDCC Part 8 scheme at Parkview consists of a two-way 13.0m wide carriageway, catering for general traffic and bus lanes in both directions and a 3.2m wide cycletrack/footpath on either side of the carriageway as shown in extract from SDCC Part 8 Display Drawings Figure 2.3.5.

The reduced carriageway cross section of 6.0m width for the Proposed Scheme compared to the 13.0m width for the SDCC Part 8 Planning Application would minimise impacts on the adjacent properties and surrounding environment due to the physically narrower carriageway cross section which results in a lower landtake requirement for trafficked carriageway and increased offset distances between the carriageway edge and residential properties in the area.

2.3.3.6 Access to amenities

Summary of Issues Raised

The open space between Treepark Road and Greenhills Road is used by residents in the locality to access bus stops, local theatre, betting office, pub, Castletymon Library and Tymon Park, students from Kilnamanagh also use this green area to access Collaiste De Hide on Castletymon Road.

Response to issues Raised

Section 4.5.1.1 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR notes the following:

"Between Mayberry Road and Tymon Lane……. improved cycling facilities including new two-way cycling and pedestrian links will be incorporated to improve access to Tymon Park and surrounding amenities. Significant new landscaping and Sustainable Drainage Systems enhancements will also be provided in these areas."

Figure 2.3.25 below is an extract from Section 6.4.6.1.2.1 of Chapter 6 of Volume 2 of the EIAR assessment of the qualitative impacts on the pedestrian infrastructure for Section 1 of the Proposed Scheme.

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R819 Greenhills Road / Mayberry Road signalised junction	A2950	C	A	Medium	Medium	Positive Significant
R819 Greenhills Road / Castletymon Road signalised junction	B225	C	A	Medium	Low	Positive Moderate
R819 Greenhills Road / Temple Woods priority junction	B425	B	A	Low	Medium	Positive Moderate
R819 Greenhills Road / Tymon Lane priority junction	B551	F	C	Medium	Medium	Positive Significant
Section Summary		**D**	**B**	**Medium**	**High**	**Positive Very Significant**

Figure 2.3.25: Extract from Chapter 6 of the EIAR, Table 6.25 Section 1 – Significance of Effects for Pedestrian Impact during Operational Phase

In summary Section 6.4.6.1.2.1 of the EIAR notes:

"Overall, it is anticipated that there will be a Positive, Very Significant and Long-term effect to the quality of the pedestrian infrastructure along Section 1 of the Proposed Scheme, during the Operational Phase, which aligns with the overarching aim to provide enhanced walking infrastructure on the corridor. A detailed breakdown of the assessment at each impacted junction, including a list of the junctions which experience no change, can be found in Appendix A6.4.1 (Pedestrian Infrastructure Assessment) in Volume 4 of this EIAR."

Figure 2.3.26 below is an extract from Section 6.4.6.1.2.2 of Chapter 6 of Volume 2 of the EIAR outlines the cycling qualitative assessment along Section 1 of the Proposed Scheme.

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R819 Greenhills Road between Bancroft Park junction and Castletymon Road	A2000 – A3350	C	A	Medium	High	Positive Very Significant
Castletymon Road to M50 overbridge	A3350 / B250 - A3700 / B551	C	A	Medium	Low	Positive Moderate
Section Summary		**C**	**B**	**Low**	**High**	**Positive Moderate**

Figure 2.3.26: Extract from Chapter 6 of the EIAR, Table 6.26 Section 1 – Cycling Impact during Operational Phase

In summary Section 6.4.6.1.2.2 of the EIAR notes:

"Overall, it is anticipated that there will be a Positive, Moderate and Long-term effect to the quality of the cycling infrastructure along Section 1 of the Proposed Scheme, during the Operational Phase. A detailed breakdown of the assessment along each section can be found in Appendix A6.4.2 (Cycling Infrastructure Assessment) in Volume 4 of this EIAR.

The findings of the cycling assessment fully aligns with the objective of the CBC Infrastructure Works, applicable to the Traffic and Transport assessment of the Proposed Scheme, to 'Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable'."

Section 14.7.1 of the Preliminary Design Report included in the Supplementary Information with the application notes:

"An extensive tree planting scheme is proposed along the entire route to provide a more consistent level of tree cover that will enhance the visual appearance of the route and increase the local biodiversity values. Key enhancements will include a new sustainable link road at Parkview and the creation of new public realm links, an extensive SuDS attenuation area at Tymonville Crescent planted with native species adaptable to wetland conditions and surrounded by native woodland trees in small clusters to provide a new landscaped parkland that will resemble the existing tree belt retained on the eastern side of Greenhills Road, and enhancement of the green infrastructure through new tree planting and development of meadow grass areas."

Section 17.4.1.2 of Chapter 17 Landscape (Townscape) & Visual of Volume 2 of the EIAR considers development of the Proposed Scheme and notes the following:

"Two-way cycle tracks and footpaths are provided to enhance the permeability and accessibility, formalising existing desire lines between Birchview Avenue and Treepark Road to local amenities including Tymon Park, Tallaght Theatre and Castletymon Road, where a number of schools exist;"

Section 10.4.4.1.2.2 of Chapter 10 Population of Volume 2 of the EIAR considers community accessibility during the operational phase of the Proposed Scheme and notes the following for Pedestrians, Cyclists and Bus Users:

*"The community areas that are expected to experience a Positive, Moderate to Very Significant and Long-Term impact on walking and bus users and a Positive, Moderate to Significant and Long-Term impact on cyclists are Tallaght Village, **Tallaght Tymon, Kilnamanagh**, Greenhills, Walkinstown, Crumlin, Mourne Road, Clogher Road, Dolphins Barn, Donore Avenue, Francis Street, Meath Street and Merchants Quay, Clondalkin and Bluebell."*

Figure 2.3.18 and Figure 2.3.19 in Section 2.3.3.2 above are extracts from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed footways, pedestrian crossings and cycle tracks at Parkview / Birchview Avenue / Treepark Road.

2.3.3.7 Lack of consultation

Summary of Issues Raised

No consultation or contact from BusConnects team within the National Transport Authority.

Response to issues Raised

The submission asserts that this specific proposal has not undergone a proper consultation process.

In May 2017 the NTA launched the BusConnects Programme and then in June 2018 published the Core Bus Corridors Project Report. The report was a discussion document outlining proposals for the delivery of Core Bus Corridor Routes across Dublin.

Since the commencement of the non-statutory period of the CBC Infrastructure Works, there has been a total of three rounds of non-statutory public consultation.

First Round of Non-Statutory Public Consultation - The first round of non-statutory public consultation on the Emerging Preferred Route Options was from November 2018 until May 2019 divided into three phases. The reason it was divided into three phases was primarily due to the fact that the BusConnects Infrastructure team carried out all aspects of the first round without external design service providers having been appointed at that stage. Moreover, the BusConnects Infrastructure team sought to gain maximum engagement from the public from the commencement of the CBC Infrastructure Works to raise awareness, establish relationships and gain immediate insight and knowledge of the issues at an early stage.

It was also important that at the start of the non-statutory consultation that considerable time and resources were dedicated by the BusConnects Infrastructure team to initiate contact with potential impacted properties. Each of the potentially impacted property owners were offered the opportunity to meet with members of the BusConnects Infrastructure team on a one-to-one basis which meant a significant amount of resources had to be dedicated to this process.

Second Round of Non-Statutory Public Consultation – The non-statutory public consultation for the Preferred Route Options ran from March 2020 to April 2020 as Ireland entered the first lockdown due to the Covid-19 pandemic. The consultation continued in deference to the number of online submissions received during this period. A number of public facing elements of the consultation were cancelled in line with Government health guidelines, however, all other elements of the consultation including online versions of the brochures, supporting documentation were available. Other communication tools including the Freephone, email and digital aspects remained active for submissions to be received.

Third Round of Non-Statutory Public Consultation – This round of non-statutory public consultation for the Preferred Route Options from November 2020 to December 2020 was added due to the disruption caused to the second-round consultation process. It was important that further engagement was facilitated to communicate design development changes prior to concluding the determination of the Preferred Route Options. Methods had emerged whereby traditional public information events could be replaced by virtual online alternatives to offset the restrictions that continued associated with the Covid-19 Pandemic. Accordingly, all elements of the public consultation and stakeholder engagement were conducted virtually or online in line with the Government health guidelines.

The Public Consultation Report included in the Supplementary Information provided with the application for the Proposed Scheme includes the brochure for the 1st round of public consultation in January 2019. Section 2.2.2 on page 11 specifically highlights the route alignment in this area noting: *“Between Mayberry Road and Tymon Lane it is proposed to undertake major changes to the local road network. South Dublin County Council has identified this section of Greenhills Road for upgrade under their current County Development Plan. It is intended to implement some of these road construction works as part of this scheme. The existing Greenhills Road will be retained as an access road for Park View Estate. A new Greenhills Road will be constructed on the green space south of Birchview Avenue and Treepark Road. Traffic to the Old Greenhills Road will be restricted to local traffic only and movement bans will be proposed to enforce this. This new section of road will be wide*

enough to accommodate one bus lane, one traffic lane and a cycle track in both directions with new bus stop and pedestrian crossing facilities."

Also included in this brochure Appendix 6 Map 9 and 10: Emerging Preferred Route, layout map showing the proposed route at Parkview.

The second public consultation (March to April 2020) was interrupted by the COVID-19 pandemic where planned public information events were postponed. The public consultation remained open, and submissions could be made by email and by post and the Preferred Route Option brochures continued to be available to view and download. Information on the public consultation process was published in major print media from the 5th of March 2020 inviting the public to make a submission. National and local radio segments were included beginning on 4th March 2020. Digital media was also published. Information was also advertised at bus and Luas stops throughout Dublin city.

Consequently just 10 submissions with 49 comments for the Greenhills to City Centre CBC were received for the second public consultation. The proposed route at Parkview at the second public consultation stage is shown in Figure 2.3.27 below (extract from Brochure Maps 9 and 10).

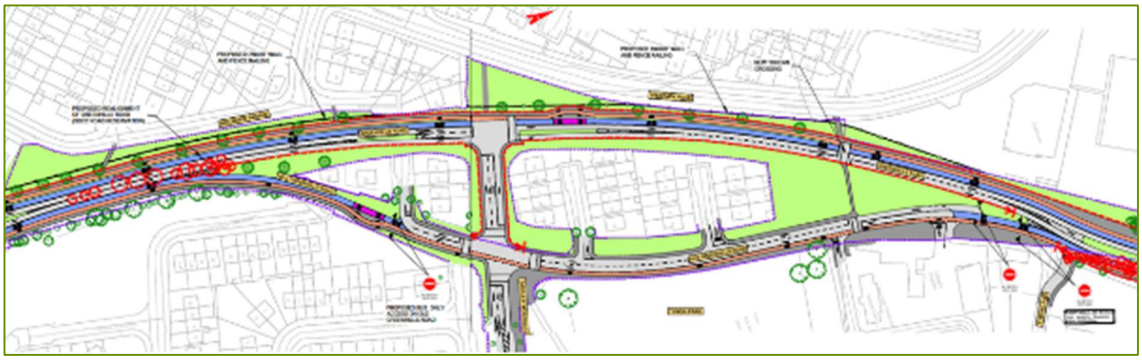


Figure 2.3.27: Extract from Second Public Consultation Map 9 and Map 10

The third public consultation (November to December 2020) and Copies of the revised CBC Preferred Route consultation brochure were made available to the public at Public Information Events, by post (upon request), at the NTA office reception, as well as from the NTA's website. Relevant background technical reports were also available for download from the NTA's website. The public were invited to make written submissions relating to the Preferred Route consultation brochure. Submissions could be made by post, email, or by hand-delivery at the reception of the NTA's offices. A community forum was held on the 25th November 2020 where attendees included the Dublin Cycling Campaign, D12 Bus, Crumlin Residents Group, Crumlin Community Cleanup, Terenure West Residents, Dublin Commuter Coalition, Crumlin Road Residents Group, Cllr Deirdre Conroy, Cllr Maria Devine, Cllr Darragh Moriarty, Cllr Tina McVeigh, Orwell Park Residents, Cllr Pat Dunne, Recorders Residents Association, Dublin Commuter Coalition, Cllr Eoin O'Broin, Catherine Scuffil (Historian in Residence), Back of the Pipes Residents Association.

There were 348 submissions with 1545 comments for the Greenhills to City Centre CBC including a submission where the proposed realignment of Greenhills Road, near the Parkview residential area was challenged due to its effect on the locality.

The proposed route at Parkview at the third public consultation stage is shown in Figure 2.3. below (extract from Brochure Maps 9 and 10).



Figure 2.3.30: Extract from Third Public Consultation Map 9 and Map 10

The final layout of the Proposed Scheme at Parkview was arrived at following ongoing design reviews and consideration of proposals by local residents. As described in Section 3.4.1.2.3 of the Preferred Route Option Report included in the Supplementary Information provided with the application: *"As part of the third round of public consultation another option was proposed by local residents with the intention of reallocating road space on the existing R819 Greenhills Road for buses and general traffic. The aim of this proposal was to provide a reduced impact on local residents for the road alignment and cross section provided through the green area between Treepark Road and Parkview as outlined in the PV3 option. Bus and general traffic lanes in both directions were suggested to be allocated on the existing R819 Greenhills Road by removing the existing footway and cycle lanes along the existing road. The footway and cycle track were proposed to be provided offline to the existing road. This proposal was examined and while it was deemed to be unfeasible to accommodate bus and general traffic lanes along the full section of the route due to existing constraints to the south of Castletymon Road a modified version of the suggestion was developed as alternative Option PV4."*

Figure 2.3. extract below from the Preferred Route Option Report provided included in the Supplementary Information provided with the application for the Proposed Scheme is the indicative layout of Route Option PV4 at Parkview.

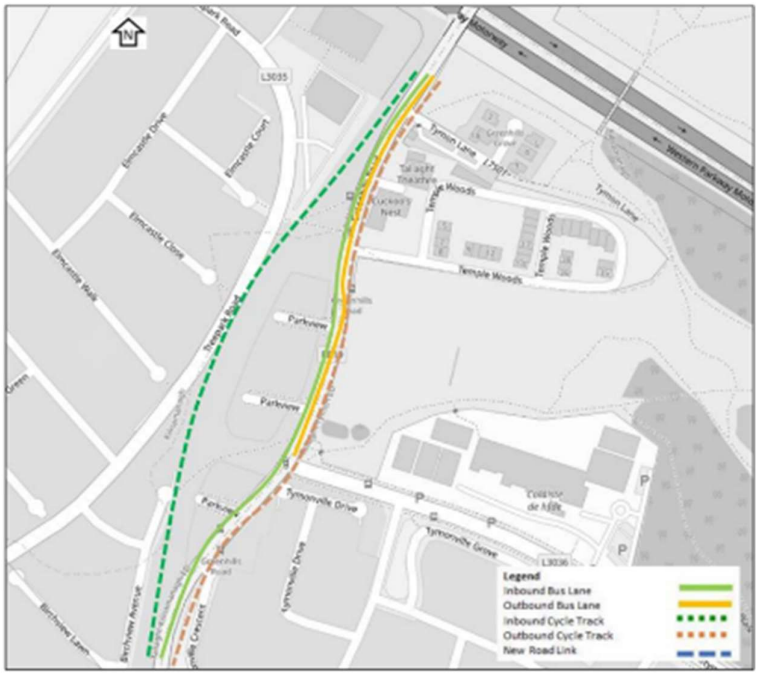


Figure 2.3.31: Extract from the Proposed Route Option Report – Route Option PV4 Indicative Scheme Design (Figure 3-11)

As stated above Option PV4 was deemed unfeasible to accommodate bus and general traffic along the full section of the route so a further alternative to the route proposed at the third public consultation following updated traffic modelling and resulting noise assessment modelling which indicated noise impact mitigation may be required at Parkview, Treepark Road and Birchview Avenue with subsequent landscape and visual impacts. Option PV5 was developed to mitigate these concerns and to provide a solution which would achieve the scheme objectives while providing a reduced cross section, reduced traffic volumes, reduced noise levels, improved visual and landscape aspects and improved pedestrian permeability and accessibility to public transport as well as serving local attractions including Tymon Park, Tallaght Theatre and nearby schools.

Figure 2.3.28 extract below from the Preferred Route Option Report provided included in the Supplementary Information provided with the application for the Proposed Scheme is the indicative layout of Route Option PV5 at Parkview.

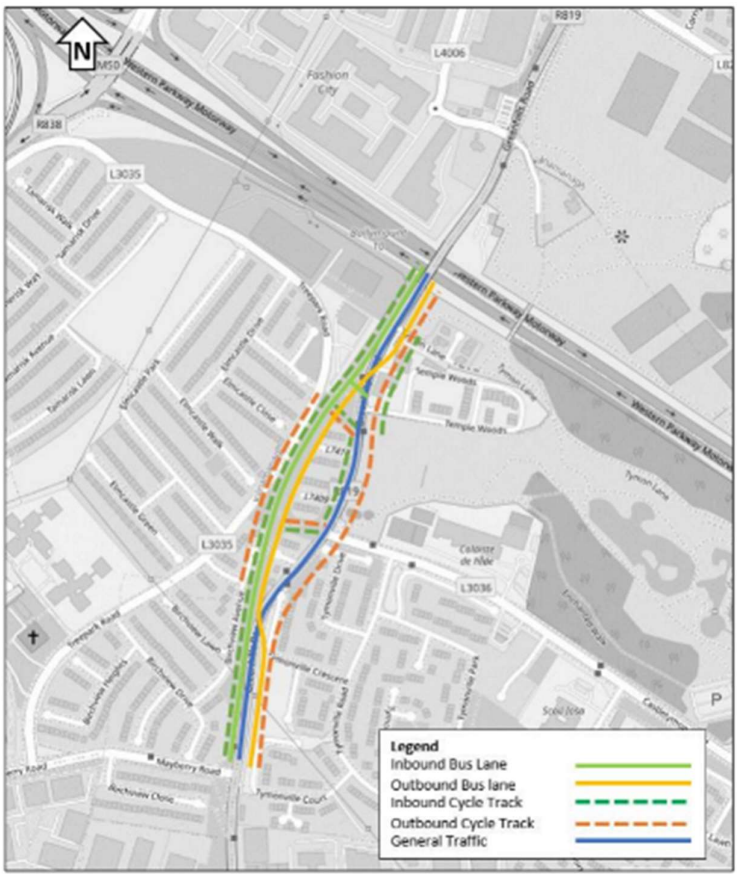


Figure 2.3.28: Extract from the Proposed Route Option Report – Route Option PV5 Indicative Scheme Design (Figure 3-12)

2.3.3.8 Unnecessary change providing no real gains to bus travel times

Summary of Issues Raised

The submission express the view that the proposed route is not extensive and would add no real gains to the travel times of these buses. It will not benefit the bus service in any way as buses will return to single lane of traffic. Proposed development is totally unnecessary, and the roads are fine as they are.

Response to issues Raised

EIAR Volume 2 Chapter 2 Need for the Proposed Scheme outlines the policy context that underpins the Proposed Scheme as well as the regional and local transport need for the Proposed Scheme.

Section 2.2.1.5 notes the following:

"To inform the preparation of the GDA Transport Strategy, the NTA prepared the Core Bus Network Report (NTA 2015) for the Dublin Metropolitan Area, which identified those routes on which there needed to be a focus on high capacity, high frequency and reliable bus services, and where investment in bus infrastructure should be prioritised and concentrated. The Core Bus Network is defined as a set of primary orbital and radial bus corridors which operate between the larger settlement centres in the Dublin Metropolitan Area".

Section 2.2.2 of Chapter 2 notes that: *"The Proposed Scheme will facilitate almost 100% bus priority and will complement the rollout of the Dublin Area Bus Network Redesign to deliver improved bus services on the route. This will improve journey times for bus, enhance its reliability and provide resilience to congestion."*

Section 6.4.6.2.5.3 of EIAR Volume 2 Chapter 6 Traffic & Transport which assessed Bus Journey Time and Reliability changes as a result of the Proposed Scheme notes the following:

"Inbound Direction

Based on the results presented in Table 6.66, the Proposed Scheme will deliver average inbound journey time savings, in the peak direction of travel, for D2 service bus passengers of up to 7.0 minutes (13%) in 2028 (AM) and 2.4 minutes (5%) in 2043 (AM).

Based on the results presented in Diagram 6.29 to Diagram 6.32, the Proposed Scheme offers average bus journey time savings for the peak period (AM) direction, most notably on the sections of Greenhills Road from Mayberry Road to south of the M50 overpass and the northbound approach to Walkinstown Roundabout. This is due to the introduction of an inbound bus lane along both sections.

In addition, the Proposed Scheme includes the redesign of Greenhills Road north of Mayberry Road to include a fully segregated bus lane running adjacent to the existing Greenhills Road, which bypasses delays originating from Walkinstown Roundabout in the AM peak, and the introduction of bus priority 'hurry calls' signalling where this segregated bus lane connects with the mainline. The bus lane that stops south of the Walkinstown Roundabout allows buses to bypass delays up to this point.

Outbound Direction

Based on the results presented in Table 6.68, the Proposed Scheme will deliver significant average outbound journey time savings, in the peak direction of travel, for D2 service bus passengers of up to 9.3 minutes (16%) in 2028 (PM) and 11.1 minutes (24%) in 2043 (PM).

Based on the results presented in Diagram 6.34 to Diagram 6.37, the Proposed Scheme offers considerable outbound average bus journey time savings for the peak period (PM) direction, most notably on Walkinstown Road from Drimnagh Road to north of the Walkinstown Roundabout and at the Mayberry Road and Greenhills Road junction. The Proposed Scheme introduces an outbound bus lane on Walkinstown Road from Drimnagh Road to just short of the Walkinstown Roundabout which contributes greatly to the outbound average bus journey time savings. The Proposed Scheme also introduces a continuous bus lane through the Mayberry Road junction, which along with the bus priority 'hurry calls' signalling leads to further accumulation of average bus journey time savings."

Demand for travel by bus is anticipated to continue to grow in this corridor into the future, in line with population growth. The bus priority measures forming part of the Proposed Scheme are required to accommodate this growth in travel demand and to facilitate the revised bus network (D-Spine) by providing journey time and reliability savings for passengers. This will ensure that the projected growth in passenger demand is facilitated and protected from increasing congestion, providing resilience which can in the future cater for additional bus service provision.

2.3.3.9 Property values

Summary of Issues Raised

The Proposed Scheme on value of resident's properties due to noise levels, air quality and privacy issues associated with the scheme.

Response to issues Raised

As regards the view expressed that the combined impact of all the issues raised would have an adverse and negative impact on the value of properties in the Bancroft Park area, EIAR Chapter 10 Population includes Appendix A10.2 Economic Impact of the Core Bus Corridors. Section 3 on page 14 the appendix discusses the impact of the Proposed Scheme on property prices. The conclusion reached is that in overall terms the public realm improvements planned by the NTA may lead to an increase in value of both residential and retail property prices, especially in the community centres along the corridors, with evidence showing that investing in public realm creates improved spaces that are more desirable for people and business to locate in, thereby increasing the value of properties in the area.

Air Quality

Chapter 7 Air Quality of the EIAR sets out the methodology adopted to assess the impact on air quality of the Proposed Scheme. Table 7.1 identifies the air quality receptors within the study area from Tallaght to Ballymount.

Construction phase air quality

For the Construction Phase Section 7.4.2.2.3 of Chapter 7 identifies the significance of the changes in the concentration of each of the ambient receptors in the context of the TII significance criteria (TII 2011). Table 7.27 of Chapter 7 provides a list of the most impacted receptor locations, which does not include locations AQ45 at Parkview and AQ46 at Temple Court on Greenhills Road. Along with the majority of modelled receptors, AQ45 and AQ46 are assessed as experiencing a negligible impact due to the Proposed Scheme in terms of the annual mean NO_2 concentration.

As shown in Table 7.27 and Figure 7.7 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of annual mean PM_{10} concentrations, with all receptors experiencing a negligible impact.

As shown in Table 7.27 and Figure 7.8 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of the annual mean $PM_{2.5}$ concentration with all receptors experiencing a negligible impact.

In accordance with the EPA Guidelines (EPA 2022), the impacts associated with the Construction Phase traffic emissions pre-mitigation are overall neutral and long-term.

Section 7.6.1 Construction Phase notes the following: *"When the dust minimisation measures detailed in the mitigation section of this Chapter are implemented, fugitive emissions of dust from the site will be insignificant and pose no nuisance at nearby receptors. Thus, there will be no significant residual Construction Phase dust impacts.*

The air dispersion modelling assessment of Construction Phase traffic emissions has found that the Proposed Scheme will be neutral overall in the study area. There are no substantial or moderate adverse effects expected as a result of the Construction Phase of the Proposed Scheme.

Therefore, overall, it is considered that the residual effects as a result of the Proposed Scheme's construction are Neutral and Short-term. No significant residual impacts have been identified during the Construction Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."

Operational phase air quality

For the Operational Phase Section 7.4.3.3 of Chapter 7 identifies the significance of the changes in the concentration of each of the ambient receptors in the context of the TII significance criteria (TII 2011). Table 7.33 of Chapter 7 provides a list of the most impacted receptor locations, which includes locations AQ45 at Parkview and AQ46 at Temple Court on Greenhills Road. AQ45 is assessed as experiencing a negligible impact (slight beneficial) due to the Proposed Scheme in terms of the annual mean NO_2 concentration, AQ46 is assessed as experiencing a slight adverse impact due to the Proposed Scheme in terms of the annual mean NO_2 concentration.

As shown in Table 7.33 and Figure 7.4 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of annual mean PM_{10} concentrations, with all receptors experiencing a negligible impact.

As shown in Table 7.33 and Figure 7.5 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of the annual mean $PM_{2.5}$ concentration with all receptors experiencing a negligible impact.

In accordance with the EPA Guidelines (EPA 2022), the impacts associated with the Operational Phase traffic emissions pre-mitigation are overall neutral and long-term.

Section 7.4.3.3 goes on to note that the predictions reported are based on conservative assumptions regarding background pollutant concentrations and the improvement in vehicle emission rates. 2019 background pollutant concentrations have been used to represent 2028 and are likely be lower by the opening year than in 2019. Older fleet projections were used in the absence of a fleet that incorporates the effects of 2023 Climate Action Plan measures – a larger proportion of electric vehicles is planned by the opening year than has been modelled. In reality, total concentrations (and magnitude of change) are likely to be lower than those reported in the EIAR.

Section 7.6.2 describes the residual impacts for the Operational Phase: *"The air dispersion modelling assessment has found that the Proposed Scheme will be neutral overall in the study area. The*

number of receptors where an exceedance of the NO_2 limit value is predicted reduces from 24 in the Do Minimum scenario to 12 as a result of the Proposed Scheme. In 2043, all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the Do Something (and Do Minimum) scenario. There are no substantial or moderate adverse effects expected as a result of the Operational Phase of the Proposed Scheme. Therefore, overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are Neutral and Long-term. No significant residual impacts have been identified during the Operational Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."

Section 7.6.2 Operational Phase notes the following: *"The air dispersion modelling assessment has found that the Proposed Scheme will be neutral overall in the study area. The number of receptors where an exceedance of the NO2 limit value is predicted reduces from 24 in the Do Minimum scenario to 12 as a result of the Proposed Scheme. In 2043, all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the Do Something (and Do Minimum) scenario. There are no substantial or moderate adverse effects expected as a result of the Operational Phase of the Proposed Scheme.*

Therefore, overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are Neutral and Long-term. No significant residual impacts have been identified during the Operational Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."

In summary, the EIAR demonstrates that there will be no significant impact on air quality as a result of the operation of the Proposed Scheme.

Noise

The potential Noise impacts, as a result of the Proposed Scheme has been assessed in the EIAR. The process of assessment and the results have been described in Chapter 9 (Noise & Vibration) in Volume 2 of the EIAR.

Construction phase noise

Section 9.4.3.2 of Chapter 9 considers construction noise and Table 9.34 provides the predicted noise levels for Road Widening, Road Construction, Road Upgrade and Utility Diversion Construction Noise Calculations at Nearest NSLs. The total predicted cumulative CNL for these works at the nearest Residential NSL's to the west and east of greenfield site between Treepark Road and R819 Greenhills Road (<10m) and at the Residential NSL's at Parkview Estate (10m) are 83 dB LAeq,1hr in the absence of any noise mitigation. Making reference to the CNLs in Table 9.34 the potential noise impacts at the closest NSLs are assessed to range between Negative, Not Significant to Very Significant, and Temporary during the daytime evening and weekend periods in the absence of noise mitigation.

The calculations are based on six plant items with an average noise level of 75 dB LAeq,T at 10m operating simultaneously, in the absence of any noise mitigation, along a given section of road. The average plant noise level has been calculated on the basis that plant will be operating at varying distances from a NSL at any one time. Reference to Table 9.30 indicates that highest noise levels will occur when breaking, excavators and road planers are operating at the closest distance to NSLs. During specific periods when these activities are operating outside NSL's, higher noise levels will occur compared to those discussed in Table 9.34. These activities will occur, however, for intermittent periods of time at any one location over the course of a working day."

The EIAR contains a comprehensive set of mitigation measures to minimise construction phase impacts, including noise impacts. Construction noise mitigation measures are set out in Chapter 9 in Volume 2 of the EIAR (and are also summarised in Appendix A5.1 Construction Environmental Management Plan in Volume 4 of the EIAR).

Section 9.5.1.1 of the EIAR Chapter 9 states the following:

"The appointed contractor will be required to take specific noise abatement measures to the extent required and comply with the recommendations of BS 5228–1 (BSI 2014a) and S.I. No. 241/2006 - European Communities (Noise Emissions by Equipment for Use Outdoors) (Amendment) Regulations

2006. The mitigation measures outlined below for the Construction Phase have also been included in the Construction and Environmental Management Plan (CEMP) in Appendix A5.1 in Volume 4 of this EIAR.

These measures will ensure that:

- *During the Construction Phase, the appointed contractor will be required to manage the works to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228–1 (BSI 2014a); and*
- *The best means practicable, including proper maintenance of plant and equipment, will be employed to minimise the noise produced by on site operations.*

BS 5228–1 includes guidance on several aspects of construction site practices, which include, but are not limited to:

- *Selection of quiet plant;*
- *Control of noise sources;*
- *Screening;*
- *Hours of work;*
- *Liaison with the public; and*
- *Monitoring.*

…….The appointed contractor will put in place the most appropriate noise control measures depending on the level of noise reduction required at individual working areas (i.e. based on the construction threshold values for noise and vibration set out in Table 9.11 and Table 9.14). Reference to Table 9.50 indicates that intrusive works occurring within 75m of NSLs with a direct line of sight to work will need specific noise control measures to reduce impacts depending on time period over which they will occur (i.e., daytime or evening).”

Section 9.5.1.1.4 of Chapter 9 sets out the proposed working hours and states:

“It is envisaged that generally construction working hours will be between 07:00hrs and 23:00hrs on weekdays, and between 08:00hrs and 16.30hrs on Saturdays. Night-time and Sunday working will be required during certain periods to facilitate street works that cannot be undertaken under daytime / evening time conditions. The planning of such works will take consideration of sensitive receptors, in particular any nearby residential areas.

Construction activities will be scheduled in a manner that reflects the location of the site and the nature of neighbouring properties. Construction activities / plant items will be considered with respect to their potential to exceed construction noise thresholds at NSLs and will be scheduled according to their noise level, proximity to sensitive locations and possible options for noise control. In situations where an activity with potential for exceedance of construction noise thresholds is scheduled (e.g., road widening and utility diversions or activities with similar noise levels identified in Table 9.50), other construction activities will be scheduled to not result in significant cumulative noise levels.”

In summary the NTA is satisfied that the noise abatement measures set out in the EIAR that the appointed contractor will be required to put in place to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228-1 will result in appropriate and adequate mitigation measures in respect of construction noise impact at this location.

Operational phase noise

Specifically, Section 9.4.4.1.1.6 New Sustainable Transport Link Road mentions:
“In Section 1 of the Proposed Scheme (Tallaght to Ballymount), it is proposed to reconfigure the local road network between Mayberry Road and Tymon Lane. A new approximately 620m long sustainable link road will run parallel to Birchview Avenue and Treepark Road as part of this re-configuration. A previous version of this new road section received Part 8 Planning Approval in 2007 which involved a more substantial cross section to accommodate a full carriageway for private and public vehicles. The Proposed Scheme seeks to align with the principles of the Part 8 scheme, but with a significantly

reduced cross section that caters for sustainable modes only (i.e. bus / cycling / pedestrian) to minimise impacts on the adjacent properties and surrounding environment. The total volume of buses travelling along the new road is up to 245 over a 24 hour period in the year of opening 2028 and in the Design Year (2043). The design speed along the road link is 50 km/hr.

Traffic noise levels have been calculated at the nearest properties along Birchview Avenue and Treepark Road for the Do Minimum and Do Something scenarios for the Opening Year 2028 to determine the potential change in traffic noise levels at these properties. The calculations take account of traffic along the existing Greenhills Road, Treepark Road, Castletymon Road and Mayberry Road during both scenarios, in addition to existing walls along properties boundaries, where they provide screening from the road, where relevant. Table 9.53 presents the calculated noise impact at the most affected properties along Treepark Road, Parkview and Birchview Avenue"

Extract from Section 9.4.1.1.6 Table 9.53 of Chapter 9 Noise & Vibration of Volume 2 of the EIAR Summary of Traffic Noise Impacts along Sustainable Link Road is shown in Figure 2.3.29.

Road	Do Minimum, dB $L_{Aeq,16hr}$	Do Minimum, dB L_{den}	Do Something, dB $L_{Aeq,16hr}$	Do Something, dB $L_{Aeq,Lden}$	Traffic Noise increase, dB	Potential Impact
Treepark Road	56	58	57	60	+2	Direct, Negative, Slight, Short-Long-term
24 Parkview	55	57	55	58	+1	Direct, Negative, Not Significant, Short-Long-term
10A Parkview (upper floor level)	53	56	54	56	+1	Direct, Negative, Not Significant, Short-Long-term
15 Birchview Avenue	54	57	55	58	+1	Indirect, Negative, Slight, Long-term

Figure 2.3.29: Extract from the EIAR Section 9.4.1.1.6 Table 9.53: Summary of Traffic Noise Impacts along Sustainable Link Road

Section 9.4.4.1.1.6 in summary notes: *"The resultant traffic noise levels associated with the reconfigured sustainable link road is determined to be Not Significant to Slight at the closest NSLs (i.e. properties along Treepark Road, Parkview, and Birchview Avenue) when added to the surrounding traffic noise. The resultant impact is determined to be Direct, Negative, Not Significant to Slight and Short to Long term. The small increase is due to the low traffic volumes along the new link road, the screening provided by existing property boundaries and the existing traffic noise levels from the surrounding road network."*

In relation to proposed new bus stops at Parkview, Section 9.4.4.3 Bus Stops notes the following:

"As discussed in Section 9.4.4.1.1.4, during the proposed year of opening, 2028, the NTA forecast for 94% of the city bus fleet to be electric vehicles (EVs) or hybrid electric vehicles (HEVs). For the Design Year 2043, the city bus fleet is forecast to be 100% electric. The operation of electric and hybrid buses eliminates ICE [Internal Combustion Engine] *noise from buses accelerating, decelerating and idling at bus stops which is the dominant noise source. In addition, the characteristic of noise from electric vehicles is subjectively less intrusive compared to those with ICE's and is masked to a much greater extent by surrounding road traffic……*

The closest noise sensitive locations (residential dwellings) to the new bus stop locations along the Proposed Scheme are close to the existing road edge and are exposed to road traffic noise levels typically between 65 and 69dB LAeq,16hr, which will dominate noise levels at these locations. As noted above, the forecast for an electric bus fleet will result in a reduction in noise emissions from buses accelerating, decelerating and idling at bus stops which is the dominant noise source.

It is noted that the bus stops along the Proposed Scheme will be used by other bus operators which may not transition to EV and HEVs over the same period as the city bus fleet. The volume of these buses along the Proposed Scheme will, however, be significantly less than the city bus fleet and hence, noise levels associated with these areas will not generate significant noise levels over the prevailing noise environment. Taking into consideration the location of NSL [Noise Sensitive

Locations] *relevant to the proposed bus stops in addition to the lower noise emissions from the proposed future bus fleet, the overall impact is determined to be Negative, Not Significant and Long Term"*

As regards the view expressed that the combined impact of all the issues raised would have an adverse and negative impact on the value of properties in the Birchview Avenue, Treepark Road and Parkview area, EIAR Chapter 10 Population includes Appendix A10.2 Economic Impact of the Core Bus Corridors. Section 3 on page 14 the appendix discusses the impact of the Proposed Scheme on property prices and notes in conclusion. *"The public realm improvements planned by the NTA may lead to an increase in value of both residential and retail property prices, especially in the community centres along the corridors. Evidence shows that investing in public realm creates nicer places that are more desirable for people and business to locate in, thereby increasing the value of properties in the area. The evidence suggests that all public realm improvements generate value, regardless of the size of the investment or the neighbourhood. Residents along the corridors will also see a measurable increase in their quality of life, with evidence showing that residents are willing to pay more for an improved public realm."*

2.3.3.10 Bus Stops

Summary of Issues Raised

a) Relocation

The submissions are concerned that the Proposed Scheme will remove three existing bus stops on the Greenhills Road and relocate them on the new bus lane, expressing the view that this will impact students from Collaiste De Hide and Scoil Iosa who can safely access the current No.27 bus stops at Tymonville (2340) and beside the Cuckoo's Nest (2339).

b) Anti-social behaviour

Concerns were also expressed the submissions about the proposed bus stop at the side of No.18 Birchview Avenue giving rise for the potential anti-social behaviour in this area.

Response to issues Raised

1. Bus Stop Relocation

Section 4.6.4.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR notes the following:

"To improve the efficiency of the bus service along the Proposed Scheme the position and number of bus stops has been evaluated as part of a bus stop review. The main principles considered as part of the bus stop review were as follows:

- *Aim to achieve a bus stop spacing of 400m in suburban locations, and 250m in urban centres;*
- *Locate bus stop as close as possible to nearest junction/pedestrian crossing;*
- *Locate bus stop downstream of junction rather than upstream;*
- *Consider space requirements to provide bus stop including shelter, waiting area, cycle lane and footpath provision and information displays;*
- *Review existing and proposed boarding and alighting volumes to determine the usage of the bus stop; and*
- *Consider the potential for interchange with orbital bus services proposed as part of the New Dublin Area Bus Network.*

The above principles were considered to determine whether a bus stop should remain where it is, be relocated or be removed."

As part of the design of the Proposed Scheme a detailed review of bus stop locations was undertaken as set out in Bus Stop Review Analysis in Appendix H.2 (using the methodology as set out in Appendix H.1) of the Preliminary Design Report provided as Supplementary Information. This exercise was carried out to review existing bus stops along the route of the Proposed Scheme and, where appropriate to rationalise these stops in line with best practice criteria mentioned above.

Inbound, a new stop is proposed along the new bus route. The stop is required due to the spacing between the previous and the next stop being greater than 250m, furthermore the stop will enhance

catchment to the nearby residential areas, the existing stop 2371 is proposed to be removed as the new bus route will not travel along this section of Greenhills Road, therefore the existing stop will not be able to cater for inbound services.

Outbound, A new stop proposed on the BusConnects route, to provide catchment for the surrounding residential areas, the existing stop 2339 proposed to be removed as this stop will not be on the BusConnects route.

Anti-social behaviour

In relation to the potential community impacts arising from crime and antisocial behaviour is set out in EIAR Chapter 10 Population Appendix A10.2 Economic Impact of the Core Bus Corridors, which notes the following:

- *"Good infrastructure has also been shown to have a positive impact on levels of crime, particularly low level crimes such as theft and vandalism. There is evidence from a wide range of studies that redesigned public realm, especially those which are better lit and more visible, see significant reductions in the level of crime.*
- *A UK study found that a set of public realm investments in Stroud Town Centre16, led to burglaries dropping from 51 to 25 incidents per year and shop thefts dropping by a quarter. These public realm investments included new signage, efforts to promote increased activity within the town centre and good quality street lighting. The same study also found that a redesign of Mowbray park in Sunderland led to a reduction in incidents of anti-social behaviour from 30- 50 per month to c.10 per month.*
- *A study from Los Angeles in the late 1990s discovered that the location and visibility of bus stops can have an impact on crime. Where bus stops were clearly visible, offered shelter to the user and were on streets with high levels of vehicle traffic, criminal activity was less common. In contrast, crime rates were found to be higher if the bus stop was at an intersection with an alley, next to off-licences, cashpoint services, vacant buildings or on-street parking, or in areas where there was a lot of graffiti and litter.*
- *Birmingham City Council achieved a 70 per cent drop in theft from shopping bags by increasing the lighting of their street markets and widening footpaths from 2m to 3m to give pedestrians more space. A similar street lighting project in Dudley has been credited with encouraging more pedestrians, particularly women, to use the streets at night. This in itself has a self-policing effect."*

The new bus stops located between Treepark Road and Parkview on the new bus route are placed where there are public open spaces behind the footpaths serving them. It is not considered that anti-social behaviour will not be increased by the location of the new bus stops.

2.3.3.11 Alternative options

Summary of Issues Raised

a) Wider road and realignment for buses

Some submissions proposed a realignment of Greenhills Road between Castletymon and Mayberry junctions and bringing the proposed cycle lanes off-road which would allow space for the proposed Bus corridor without the need to take open space at Birchview.

Another submission suggests road widening for buses as the bottleneck of traffic currently in place is caused by road narrowing at the traffic lights on Greenhills Road.

b) Option PV1

The submissions suggested that an alternative option to the current proposal needs further consideration and that is the realignment of R819 as per Alternative Options between Parkview and Tymon Lans, indicated as Option 1 (PV1) in the proposal documents. They express the view that this would be a more cost efficient and less intrusive option, it would remove a pinch point and the cycle track could still be accommodated through Tree Park Road, within the Kilnamanagh boundary.

Response to issues Raised

Section 3.3.2.1.3 of EIAR Chapter 3 Consideration of Reasonable Alternatives highlights that following a two-stage assessment of the Emerging Preferred Route. Between Parkview and Tymon Lane Alternative Route Options 1 (PV1) and 2 (PV2) were assessed. Based on this assessment

Route Option PV2 was brought forward into the Emerging Preferred Route for Parkview for the following reasons:

- *"It strikes the right balance between cost and delivering reliable journey times through the provision of continuous bus lanes and cycle facilities;*
- *It delivers high quality cycle facilities;*
- *It delivers road links which are included as objectives in the South Dublin County Council Development Plan 2016 – 2022; and*
- *Notwithstanding that option PV2 was considered to have a greater potential for negative environmental impacts than option PV1 the MCA identified option PV1 as having more advantages in terms of meeting the Proposed Scheme objectives by providing high quality bus and cycle facilities and delivering reliable bus journey times."*

Options PV1 and PV2 are shown in Figure 2.3.30.

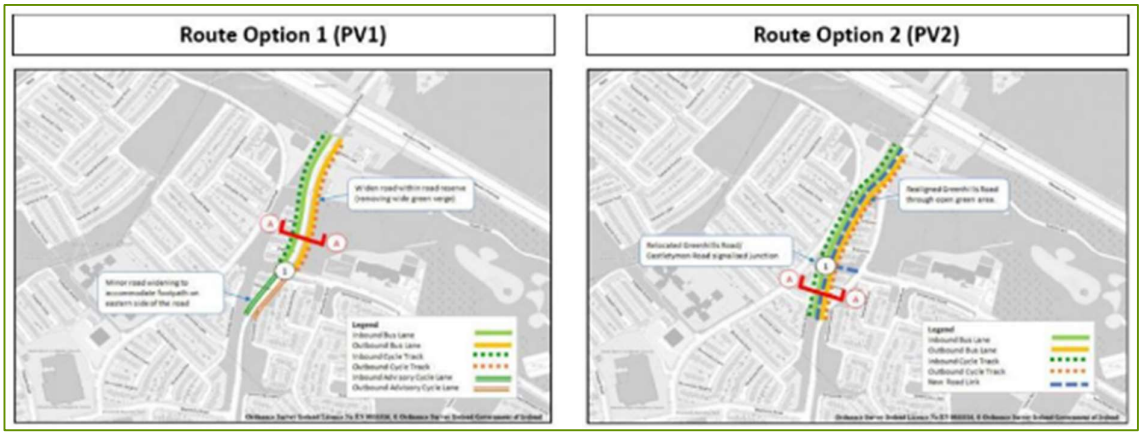


Figure 2.3.30: Extract from EIAR Chapter 3 showing Route Options PV1 and PV2 at Parkview

Following the completion of the public consultation process in relation to the EPR, various amendments were made to the scheme proposals to address a number of the issues raised in submissions, including incorporating suggestions and recommendations from local residents, community groups and stakeholders, and / or arising from the availability of additional information. These amendments were incorporated into the designs and informed a draft PRO.

Section 3.4.1.1.1 of EIAR Chapter 3 Consideration of Reasonable Alternatives notes the following in relation to Parkview:

"At Parkview, the proposed alignment has been altered to allow a northbound, right turn lane to Castletymon Road and also to provide more landscaping space between the proposed road and the adjoining properties. The existing road will continue to be used for southbound buses and cyclists;"

No major scheme design alternatives were considered to the Proposed Scheme following the draft PRO consultation. However, specific design alternatives which required a further level of consideration either in microlocation or in design form included Route alignment at R819 Greenhills Road / Parkview which Section 3.4.4.1 notes:

"Between Mayberry Road and Tymon Lane, the draft PRO proposed that the local road network be reconfigured, with a new road alignment catering for general through traffic (inbound and outbound) and inbound bus and cycle lanes routed through the existing green area between Parkview and Birchview Avenue / Treepark Road. A new junction and link road was proposed to connect Castletymon Road to this new road alignment. The Old Greenhills Road was proposed to become a cul-de-sac for general traffic with bus gates either end allowing outbound buses and cyclists to follow the Old Greenhills Road alignment. Following a review of the public consultation feedback, updated traffic modelling and noise assessment modelling which indicated that a potential modification to the Parkview boundary walls may be required to mitigate the noise impacts from general traffic on the new link road, this proposed alignment was reviewed to seek a solution which would mitigate noise impacts and possible resulting landscape and visual impacts. This design review resulted in an alternative alignment option which provides a sustainable transport link road within the green area between Treepark Road and Parkview to cater for pedestrians, cyclists, bus movements in both

directions and other authorised vehicles. General traffic movements would remain on the existing Greenhills Road. Two bus gates would be provided at either end for outbound bus priority to allow buses to navigate between the new sustainable link road and the existing R819 Greenhills Road. Inbound buses from Castletymon road will be provided with a short bus only link road opposite the Tallaght Theatre to mitigate against potential congestion from the northern outbound bus gate. Two-way cycle tracks and footpaths would be provided to enhance the permeability and accessibility, formalising existing desire lines between Birchview Avenue and Treepark Road to local amenities including Tymon Park, Tallaght Theatre and Castletymon Road, where a number of schools exist.

This revised alignment was taken forward into the final PRO."

As described in Section 4.5.1.1 of EIAR Chapter 4 Proposed Scheme Description, *"Between Mayberry Road and Tymon Lane, it is proposed to reconfigure the local road network. SDCC had previously identified this section of Greenhills Road for upgrade through the provision of new roads under their County Development Plan and received Part 8 Planning Approval in 2007. The Proposed Scheme seeks to align with the principles of the Part 8 scheme with a significantly reduced cross section that caters for sustainable modes only (i.e., bus / cycling / pedestrian) to minimise impacts on the adjacent properties and surrounding environment."*

Reference to this is also made in Section 3.4.1.2 of the Preferred Route Option Report included in the Supplementary Information provided with the application: *"The EPR proposal to the north of Mayberry Road was to provide a new road alignment, with bus and cycle lanes in each direction, through the green area between Parkview and Treepark Road. This route is identified as a Road Objective in the South Dublin County Council County Development Plan and has a previously approved alignment (SDCC Part 8, 2007)."*

In summary, the Proposed Scheme aligns with the principles of this SDCC Approved Part 8 scheme and the Proposed Scheme has a significantly reduced cross section that caters for sustainable modes only (i.e. bus/cycling/pedestrian) to minimise impacts on the adjacent properties and surrounding environment, and is the optimum solution for achieving the objectives of the Proposed Scheme. Inbound D5 spine services and X47 services from Castletymon Road will also be provided with a priority bus only link that joins the new link road. As part of the Proposed Scheme improved cycling facilities including new two-way cycling and pedestrian links will be incorporated to improve access to Tymon Park and surrounding amenities. Significant new landscaping and SUDs enhancements will also be provided in these areas.

2.2.3.12 Other Issues Raised

Summary of Issues Raised

1. Damage to house foundations

Submission gave the opinion that the foundations of homes would be compromised

2. Taxis / private coaches / private cars using bus route

Submission gave the opinion that the proposed corridor will encourage taxis and other bus/coach traffic to use route.

3. Single bus route

Submission gave the opinion that bus service will not be beneficial as buses will return into a single traffic lane.

4. Light pollution

Submission gave the opinion that the proposed corridor would lead to significant increases in light pollution.

5. Removes social and ecological potential with decreases in use of private motor cars.

Submission gives the opinion that the BusConnects plans for decreases in the use of private motor cars which would increase the future capacity for local green spaces, this scheme removes that social and ecological potential.

6. Plan proposed many years ago and not suitable for current volumes of traffic.
7. Exiting the estate by car will become a challenge

Response to Other Issues Raised

1. Damage to house foundations

Vibration

The potential Vibration impacts, as a result of the Proposed Scheme has been assessed in the EIAR. The process of assessment and the results have been described in Chapter 9 (Noise & Vibration) in Volume 2 of the EIAR.

Operational phase vibration

Section 9.4.4.2 Operational Vibration Impact Assessment mentions:

"Once operational, buses will use the dedicated bus lanes for the Proposed Scheme. Analysis of traffic data for the Proposed Scheme, however, indicates a reduction in overall AADT [Annual Average Daily Traffic] *traffic flows along the core bus corridor.*

Reference to the monitoring results in Table 9.28 and Table 9.29 confirms that vibration levels associated with passing buses and other vehicular traffic at distances of 2.5 to 10m from the road edge are negligible in terms of human perception and building response. Vibration levels associated with a passing bus were recorded at 0.1mm/s PPV [Peak Particle Velocity] *or less under the monitored scenarios. These values are below the normal range of perceptible human response to vibration and would not pose any significant impact.*

A review of the traffic data for the Proposed Scheme indicates that the maximum number of buses travelling inbound or outbound is 545 over the 16hr daytime period along the Drimnagh Road. Using this number and the highest VDV [Vibration Dose Value] *event measured during a bus pass at a reference distance of 5m from the road edge (0.0033 m/s1.75), the daytime VDV,b,day value is calculated as 0.016 m/s1.75. Reference to Table 9.20 confirms this value is orders of magnitude below those associated with a low probability of adverse comment. The overall impact is neutral, negligible and long term."*

In relation to the Proposed Scheme residual impacts for the Operational Phase Section 9.6.2 notes the following: *"There are no significant residual Operational Phase noise or vibration impacts associated with the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."*

Construction phase vibration

Section 9.4.3.3 notes the following:

"The potential for elevated levels of vibration at sensitive locations during construction activities associated with the Proposed Scheme is typically associated with surface breaking activities used for road widening and utility diversions. Depending on the method and equipment used, there is the potential for minor vibration levels relating to piling operations……

…vibration impacts during ground-breaking activities using heavy breakers have the potential to generate a negative, slight to moderate, temporary effects at distances of 10m from the activity. Beyond 50m from this type of activity, impacts are reduced to not significant to slight and temporary. For all other works, vibration impacts will be below those associated with perceptible vibration and will be imperceptible to not significant and temporary. All construction works are orders of magnitude below limits values associated with any form or cosmetic or structural damage for structurally sound or protected or historical buildings or structures referred to in Table 9.14 even at closer distances to the source. Notwithstanding the above, any construction activities undertaken on the site will be required to operate below the recommended vibration criteria set out in Table 9.14. No vibration sensitive processes have been identified along the Proposed Scheme."

Extract from Section 9.2.4.1.3.1 Table 9.14 of Chapter 9 Noise & Vibration of Volume 2 of the EIAR Recommended Construction Vibration Thresholds for Buildings Figure 2.3.11.

Vibration Limits for Buildings (PPV) at the Closest Part of the Building to the Source of Vibration, at a Frequency of 4Hz		
Building Type	**Transient Vibration**	**Continuous Vibration**
Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s	25 mm/s
Unreinforced or light framed structures. Residential or light commercial-type buildings	15 mm/s	7.5 mm/s
Protected and Historic Buildings *Note 1	6 mm/s – 15 mm/s	3 mm/s – 7 mm/s
Identified Potentially Vulnerable Structures and Buildings with Low Vibration Threshold	3 mm/s	

Note 1: The relevant threshold value to be determined on a case by case basis. Where sufficient structural information is unavailable at the time of assessment, the lower values within the range will be used, depending on the specific vibration frequency.

Figure 2.3.31: Extract from the EIAR Section 9.2.4.1.3.1 Table 9.14: Recommended Construction Vibration Thresholds for Buildings

In relation to the Proposed Scheme residual impacts for the Construction Phase Section 9.6.1 notes the following: *"The assessment has indicated that the use of standard construction activities can operate comfortably within the recommended vibration limits for standard residential and other light-framed buildings. With the adoption of best practice methodologies, vibration impacts at the most sensitive premises can be adequately mitigated to within acceptable levels relating to disturbance, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."*

2. Taxis / private coaches / private cars using bus route

The proposed new bus lanes in each direction will be subject to enforcement and general traffic shall not be allowed make use of the bus lanes. At all times including during times of congestion in the general traffic lanes on Greenhills Road, buses, taxis and emergency vehicles will be permitted to use the proposed bus lanes.

3. Single bus route not beneficial

For the sustainable Bus Priority signalling will be used to prioritise bus movements in the outbound direction via the new approximately 620m long sustainable link road that will run parallel to Birchview Avenue and Treepark Road. When the outbound bus re-joins Greenhills Road the bus priority signals will prioritise buses onto the dedicated outbound Greenhills Road bus lane between Parkview and Mayberry Road junction, the outbound buss will not share the general traffic lanes. The inbound bus lane through this section of the scheme will also have a dedicated bus lane not shared with general traffic.

4. Light pollution

As can be seen in the EIAR Volume 3 – Figures Part 1 of 3, 9. Street Lighting Drawing sheet numbers 10 and 11 of 56, some existing street lighting columns are required to be removed as part of the Proposed Scheme as the existing locations clash with the proposed cycle tracks, footways and roadway and some additional street lighting is also required. All new and replacement lighting columns are positioned to facilitate the new alignment. In the Supplementary Information section of the planning application documentation, Section 12.4.2 states that Light emitting diode (LED) lanterns will be the light source for any new or relocated public lighting provided, Section 12.4.3 of the Preliminary Design Report states that all new lighting will aim to minimise the effects of obtrusive light at night and reduce visual impact during daylight. Lighting schemes will comply with the 'Guidance notes for the Reduction of Light Pollution' issued by the Institution of Lighting Professionals (ILP).

5. Benefit of reduced car usage on future ecological capacity for local green spaces not utilised

Section 2.3.3.1 a) response to loss of green space addresses community amenity, traffic and environmental impacts of the scheme.

6. Plan not suitable for current traffic volumes

Section 2.3.3.1 b) response to loss of green space addresses traffic assessment and impact of the scheme.

7. Exiting the estate challenging

Section 2.3.3.1 b) response to loss of green space addresses traffic assessment and impact of the scheme.

The following should be noted in the above response in Section 2.3.3.1:

- The reduction in traffic along Greenhills Road for combined flows (Passenger Car Units per hour in two directions) expected in the AM Peak Hour 2028 Opening Year scenario is noted in Table 6.73, page 153 of Chapter 6 in Volume 2 of the EIAR as minus 1516 PCU (Passenger Car Unit).

- The reduction in traffic along Greenhills Road for combined flows (Passenger Car Units per hour in two directions) expected in the PM Peak Hour 2028 Opening Year scenario is noted in Table 6.78, page 160 of Chapter 6 in Volume 2 of the EIAR as minus 1508 PCU (Passenger Car Unit).

- Also, the reduction in traffic along Tymonville Crescent for combined flows (Passenger Car Units per hour in two directions) expected in the AM Peak Hour 2028 Opening Year scenario is noted in Table 6.75, page 156 of Chapter 6 in Volume 2 of the EIAR as minus 497 PCU (Passenger Car Unit).

- Finally, the reduction in traffic along Castletymon Road for combined flows (Passenger Car Units per hour in two directions) expected in the PM Peak Hour 2028 Opening Year scenario is noted in Table 6.80, page 161 of Chapter 6 in Volume 2 of the EIAR as minus 174 PCU (Passenger Car Unit).

2.4 Proposed Scheme at Greenhills Road

2.4.1 Description of the Proposed Scheme at this Location

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.1.1 of Chapter 4 of Volume 1 of the EIAR, Proposed Scheme Description, between the Old Greenhills Road and the junction with Mayberry Road, along the Greenhills Road (R819), it is intended to provide one bus lane, one traffic lane and a cycle track in each direction. Raised table side entry treatments and protected junctions have been proposed along this section where practical to improve pedestrian and cycle facilities. To accommodate this road cross section, it is proposed to acquire additional land on both the west and east side of the existing Greenhills Road (R819). A bus gate has been proposed along this section to minimise impacts to the existing mature trees and the stone wall on the western verge north of the TUD entrance on Greenhills Road (R819). The Airton Road / Greenhills Road (R819) junction has been upgraded to provide improved facilities for buses, cyclists and pedestrians.

To improve the operation of the existing junction and minimise land take, it is proposed to introduce a southbound right turn ban from the Greenhills Road (R819) to the entrance to Harvey Norman / Costa carpark and a northbound right turn ban from the Greenhills Road (R819) to Hibernian Industrial Estate. Southbound access to Harvey Norman / Costa car park via Greenhills Road (R819) will be maintained via the entrance off Airton Road. Northbound access to Hibernian Industrial Estate will be achieved via the entrance opposite Broomhill Road.

A low height retaining wall will be required to the south of Broomhill Road to accommodate the proposed road boundary cross section.

Between Mayberry Road and Tymon Lane, it is proposed to reconfigure the local road network. SDCC had previously identified this section of Greenhills Road for upgrade through the provision of new roads under their County Development Plan and received Part 8 Planning Approval in 2007. The Proposed Scheme seeks to align with the principles of the Part 8 scheme with a significantly reduced cross section that caters for sustainable modes only (i.e., bus / cycling / pedestrian) to minimise impacts on the adjacent properties and surrounding environment. General traffic will remain on the existing Greenhills Road. Bus Priority signalling will be used to prioritise bus movements in the outbound direction via the new approximately 620m long sustainable link road that will run parallel to Birchview Avenue and Treepark Road. Inbound D5 spine services and X47 services from Castletymon Road will also be provided with a priority bus only link that adjoins the new link road. As part of the proposal, improved cycling facilities including new two-way cycling and pedestrian links will be incorporated to improve access to Tymon Park and surrounding amenities. Significant new landscaping and Sustainable Drainage Systems enhancements will also be provided in these areas.

As outlined in the Greater Dublin Area (GDA) Cycle Network Plan, this Section of the corridor will provide access with the proposed secondary routes SO6 and 9C at Belgard Square South / Belgard Square West and aligns with primary route SO5 on the Blessington Road and primary route 8B on Greenhills Road (R819). The proposed Dodder Greenway can be accessed at Tymon Park south of the R819 / M50 overbridge.

Section 4.5.2.1 of Chapter 4 describes that the existing M50 bridge crossing will be retained. Two new single span pedestrian / cycle bridges are proposed to be located adjacent to the existing bridge to maintain priority for buses on the existing bridge and to provide high quality cycle / pedestrian facilities over the M50 in both directions. The pedestrian / cycle bridges will be steel warren truss type structures and will be positioned immediately parallel to the existing structure. Additional land acquisition on both sides of the M50 will be required to facilitate the construction of the pedestrian / cycle bridges.

Two sustainable link roads will be constructed in the Ballymount area due to the existing width constraints within the existing Greenhills Road (R819) to the east of the M50. The existing Ballymount Road Upper connection to Greenhills Road will be closed to vehicular traffic and a new 220m long link road to the south of Ballymount Avenue will provide a connection to Greenhills Road (R819). New

retaining walls and earth embankments will be required at this location to facilitate the new road construction. It is proposed to widen the existing Ballymount Avenue and Calmount Road for dedicated bus and cycle tracks and connect Calmount Road to Greenhills Road. The existing Greenhills Road (R819) will be retained for local access and cycling facilities with a cul-de-sac treatment to the northern end where a new approximately 250m long sustainable transport link road will be constructed in the green area to the east of Calmount Road. New retaining walls and earth embankments will be required at this location to facilitate the new road construction. To maintain access for local businesses along the Greenhills Road (R819) in this area a small roundabout will be constructed with a new approximately 90m long link road to connect Greenhills Road with Calmount Avenue which generally aligns to the principles of the SDCC Part 8 schemes for the area. Accessible ramps and stairs will be provided to mitigate against the steep gradient on Calmount Avenue where it joins to Greenhills Road.

Between Calmount Road and Walkinstown Roundabout, it is proposed to maintain one bus lane, one traffic lane and a cycle track inbound with one traffic lane and a cycle track outbound along the Greenhills Road (R819).

Figure 2.4.1 below is an extract from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing Proposed Scheme layout at Greenhills Road / Calmount Avenue.

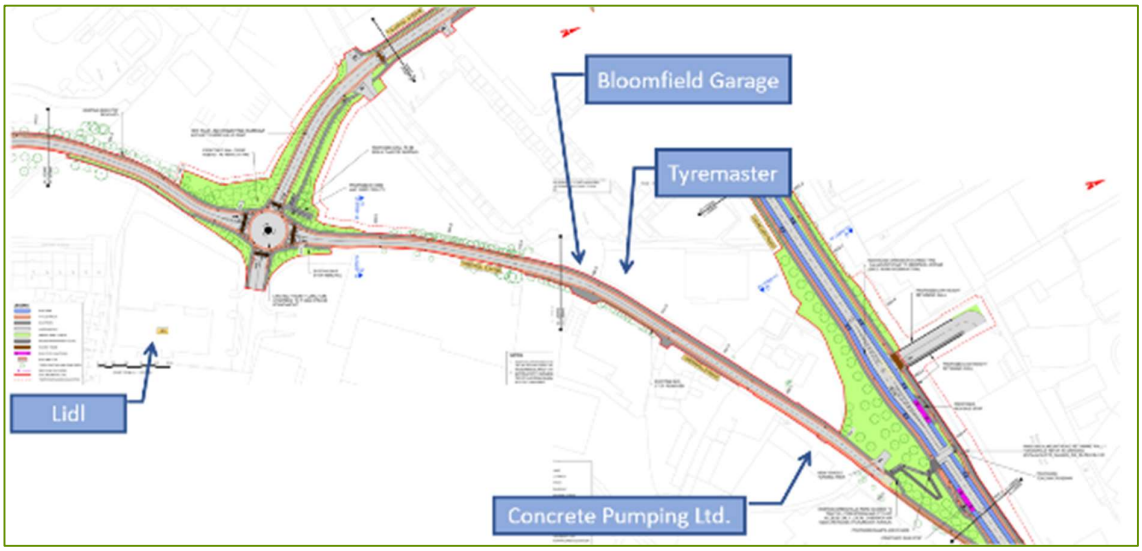


Figure 2.4.1: Extract from General Arrangement Drawings (Sheets 15 and 17)

Figure 2.4.2 below shows CPO Proposed Landtake Redline for Proposed Scheme overlaid on Aerial imagery on Greenhills Road between Calmount Avenue and proposed Calmount Road Extension.

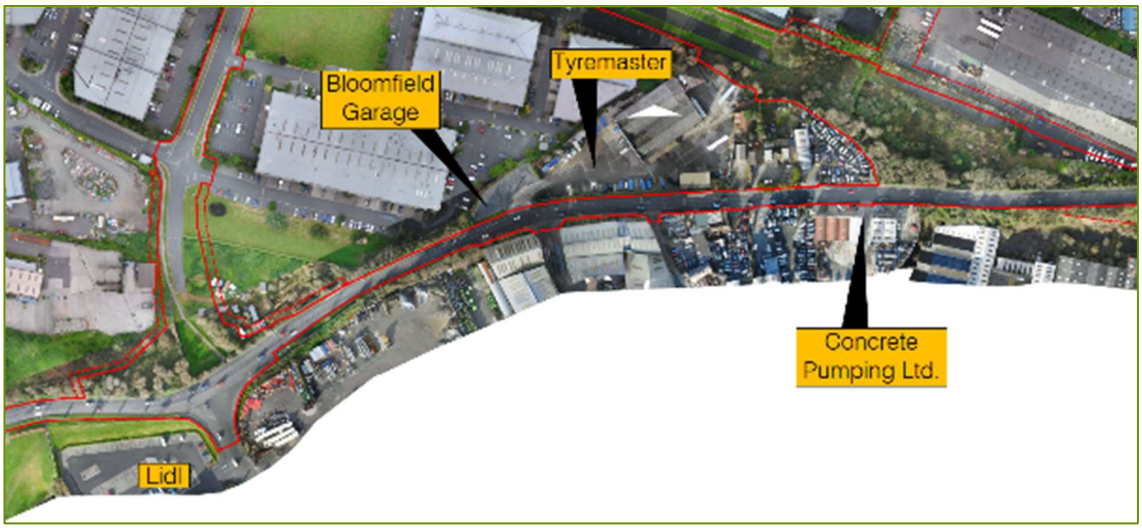


Figure 2.4.2: CPO Redline Overlay on Aerial Imagery Greenhills Road / Calmount Avenue

2.4.2 Overview of Submissions Received

Table 2.4.2.1 below lists the 5 submissions within which issues were raised in respect of the Proposed Scheme at Greenhills Road.

Table 2.4.2.1: Submissions Made in Respect of Greenhills Road

No	Name	No	Name	No	Name
10	Lidl Ireland GmbH	28	Cllr. Kieran Mahon	57	Ravensburg Unlimited Company
22	AA Tyremaster Limited & Others	56	Concrete Pumping Limited		

Of the 5 submissions, 4 were from commercial businesses and 1 was from a local representative.

A number of issues were raised, and these are listed below and described in Section 2.1.3 below.

Common Issues Raised

1. Negative effect on businesses
    a) Passing trade
    b) Additional travel distance and access issues
    c) Removal of public transport link
2. Traffic
3. Security concerns with proposed cul-de-sac of existing Greenhills Road
4. Lack of consultation
5. Property values and future development
6. Alternative proposal to leave access open at Greenhills Road / Calmount Road extension

Other Issues Raised in several submissions

1. Bus stops and future bus routes
2. CPO of land
3. Mitigation measures
4. Zoning

2.4.3 Common Issues Raised and Responses

2.4.3.1 Negative effect on businesses

Summary of Issues Raised

1. Passing trade

Submission 10 noted that the Lidl store on Greenhills Road currently has a good profile with direct access from Greenhills Road and believes that the Proposed Scheme would diminish considerably the profile and access to this store and the information submitted for the scheme application does not indicate that these impacts are adequately assessed or mitigated.

Submission 22 by seven parties notes that businesses at this location have high profiles and brand visibility and rely very heavily on brand recognition and passing trade to maintain sustainable business.

2. Additional travel distance and access issues

The submission states that direct daily access to Walkinstown Roundabout is important for attending sites throughout the country and city and proposed scheme road alterations will impact viability of all businesses at this location.

3. Loss of public transport link

The submission believes that the removal of existing high frequency bus routes from Greenhills Road would disadvantage employees and customers that do not have access to a private car.

Response to Issues Raised

1. Passing trade

Corridor options for the Tallaght / Clondalkin to City Centre Bus Corridor Scheme were evaluated using a sifting process and multi-criteria assessment (MCA), with the route along Ballymount Avenue and Calmount Road identified as the preferred option to deliver the aim and objectives to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. Alternative core bus services and cycling routes that could mitigate impacts on commercial premises along R819 Greenhills Road between Kilakee Drive and Greenhills Industrial Estate utilising the R819 Greenhills Road could not meet the objectives to enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through provision of bus lanes and other measures to provide priority to bus movements over general traffic movements, and to enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable.

Three route options were assessed in the Feasibility and Route Options Assessment Report for the Proposed Scheme which are shown below in Figure 2.4.3 extract from Greenhills to City Centre Core Bus Corridor Options Study Volume 1: Feasibility and Options Assessment – Main Report.

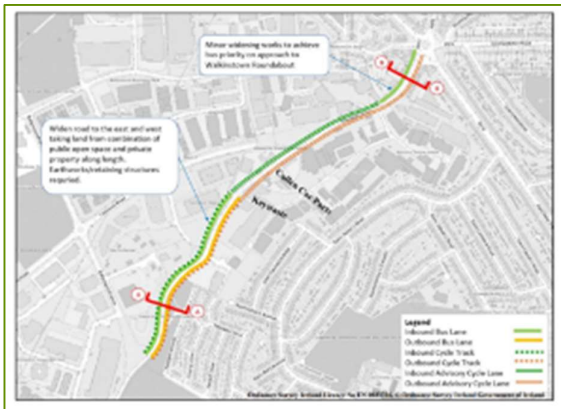


Figure 6.4: Route Option BW1 Indicative Scheme Design



Figure 6.8: Route Option BW2 Indicative Scheme Design

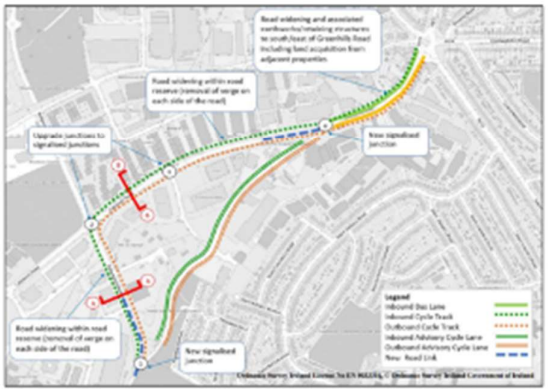


Figure 6.13: Route Option BW3 Indicative Scheme Design

Figure 2.4.3: Route Options BW1, BW2 & BW3 Extract from Greenhills to City Centre Core Bus Corridor Options Study Volume 1: Feasibility and Options Assessment – Main Report (Figures 6.4, 6.8 & 6.13)

Section 6.2.4 of the Greenhills to City Centre Core Bus Corridor Options Study Volume 1: Feasibility and Options Assessment – Main Report, included in Appendix I1 of the Supplementary Information provided with the application for the Proposed Scheme notes the following in relation to route options assessment:

"In terms of economy, route option BW1 represents the cheapest solution. However, this route option provides the least bus lane priority of all options and therefore would result in poorer journey time reliability than the more expensive options of BW2 and BW3.

In terms of 'Integration', BW2 and BW3 delivers a new road link which is included as a development plan objective and as such receives a higher ranking under land-use integration. Furthermore, option BW2 and BW3 would provide high quality cycle facilities along a route that coincides with secondary cycle route 8A with facilities provided along the entire length of the route while BW1 would provide partial dedicated cycle facilities. As such, options BW2 and BW3 rank higher in terms of cycling integration.

Under 'Accessibility and Social Inclusion', there is little to differentiate between route options with each route serving a similar number of key trip attractors.

In terms of 'Safety' option BW1 requires no turning movements and as such it ranks higher than options BW2 and BW3. Similarly, cyclist safety is better along BW2 and BW3 which offer safer environment and facilities for cyclists.

In terms of 'Environment', generally option BW1, which would require a large amount of road widening along Greenhills Road, results in greater impact in the environment in terms of air and noise. While significant works would be required to facilitate BW2 and BW3, comparatively these options have less impact on the environment and sensitive receptors.

Based on the assessment undertaken, route options BW2 and BW3 appear to offer similar benefits over BW1. However, route option BW2 is preferred for the Ballymount area for the following reasons:

- *It strikes the right balance between cost and delivering reliable journey times compared to BW1 which is cheaper to construct but provides less bus lane priority;*
- *It delivers high quality cycle facilities along the entire length of the route, forming part of secondary cycle route 8A, which are not achievable along Greenhills Road. Cycle access to Greenhills Road, which is identified as a feeder route, could also be maintained in this option;*
- *Compared to option BW3, this option removes the need for additional signalised junctions associated with bus access to and from the current Greenhills Road alignment. Furthermore, it directly serves Ballymount Industrial Estate which is a major trip attractor with a large employment catchment;*
- *It delivers road links which are included as objectives in the South Dublin County Council Development Plan 2016 – 2022. It also allows Greenhills road to be downgraded to a local road which is more suitable for its current alignment and geometry; and*
- *It has less impact on the environment compared to other options."*

Figure 2.4.4 below is an extract from South Dublin County Council Development Plan 2016 – 2022 Table 6.5 Six Year Road Programme


SOUTH DUBLIN COUNTY COUNCIL DEVELOPMENT PLAN 2016 - 2022

TRANSPORT & MOBILITY (T&M)

Table 6.5 Six Year Road Programme

ROAD	DESCRIPTION	FUNCTION
Greenhill Road upgrade and links	Upgrade of Greenhills Road from Airton Road to Walkinstown Roundabout with new links to Ballymount Avenue, Limekiln Road and Calmount Road.	To provide improved access to/between employment lands within Tallaght, Ballymount and Robinhood and to provide improved access to and from the Greenpark, Limekiln and Greenhills area.

Figure 2.4.4: Extract from South Dublin County Council Development Plan 2016 – 2022 Table 6.5 Six Year Road Programme

Figure 2.4.5 below is an extract from South Dublin County Council Public Consultation Part 8 Display Drawings 2020

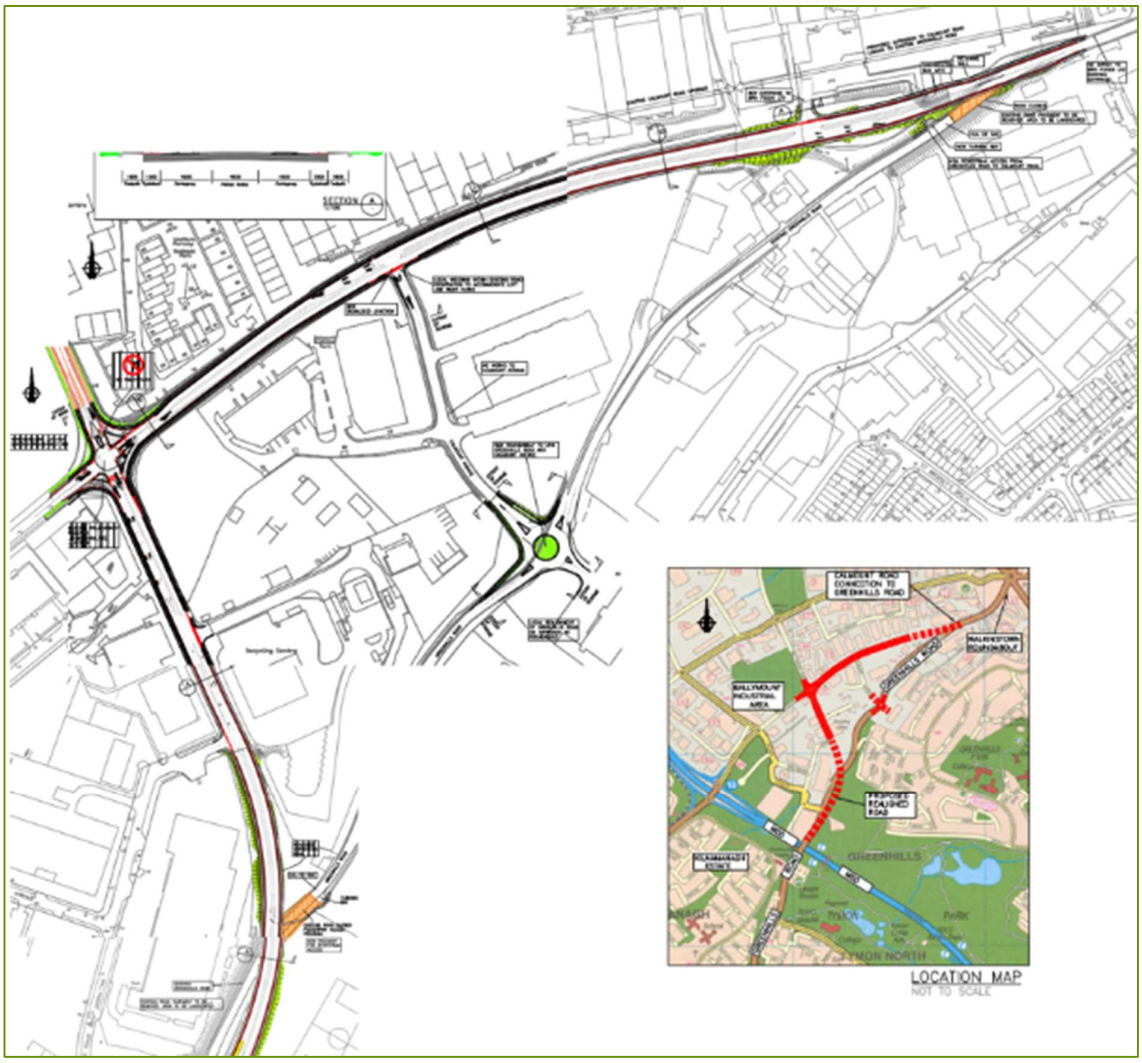


Figure 2.4.5: Extract from South Dublin County Council Public Consultation Part 8 Display Drawings 2020

Although the cul-de-sac at the north-east end of Greenhills Road opposite the Greenhills Industrial estate will prevent general traffic movement along Greenhills Road at this location, this does not preclude access to premises on Greenhills Road by car and other traffic.

General vehicular access from the south will be available via the new link road connecting Calmount Avenue to Greenhills Road at the proposed roundabout junction or via the new Greenhills Road priority junction at Ballymount Avenue as shown in Figure 2.4.6 below.

Section 10.4.4.2.1 of Chapter 10 Population of Volume 2 of the EIAR notes the following:

"Chapter 6 (Traffic & Transport) identified a Positive, Moderate and Long-Term impact from a reduction in general traffic along the Proposed Scheme and a Negative, Moderate and Long-Term impact from redistributed traffic along the surrounding road network. No road junctions in the surrounding road network are expected to be significantly impacted by the operation of the Proposed Scheme."

Section 10.4.4.2.2.2 of Chapter 10 Population of Volume 2 of the EIAR notes the following:

"Full access for pedestrians and cyclists will be maintained. Although access for vehicles servicing commercial premises is also impacted by the removal of general traffic from sections of the route, access arrangements for businesses in these locations will be maintained,"



Figure 2.4.6: Access Routes to Commercial Businesses on Greenhills Road between Kilakee Drive and Greenhills Industrial Estate

2. Additional travel distance

Due to the redistribution of existing traffic flows from Greenhills Road to Ballymount Avenue and Calmount Road, these routes will offer a reasonable alternative journey time via the new Calmount Avenue link road and new junction at Greenhills Road and Ballymount Avenue.

Access to Lidl, Tyremaster, Bloomfield Garage, Concrete Pumping Limited and other commercial businesses on Greenhills Road will be available via Greenhills Road / Ballymount Road junction and Greenhills Road Calmount Road junction as indicated in Figure 2.4.6 above.

3. Loss of public transport link

Appendix H of the Preliminary Design Report included in the Supplementary Information includes the Bus Stop Review Report. This report sets out a comprehensive exercise which has been carried out to review existing bus stops along the route of the Proposed Scheme and, where appropriate to rationalise these stops in line with best practice principles related to bus stop placement. These principles include:

- Driver and waiting passengers are clearly visible to each other;
- Located close to key local facilities;

- Located close to main junctions without affecting road safety or junction operation;
- Located to minimise walking distance between interchange stops;
- Where there is space for a bus shelter;
- Located in pairs, 'Tail to tail' on opposite sides of the road;
- Close to (and on exit side of) pedestrian crossings;
- Away from sites likely to be obstructed; and
- Adequate footway width.

A main consideration in the siting of bus stops is to minimise walking distance between interchange stops. This exercise was carried out with cognisance of the interface with orbital routes proposed as part of the Dublin Area Bus Network Redesign, which involved significant liaison with the BusConnects Dublin Area Bus Network Redesign team.

The scope of the Proposed Scheme includes the provision of infrastructure for bus services routed along the main corridor to the City Centre. Infrastructure for orbital bus routes, if required, will be delivered as part of a separate orbital core bus corridor scheme, whereby the provision of bus stops, including their location, can be assessed on a holistic basis along the orbital corridor, taking into account the location of existing nearby bus stops which are outside the red line boundary of the Proposed Scheme.

The existing bus stops 2373 (inbound) 2336 (outbound) are proposed to be removed as they are not on the proposed Scheme bus route, new bus stops on the Proposed Scheme Route are proposed near the Ballymount Avenue / Greenhills Road junction (inbound and outbound) and near the Calmount Road / Calmount Avenue junction (inbound and outbound). The nearest inbound and outbound bus stops to the Lidl store are approximately 350 metres away at the Calmount Avenue / Calmount Road junction which will be accessible for cyclists, pedestrians and general traffic via the new Calmount Avenue road extension linking Calmount Avenue with Greenhills Road at the proposed roundabout junction.

The nearest bus stops to the Lidl store are indicated in Figure 2.4.7 below.

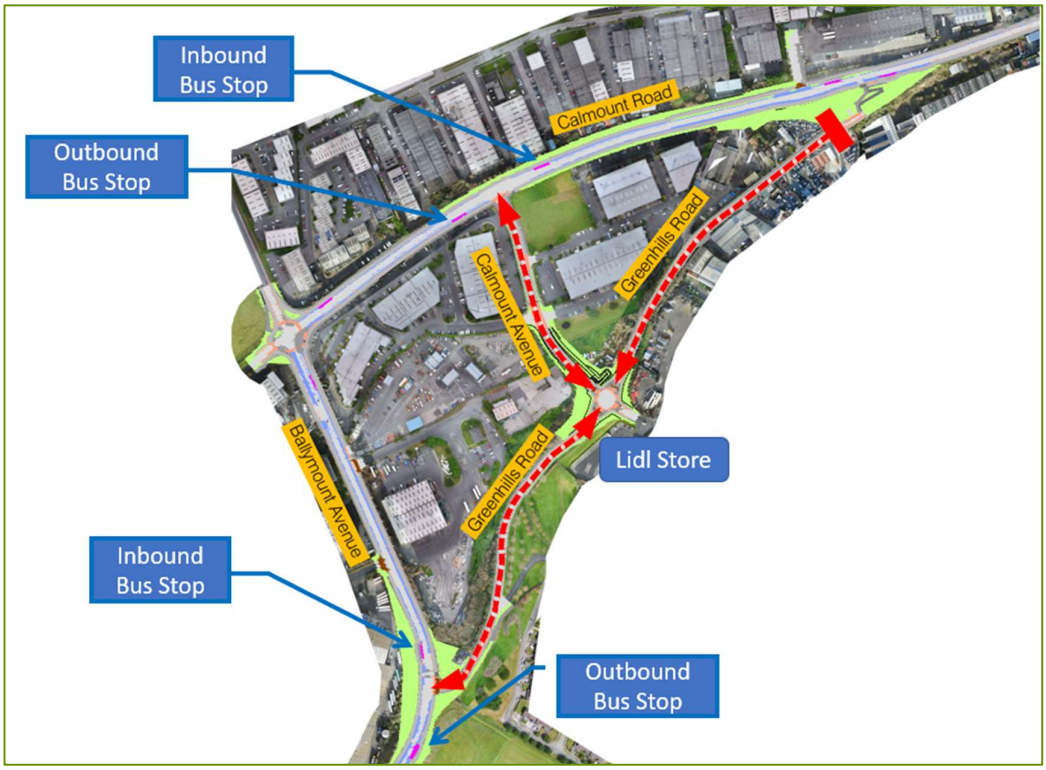


Figure 2.4.7: Access Routes to Commercial Businesses on Greenhills Road between Kilakee Drive and Greenhills Industrial Estate

2.4.3.2 Traffic

Summary of Issues Raised

Concerns were raised that the closing of Greenhills Road will transfer the substantial traffic flow it currently takes onto the new extended Calmount Road together with additional traffic which will be attracted to the extended Calmount Road.

The submissions believe that the Proposed Scheme will attract M50 bound traffic through the Calmount Road / Ballymount Avenue junction from the south city suburbs. Calmount Road is currently at a standstill at peak times and proposed scheme would result in tailbacks through the Walkinstown Roundabout causing traffic congestion in a large area.

Response to Issues Raised

As set out in Section 2.1 of EIAR Chapter 2 Need for the Scheme, *"The Proposed Scheme is needed in order to enable and deliver efficient, safe and integrated sustainable transport movement along the corridor through the provision of enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region."*

The Proposed Scheme aims to provide an attractive alternative to the private car and promote a modal shift to public transport, walking and cycling on this key access corridor in the Dublin region. Section 6.4.6.2.9.7 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR states that: *"Overall, it has been determined that the potential impact of the reduction in general traffic flows along the Proposed Scheme will be Positive, Moderate and Long-term whilst the potential impact of the redistributed general traffic along the surrounding road network will be Negative, Sight and Long-term."*

In meeting its objectives, the Proposed Scheme will deliver strong positive impacts in terms of promoting active travel and sustainable transport. It is noted that the modelled forecasts for the 2028 opening year indicate that one of the impacts of the proposed Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme is that there is a reduction of 33% in the number of people travelling via car along the Proposed Scheme towards the city centre at AM peak hour. Similarly, in the PM peak hour, there is a reduction of 38% in the number of people travelling outbound via car, as shown in Figure 2.4.8 and Figure 2.4.10 (reproduced from diagrams 6.6 and 6.7 in Chapter 6). This will reduce the overall traffic movement along the Calmount Road / Ballymount Avenue – City Centre corridor.

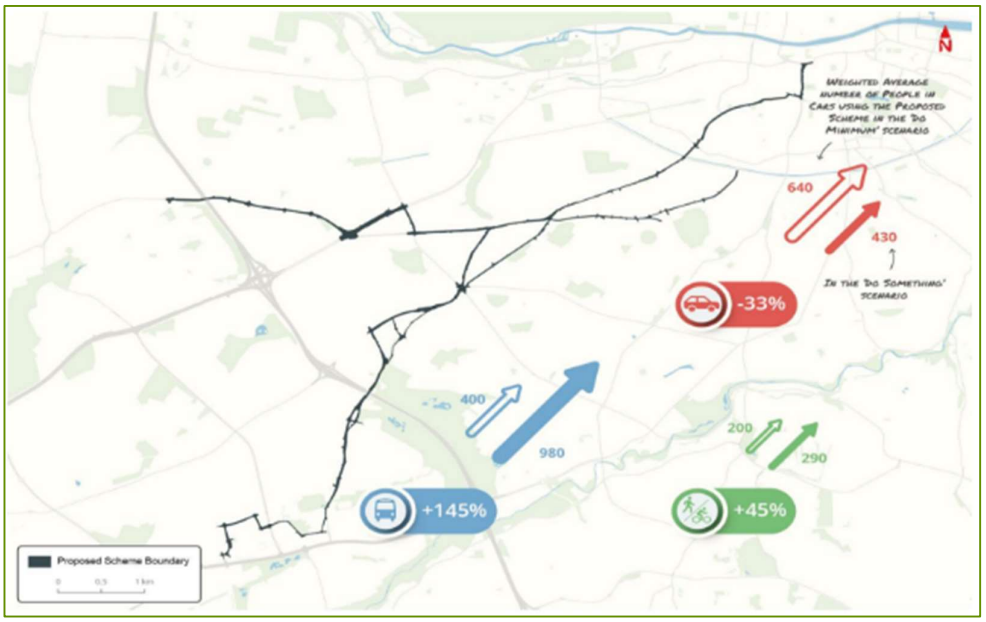


Figure 2.4.8: People Movement by Mode travelling along the Proposed Scheme during 2028 AM Peak Hour (Diagram 6.6 in EIAR Chapter 6)

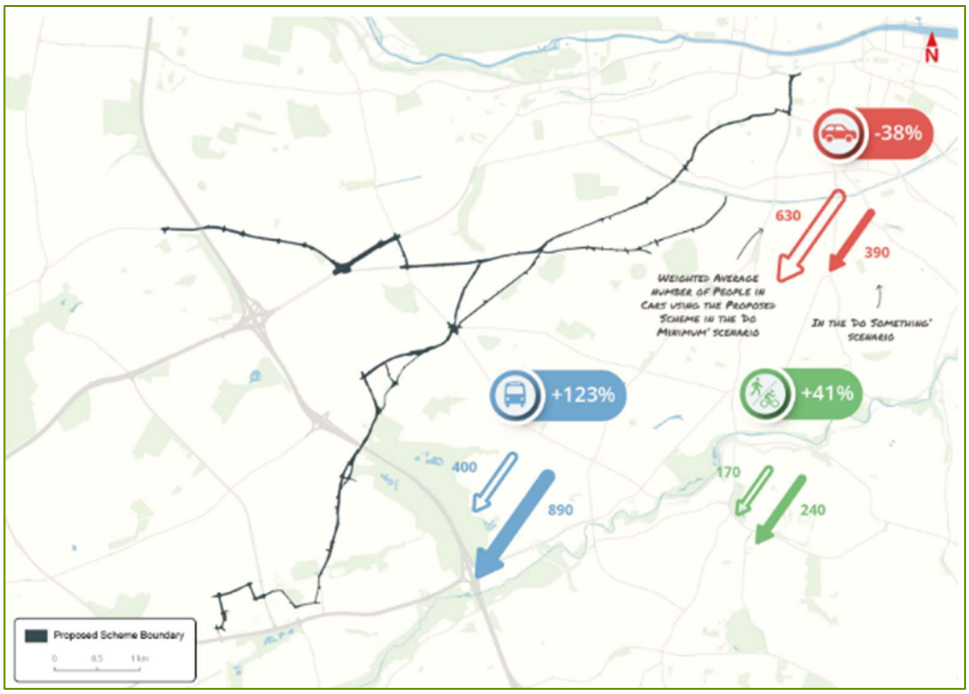


Figure 2.4.9: People Movement by Mode travelling along the Proposed Scheme during 2028 PM Peak Hour (Diagram 6.7 in EIAR Chapter 6)

For the AM peak hour, Section 6.4.6.2.9.3 General Traffic Flow Difference – AM Peak Hour, identifies increases in general traffic flows on Ballymount Avenue (New link) of 987 PCUs, Calmount Road (New Link) of 1116 PCUs and Greenhills Road (New Link) of 1462 PCUs.

For the PM peak hour, Sections 6.4.6.2.9.3 General Traffic Flow Difference – PM Peak Hour, identifies increases in general traffic flows on Ballymount Avenue (New link) of 1165 PCUs, Calmount Road (New Link) of 476 PCUs and Greenhills Road (New Link) of 1081 PCUs.

In relation to above increase in travel flows, Section 6.4.6.2.9.3 notes the following:

"The contents of Table 6.74 demonstrate that there is an increase of between +613 and +1,462 general traffic flows along the direct study area during the AM Peak Hour.

When compared to Table 6.73, Table 6.74 shows that the scheme will generally reduce traffic levels along the corridor, with increases in traffic flow only predicted on four links, three of which relate to the closing off of a section of Greenhills Road, and redirection of traffic along Calmount Road via a new link along Ballymount Avenue. Most of this traffic will be transferred from the existing Greenhill Road.

Overall Impact on Direct Study Area: Overall, the scheme is predicted to have a Medium positive impact on traffic flows within the direct study area. [AM]

The contents of Table 6.79 demonstrate that there is a slight to significant increase of between +476 to +1,563 general traffic flows along the direct study area during the PM Peak Hour.

When compared to Table 6.78, Table 6.79 shows that the scheme will generally reduce traffic levels along the corridor, with increases in traffic flow only predicted on four links, three of which relate to the closing off of a section of Greenhills Road, and redirection of traffic along Calmount Road via a new link along Ballymount Avenue. Most of this traffic will be transferred from the existing Greenhill Road.

This increase in general traffic flow has been determined as an overall negligible impact on the direct study area." [PM]

In relation to the specific junction capacity issues raised by the submission, The Junction Design Report provided as TIA Appendix 2 in the EIAR Volume 4 Part 2 of 4 explains the rationale for the proposed junction and also shows the design evolution for this junction, noting that: *"The proposed junction design has evolved on the BusConnects project from initial Concept Design, Emerging Preferred Route, Public Consultation 2, Public Consultation 3 up to the Current Design. The junction*

design iterations have been undertaken to optimise pedestrian, cyclist and bus priority infrastructure on the scheme."

The conversion of the Ballymount Avenue / Calmount Road junction from a roundabout to a signalised junction allows for more control of movements through the junction enabling the busiest arms during peak periods to be prioritised.

Pages 99 and 100 of The Junction Design Report in Appendix A6.3 of the EIAR Volume 4 Part 2 of 4 presents the junction assessment results at the Ballymount Avenue / Calmount Road in each peak period where it is demonstrated that the junction will operate at capacity in the AM pear hour, it will be congested for traffic but safer for pedestrians and cyclists and ensure that buses have priority through the junction. In the PM peak hour, the junction operates within capacity.

2.4.3.3 Security concerns with proposed cul-de-sac

Summary of Issues Raised

Concerns were raised regarding the proposed cul-de-sac and turning head at the eastern end of Greenhills Road with concerns that there is potential for this area to be used for illegal dumping and unauthorised encampments.

Response to Issues Raised

The cul-de-sac and turning head are required to provide access to the various existing commercial properties on this section of Greenhills Road which will continue to provide active daily use of this section of Greenhills Road, which will help dissuade illegal dumping and unauthorised encampments.

In relation to the potential community impacts arising from crime and antisocial behaviour is set out in EIAR Chapter 10 Population Appendix A10.2 Economic Impact of the Core Bus Corridors, which notes the following: *"The new infrastructure improvements should have a direct and immediate impact on crime along the corridors. It will provide better, safer and more visible bus stops whilst also improving the wider public realm infrastructure through investments such as improved street lighting. This will act as a direct deterrent to criminal activity and result in a reduction in crime. This in turn has been shown to encourage people onto the streets into the evening which will also support the night time economy in community centres."*

The Proposed Scheme will provide an improved public realm at the Greenhills Road cul-de-sac and turning head which will have paved footway and cycle track connections to a new bus stop on Calmount Road and footway and cycle track connection to Greenhills Road.

Figure 2.4.10 is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed public realm at Greenhills Road cul-de-sac.

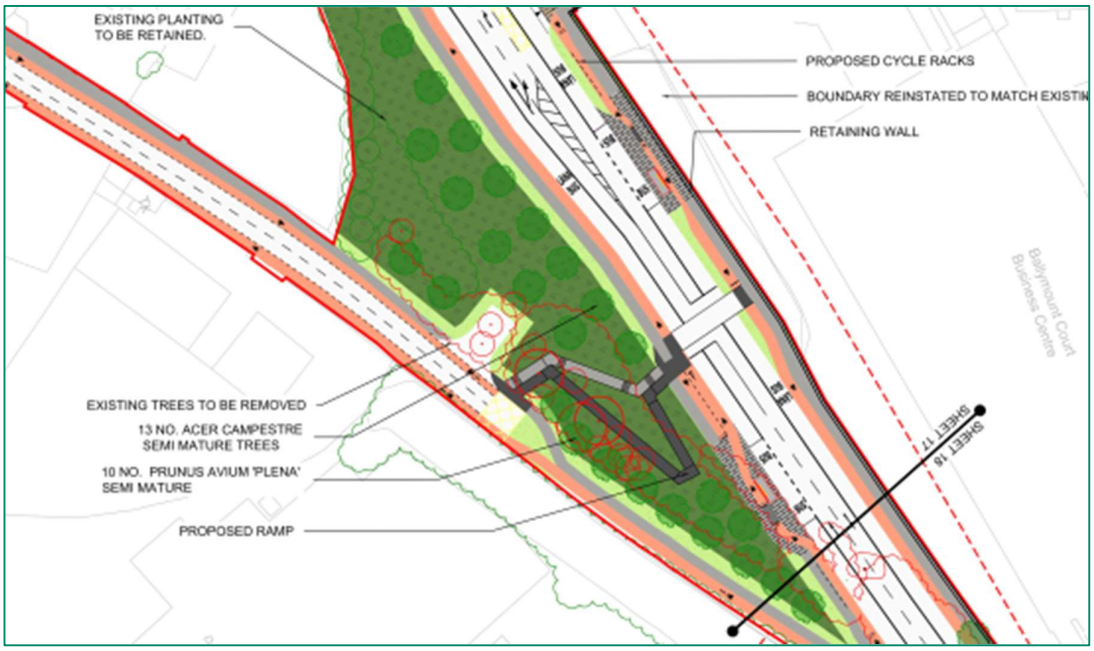


Figure 2.4.10: Extract from Landscape General Arrangement Drawing (Sheet 17)

The Proposed Scheme provides a cycle track and footway link between the proposed Greenhills Road cul-de-sac and the Calmount Road Extension link to Greenhills Road which is indicated in Figure 2.4.11 below extract from EIAR General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR.

It is also noted that the former *Chadwicks Builders Merchant site* adjacent to the south-west of Greenhills Road at this location has been referenced in South Dublin County Council's submission to the Proposed Scheme, see item h) of section 2.8.11.4 (SDCC Traffic and Transportation Section) as a sizeable development site. This is noted in EIAR Cumulative Impact Appendix A21.1 in Volume 4 Part 4 of 4, where it is stated a Strategic Housing Development (reference SHD3 ABP 313129-22) was submitted to An Bord Pleanála in 2022. It is described as *"Demolition of the former Chadwicks Builders Merchant development and the construction of a mixed-use Build-to-Rent residential and commercial development comprising 633 build-to rent apartment units, 1 childcare facility and 10 commercial units in 4 blocks (A-D) ranging in height from 5 to 12 storeys."*



Figure 2.4.11: Extract from EIAR General Arrangement Drawing (Sheets 17 and 18)This SHD application was considered by An Bord Pleanála at a Board meeting held on 27/07/2022 and the Board decided to refuse permission. Therefore, while there is currently no confirmed proposals for this development site, the design of the Proposed Scheme will be complementary to any future development at this location.

2.4.3.4 Lack of consultation

Summary of Issues Raised

Submissions 56 and 57 noted that for an earlier SDCC scheme at this location similar to the current Proposed Scheme, a local councillor informed businesses in the area that they would be consulted before final design stage. However, the submissions state that no consultation or opportunity has been provided to give input to current design has been provided.

Response to issues Raised

Since the commencement of the non-statutory period of the CBC Infrastructure Works, there has been a total of three rounds of non-statutory public consultation.

First Round of Non-Statutory Public Consultation - The first round of non-statutory public consultation on the Emerging Preferred Route Options was from November 2018 until May 2019 divided into three phases. The reason it was divided into three phases was primarily due to the fact that the BusConnects Infrastructure team carried out all aspects of the first round without external design service providers having been appointed at that stage. Moreover, the BusConnects Infrastructure team sought to gain maximum engagement from the public from the commencement of the CBC Infrastructure Works to raise awareness, establish relationships and gain immediate insight and knowledge of the issues at an early stage.

It was also important that at the start of the non-statutory consultation that considerable time and resources were dedicated by the BusConnects Infrastructure team to initiate contact with potential impacted properties. Each of the potentially impacted property owners were offered the opportunity to meet with members of the BusConnects Infrastructure team on a one-to-one basis which meant a significant amount of resources had to be dedicated to this process.

Second Round of Non-Statutory Public Consultation – The non-statutory public consultation for the Preferred Route Options ran from March 2020 to April 2020 as Ireland entered the first lockdown due to the Covid-19 pandemic. The consultation continued in deference to the number of online submissions received during this period. A number of public facing elements of the consultation were

cancelled in line with Government health guidelines, however, all other elements of the consultation including online versions of the brochures, supporting documentation were available. Other communication tools including the Freephone, email and digital aspects remained active for submissions to be received.

Third Round of Non-Statutory Public Consultation – This round of non-statutory public consultation for the Preferred Route Options from November 2020 to December 2020 was added due to the disruption caused to the second-round consultation process. It was important that further engagement was facilitated to communicate design development changes prior to concluding the determination of the Preferred Route Options. Methods had emerged whereby traditional public information events could be replaced by virtual online alternatives to offset the restrictions that continued associated with the Covid-19 Pandemic. Accordingly, all elements of the public consultation and stakeholder engagement were conducted virtually or online in line with the Government health guidelines

The Public Consultation Report included in the Supplementary Information provided with the application for the Proposed Scheme includes the brochure for the 1st round of public consultation in January 2019. Section 2.2.2 on pages 11 and 12 specifically highlight the route alignment in this area noting: *"At Keadeen Park it is proposed to close Greenhills Road to traffic. Traffic will be directed on to a new road link connecting the road to Ballymount Avenue. The new road will tie back into the existing road networks at Calmount Road. The junction between Ballymount Avenue and Calmount Road will be upgraded from a roundabout to a signalised junction with improved pedestrian facilities. The bus route will be directed down Calmount Road. The existing road is intended to be widened to incorporate bus and cycle lanes. It is proposed to connect Calmount Road to Greenhills Road with a new link road. It is proposed to connect the existing Greenhills Road to Calmount Road with a new link road through Calmount Avenue. Some limited land take will be required to construct a new roundabout at this proposed junction."*

Also included in this brochure Appendix 6 Map 16: Emerging Preferred Route, layout maps showing the proposed route at Greenhills Road / Calmount Road with cul-de-sac and Turning Area indicated.

The second public consultation (March to April 2020) was interrupted by the COVID-19 pandemic where planned public information events were postponed. The public consultation remained open, and submissions could be made by email and by post and the Preferred Route Option brochures continued to be available to view and download. Information on the public consultation process was published in major print media from the 5th of March 2020 inviting the public to make a submission. National and local radio segments were included beginning on 4th March 2020. Digital media was also published. Information was also advertised at bus and Luas stops throughout Dublin city.

Consequently just 10 submissions with 49 comments for the Greenhills to City Centre CBC were received for the second public consultation. The proposed route at Ballymount avenue, Calmount Road and Greenhills Road at the second public consultation stage is shown in Figure 2.4.12 below (extract from Brochure Maps 12, 13, 14, 15 and 16).

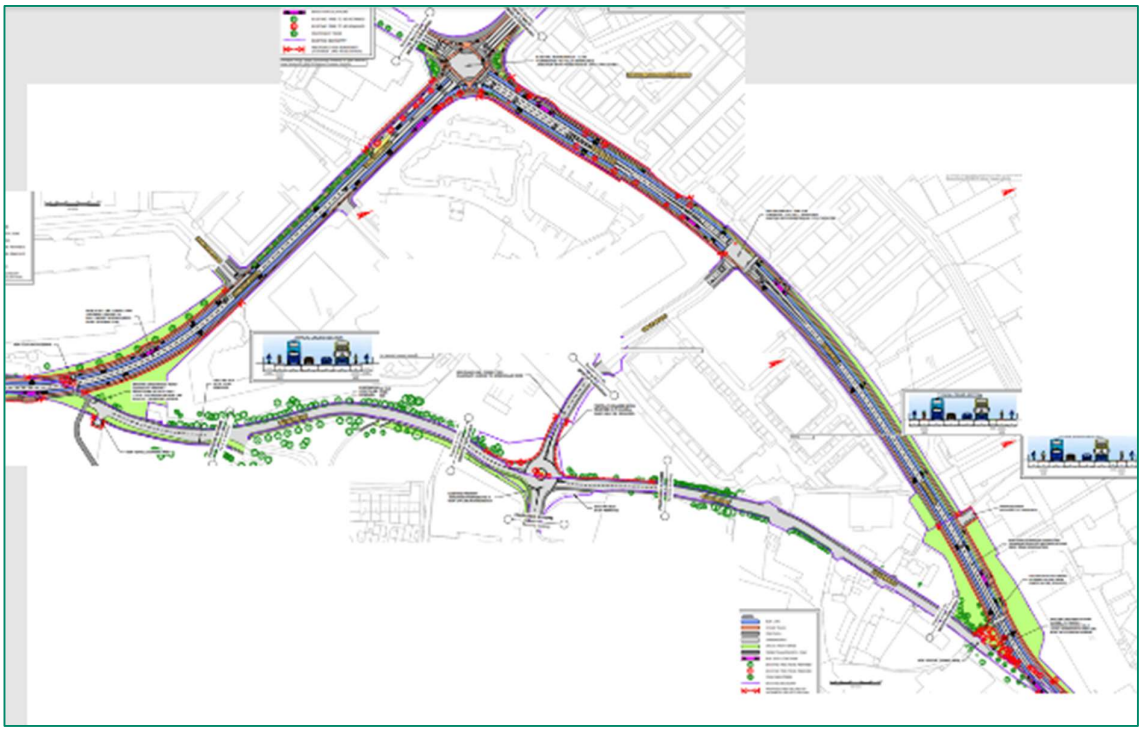


Figure 2.4.12: Extract from Second Public Consultation Maps 12, 13 14, 15 and Map 16

The third public consultation (November to December 2020) and Copies of the revised CBC Preferred Route consultation brochure were made available to the public at Public Information Events, by post (upon request), at the NTA office reception, as well as from the NTA's website. Relevant background technical reports were also available for download from the NTA's website. The public were invited to make written submissions relating to the Preferred Route consultation brochure. Submissions could be made by post, email, or by hand-delivery at the reception of the NTA's offices. A community forum was held on the 25th November 2020 where attendees included the Dublin Cycling Campaign, D12 Bus, Crumlin Residents Group, Crumlin Community Cleanup, Terenure West Residents, Dublin Commuter Coalition, Crumlin Road Residents Group, Cllr Deirdre Conroy, Cllr Maria Devine, Cllr Darragh Moriarty, Cllr Tina McVeigh, Orwell Park Residents, Cllr Pat Dunne, Recorders Residents Association, Dublin Commuter Coalition, Cllr Eoin O'Broin, Catherine Scuffil (Historian in Residence), Back of the Pipes Residents Association.

There were 348 submissions with 1545 comments for the Greenhills to City Centre CBC.

The proposed route at Ballymount avenue, Calmount Road and Greenhills Road at the third public consultation stage is shown in Figure 2.4.13 below (extract from Brochure Maps 12, 13, 14, 15 and 16) where a junction at Ballymount Avenue and Greenhills was included to maintain access at the Tymon park end of Greenhills Road to facilitate easier access to this road from Tallaght.

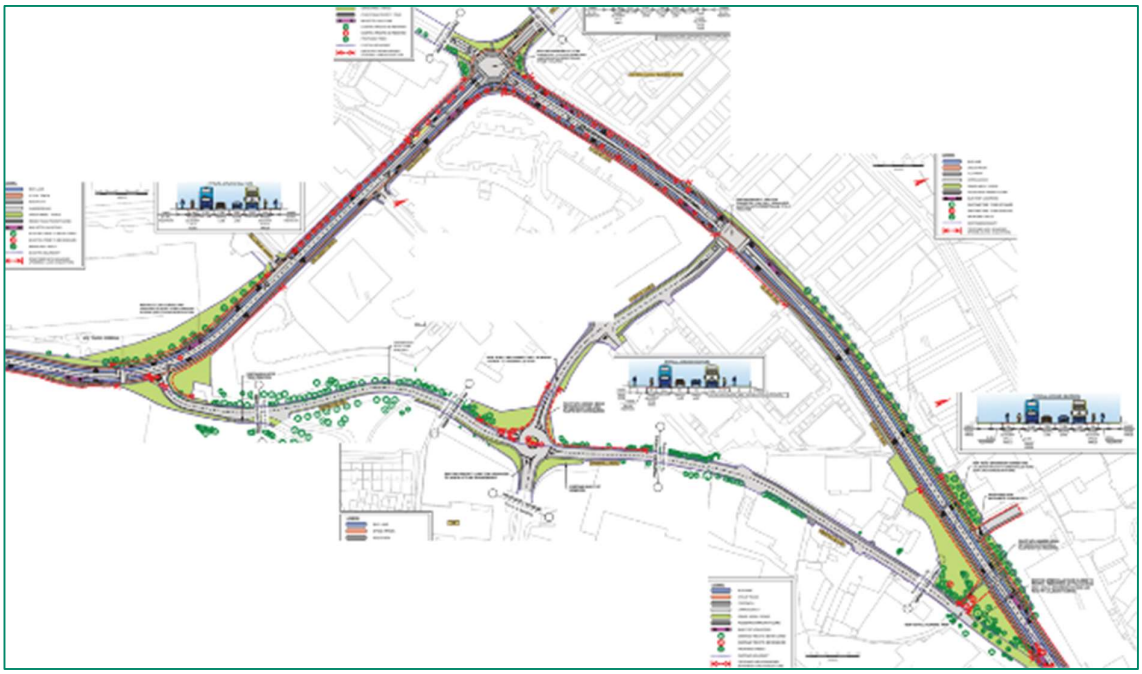


Figure 2.4.13: Extract from Third Public Consultation Map 12, 13, 14, 15 and Map 16

The final layout of the Proposed Scheme at Parkview

2.4.3.5 Property valuation and future development

Summary of Issues Raised

The submissions expressed the view that the commercial value of sites on Greenhills Road would be greatly diminished and devalued.

Response to issues Raised

As regards the view expressed that the combined impact of all the issues raised would have an adverse and negative impact on the value of properties in this area, EIAR Chapter 10 Population includes Appendix A10.2 Economic Impact of the Core Bus Corridors. Section 3 on page 14 the appendix discusses the impact of the Proposed Scheme on property prices and notes in conclusion. *"The public realm improvements planned by the NTA may lead to an increase in value of both residential and retail property prices, especially in the community centres along the corridors. Evidence shows that investing in public realm creates nicer places that are more desirable for people and business to locate in, thereby increasing the value of properties in the area. The evidence suggests that all public realm improvements generate value, regardless of the size of the investment or the neighbourhood. Residents along the corridors will also see a measurable increase in their quality of life, with evidence showing that residents are willing to pay more for an improved public realm."*

2.4.3.6 Alternative proposals

Summary of alternative proposals

Submission 10 proposes an alternative route where:

- Westbound general traffic and buses on Greenhills Road would be maintained on a single lane as far as Kilakee Drive junction where a dedicated westbound bus lane could be introduced.
- Eastbound bus route would have a dedicated bus lane following the existing Greenhills Road as far as the Lidl junction which would be a signalised junction, where it would travel north on Calmount Avenue widened to accommodate the bus lane as far as Calmount Road junction where it would travel east via the Calmount Road extension onto Greenhills Road.
- Off-road cycle tracks and footways could be accommodated on Calmount Road and Calmount Avenue within the existing footways and verges.

Submission 22 proposes an alternative route where:

- Existing Greenhills Road to remain as a two-way general traffic carriageway with a slip road access for traffic from the Walkinstown Roundabout end and a stop sign on Greenhills Road for traffic heading towards Walkinstown Roundabout.

Response to alternative proposals

Submissions 10 and 22 both propose the use of the existing Greenhills Road between the Ballymount Road Upper junction and the Greenhills Industrial Estate junction to varying degrees.

Section 3.3.2.1.4 of EIAR Chapter 3 Consideration of Reasonable Alternatives refers to the section of the Proposed Scheme between Parkview and Ballymount Road Upper, which is further to the south on Greenhills Road than the Calmount Holdings land. Section 3.3.2.1.5 describes the route option assessments for the section of the Proposed Scheme between Ballymount Road Upper and Walkinstown Roundabout, which is the section within which Calmount Holdings land interest falls.

Section 3.3.2.1.5 describes that following the stage 1 sifting process, three viable route options for this section of the Proposed Scheme were taken forward for assessment and further refinement as follows:

- Route Option 1 (BW1): This route option would run along R819 Greenhills Road as far as Walkinstown Roundabout;
- Route Option 2 (BW2): This route option would turn from R819 Greenhills Road onto a new link road to Ballymount Industrial Estate connecting into Ballymount Avenue. At the Ballymount Avenue / Calmount Road junction, the route would turn onto Calmount Road. A new link would be provided to connect Calmount Road to R819 Greenhills Road allowing the route to continue as far as Walkinstown Roundabout. The existing R819 Greenhills Road would be closed to through traffic; and
- Route Option 3 (BW3): This route option would run along R819 Greenhills Road which would be restricted to bus and local access only. General traffic would turn from R819 Greenhills Road onto a new link road to Ballymount Industrial Estate connecting into Ballymount Avenue. At the Ballymount Avenue / Calmount Road junction, the route would turn onto Calmount Road. A new link would be provided to connect Calmount Road to R819 Greenhills Road allowing the general traffic to continue as far as Walkinstown Roundabout.

These three options are shown in Figure 2.4.14, Figure 2.4.15 and Figure 2.4.16 which are extracts from Image 3.15 of EIAR Chapter 3.Route Option 1 (BW1) follows the existing Greenhills Road.

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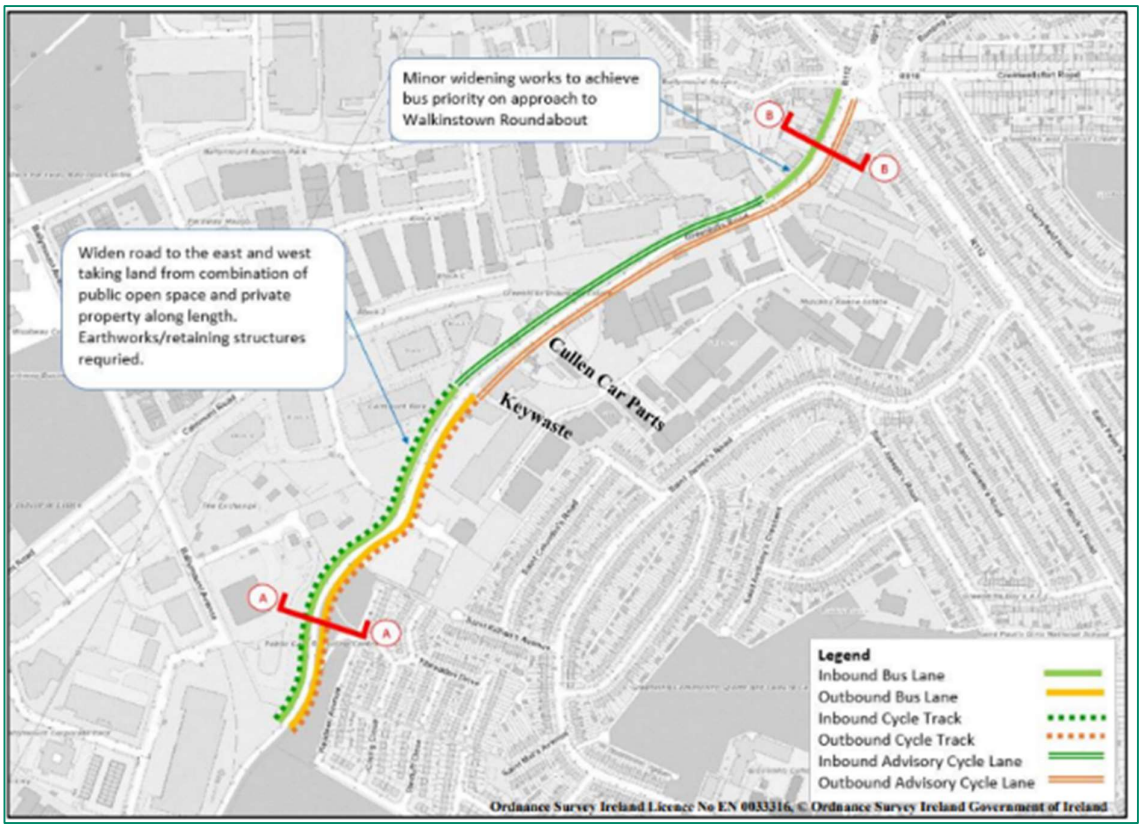


Figure 2.4.14: Route Option BW1 Extract from Greenhills to City Centre Core Bus Corridor Options Study Volume 1: Feasibility and Options Assessment – Main Report (Figure 6.4)

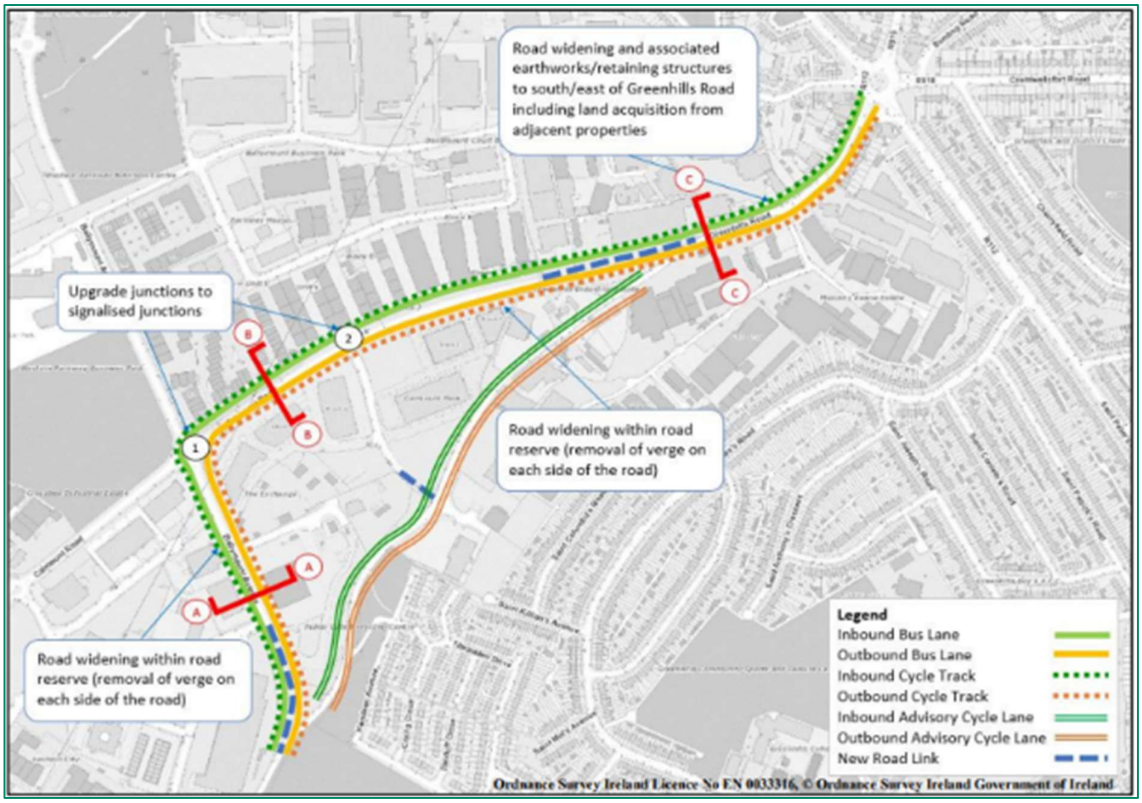


Figure 2.4.15: Route Option BW2 Extract from Greenhills to City Centre Core Bus Corridor Options Study Volume 1: Feasibility and Options Assessment – Main Report (Figure 6.8)

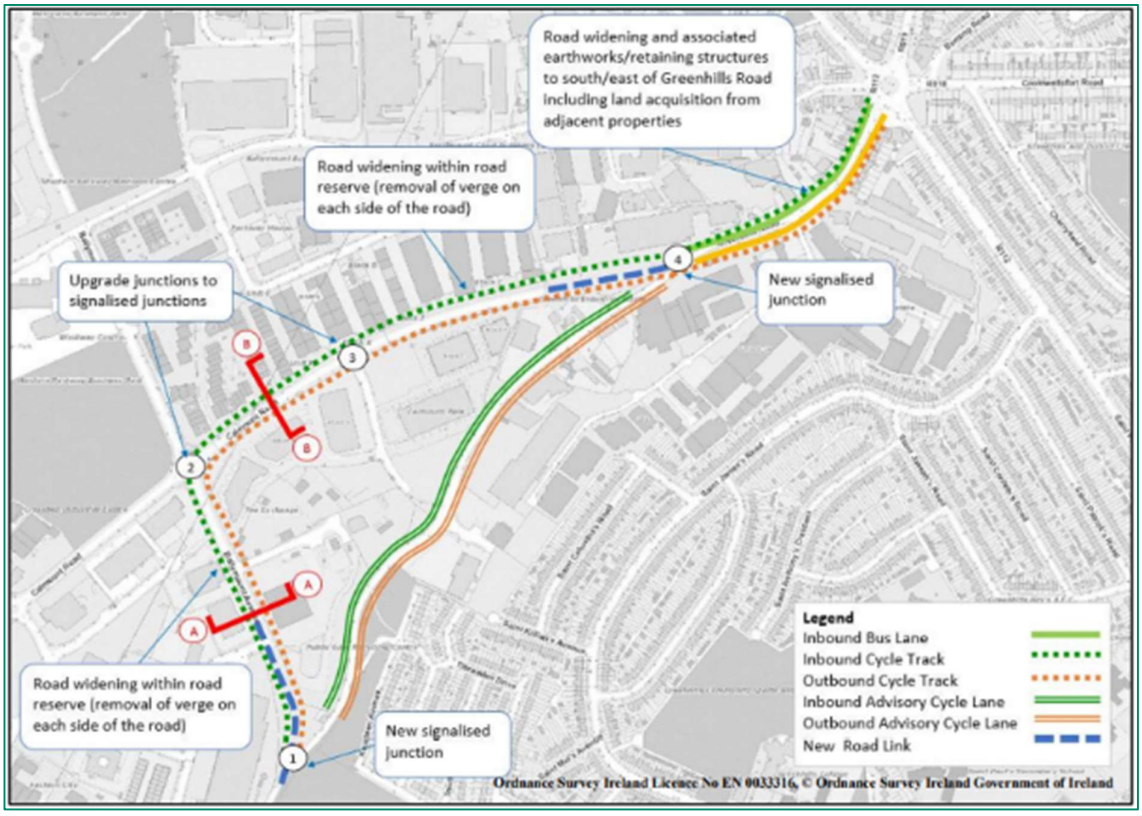


Figure 2.4.16: Route Option BW3 Extract from Greenhills to City Centre Core Bus Corridor Options Study Volume 1: Feasibility and Options Assessment – Main Report (Figure 6.13)

Towards the end of Section 3.3.2.1.5 of EIAR Chapter it states that *"In terms of 'Environment', generally, route option BW1, which would require a large amount of road widening along R819 Greenhills Road, resulting in greater potential impact in the environment in terms of air and noise. While significant works would be required to facilitate route options BW2 and BW3, comparatively, these options have less impact on the environment and sensitive receptors."*

In conclusion, Section 3.3.2.1.5 notes that *"Based on the assessment undertaken, route options BW2 and BW3 appear to offer similar benefits over BW1. However, route option BW2 is preferred for the Ballymount area for the following reasons:*

- *It strikes the right balance between cost and delivering reliable journey times compared to BW1 which is cheaper to construct but provides less bus lane priority;*
- *It delivers high quality cycle facilities along the entire length of the route, forming part of secondary cycle route 8A, which are not achievable along Greenhills Road. Cycle access to Greenhills Road, which is identified as a feeder route, could also be maintained in this option;*
- *Compared to option BW3, this option removes the need for additional signalised junctions associated with bus access to and from the current Greenhills Road alignment. Furthermore, it directly serves Ballymount Industrial Estate which is a major trip attractor with a large employment catchment;*
- *It delivers road links which are included as objectives in the South Dublin County Council Development Plan 2016 – 2022. It also allows Greenhills road to be downgraded to a local road which is more suitable for its current alignment and geometry; and*
- *It has less impact on the environment compared to other options."*

In summary, Chapter 3 of the EIAR considers all reasonable alternatives in relation to the Greenhills Road including the option of widening Greenhills Road (Route Option 1 (BW1)).

2.4.3.7 Other Issues Raised

Summary of Issues Raised

The following issues relating to Greenhills Road were raised by one submission only.

1. Bus stops and future bus routes

Submission 28 highlighted the removal of existing bus stops on Greenhills Road without any new stops to be installed to serve the proposed D5 bus route (currently route 77A) to Castletymon Road on Greenhills Road.

2. CPO of land

Submission 22 asserts that CPO Plot 1057 (1).1i in CPO Schedule Part I is shown incorrectly as it includes a portion of land belonging to Folio DN5314F which is in private ownership and the owner of this folio objects to the compulsory acquisition of a portion of Folio DN5314F.

3. Mitigation measures

Submission 10 (Lidl Ireland GMBH) has proposed measures to mitigate any reduction of store profile in the event that proposed routing alternatives submitted by Lidl cannot be accommodated. Mitigation includes wayfinding signage, phasing of construction works to minimise diversions and disruption for customers and deliveries with appropriate temporary traffic management.

4. Zoning

Submission 22 noted that land on which businesses operate on Greenhills Road are zoned REGEN *"to facilitate enterprise and/or residential-led regeneration subject to a development framework or plan for the area incorporating phasing and infrastructure delivery"* in the South Dublin County Council Development Plan 2022-2028. The businesses affected are warehouse, wholesale and retail tyre sales, car sales, servicing and repair and a concrete pump depot which are long established and historic.

Responses to Other Issues Raised

1. Bus Stops

The existing bus stops (inbound and outbound) on Castletymon Road will serve the D5 bus route at Tymonville, Tymon North. North of the M50 an inbound and an outbound bus stop will be located on Greenhills Road / Ballymount Avenue near the junction of Ballymount Avenue and Greenhills Road. Figure 2.4.17 below is an extract from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed bus stops at the junction of Ballymount Avenue and Greenhills Road. Figure 2.4.18 is a Google image of the existing Tymonville, Tymon North Bus Stops on Castletymon Road.

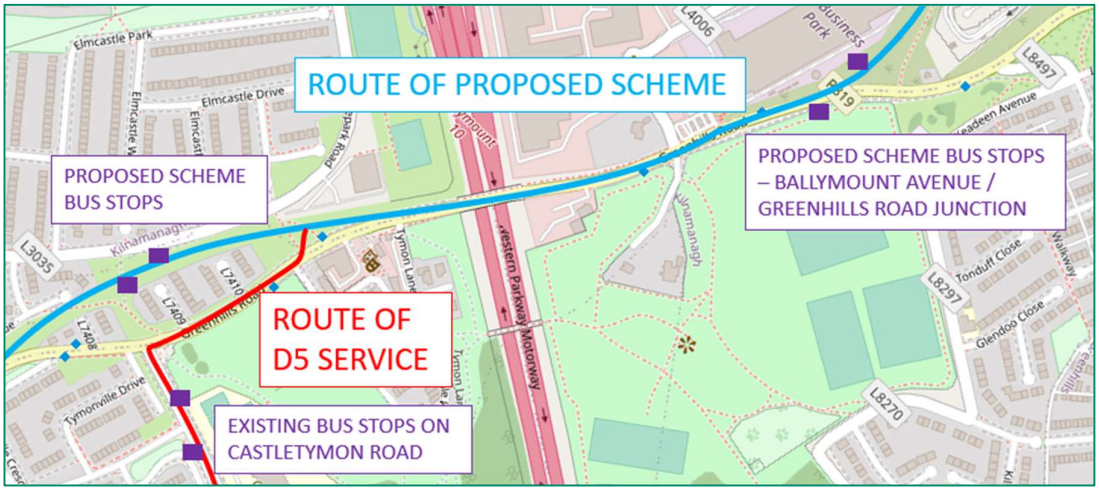


Figure 2.4.17: Location of existing and proposed bus stops (Image Source: OpenStreetMap)



Figure 2.4.18: Google Image showing Existing Bus Stops on Castletymon Road

Section 3.5.3 of The Preferred Route Option Report included in the Supplementary Information provided with the application for the Proposed Scheme notes the following: *"Inbound D5 spine services and X47 services from Castletymon Road will also be provided with a priority bus only link that joins the new link road."*

The outbound D5 bus route can continue along Greenhills Road at the bus priority signal at Tymon Lane junction on to Castletymon Road.

Figure 2.4.19 below is an extract from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed inbound priority bus link between Greenhills Road and new bus route adjacent to Treepark Road and the bus priority signal at Tymon lane junction.

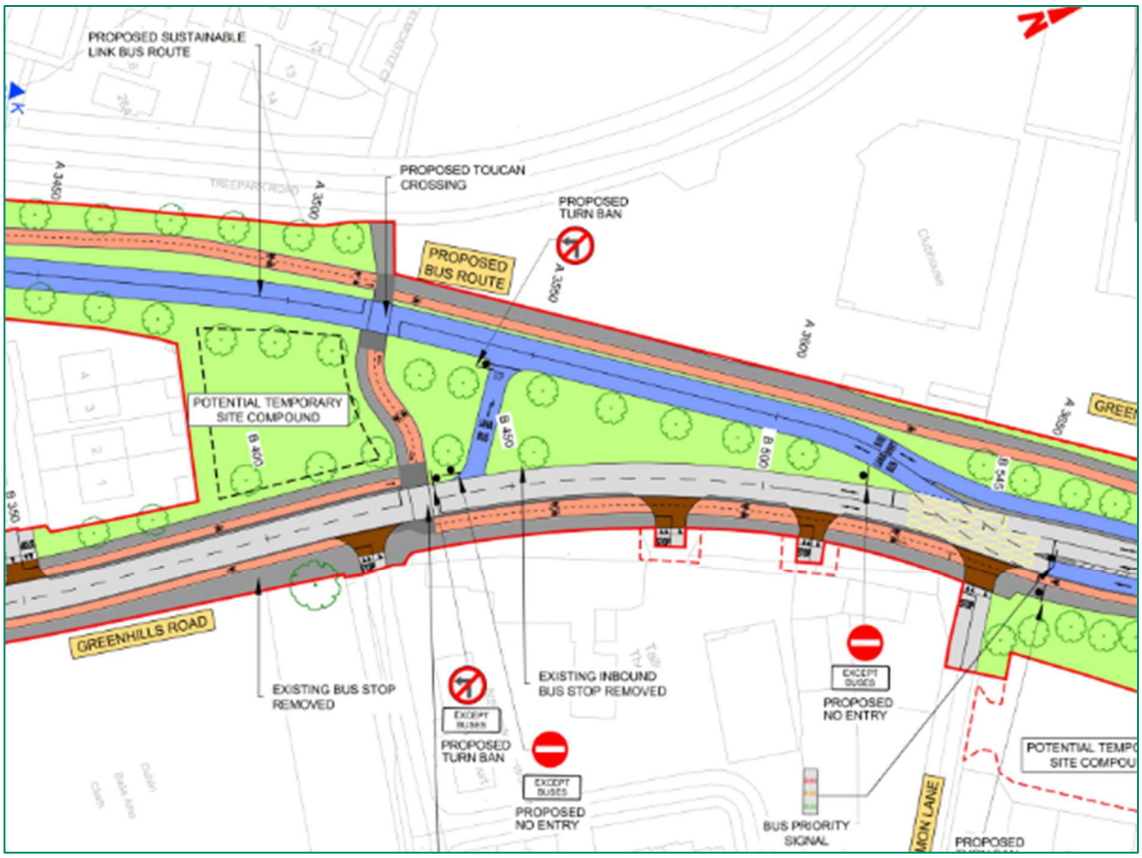


Figure 2.4.19: Extract from General Arrangement Drawing (Sheet 11)

CPO plot 1057 (1).1i

2. CPO of Land

The NTA notes the assertion that CPO Plot 1057 (1).1i in CPO Schedule Part I is shown incorrectly as it includes a portion of land belonging to Folio DN5314F which is in private ownership and the owner of this folio objects to the compulsory acquisition of a portion of Folio DN5314F.

This portion of land is required as part of the verge and embankment supporting the proposed Calmount Road Extension linking Calmount Road to Greenhills Road.

If An Bord Pleanála confirms the CPO the NTA will engage with the reputed owner(s) to confirm the ownership claim and follow due process if confirmed for purposes of serving Notice to Treat.

3. Mitigation measures

Wayfinding

The NTA notes the suggestions made regarding wayfinding signage for the Lidl store. Such a proposal is not included as it is not required to achieve the Proposed Scheme objectives. It is also noted that the Proposed Scheme would not preclude the future introduction of such a measure at a future date should the local authority wish to give consideration to this.

4. Traffic Management / Access

In terms of construction access, routing for vehicles and pedestrians, Section 5.2.3 Construction Traffic Management Plan Contents (CTMP) of Construction and Environmental Management Plan (CEMP) in Appendix A5.1 in Volume 4 of the EIAR states:

"The appointed contractor shall be responsible for developing a CTMP to effectively manage traffic and transport during the Construction Phase of the Proposed Scheme. The appointed contractor shall address the following aspects, in addition to any other aspects identified by the appointed contractor during the preparation of the CTMP:

- *Access and egress;*
- *Construction Compounds;*
- *Routing of construction vehicles;*
- *Pedestrian (including able-bodied pedestrians, wheel-chair users, mobility impaired pedestrians, pushchair users etc.) and cyclist provisions;*
- *Public transport provisions;*
- *Parking and access;*
- *Lighting;*
- *CSMMP;*
- *Traffic management signage;*
- *Timings of material deliveries;*
- *Traffic management speed limits;*
- *Vehicle cleaning;*
- *Road cleaning;*
- *Road condition;*
- *Road closures and diversions;*
- *Enforcement of Construction Traffic Management Plan;*
- *Interface with other projects;*
- *Emergency procedures during construction; and*
- *Communication."*

Further details on issues to be addressed are provided in Section 5.2.3.1 to Section 5.2.3.19.

5.2.3.1 Access and Egress

"The appointed contractor shall provide advanced warning signs, in accordance with the Traffic Signs Manual (DTTAS 2019), on approach to the proposed access locations, and entry and exit points throughout the live working area.

When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with homes and businesses prior to construction starting in the area."

Section 5.1 of Chapter 5 (Construction) of the EIAR describes the construction phasing and programme as well as the construction activities necessary to undertake the works.

Section 5.8 presents the temporary traffic management measures, including the staging measures to be carried out (i.e. how vehicles, cyclists and pedestrians will be impacted and safely catered for, during the works). The construction traffic management measures have been developed in accordance with the Traffic Signs Manual. Construction traffic management measures are included in the (Draft) Construction Traffic Management Plan (CTMP) in Appendix A5.1 CEMP in Volume 4 of the EIAR.

Section 5.8.3 notes the following: *"The roads and streets along the Proposed Scheme, will remain open to general traffic, wherever practicable, during the Construction Phase. However, lane closures, road closures and diversions will be necessary to facilitate construction.*

Where necessary, road closures and diversions will take into consideration the impact on road users, residents, businesses, etc. Road closures and diversions will be carried out with regard to the Traffic Signs Manual. All road closures and diversions will be determined by the NTA, in consultation with the

local authority and An Garda Síochána, as necessary. Access will be maintained for emergency vehicles along the Proposed Scheme, throughout the Construction Phase.

The anticipated lane closures, road closures, and diversions that may be required during the Construction Phase of the Proposed Scheme, include those identified in Table 5.8."

Zoning

Section 6.2.4 of the Greenhills to City Centre Core Bus Corridor Options Study Volume 1: Feasibility and Options Assessment – Main Report, included in Appendix I1 of the Supplementary Information provided with the application for the Proposed Scheme notes the following in relation to route options assessment and highlights alignment with South Dublin County Council Development Plan 2016 - 2022:

"Based on the assessment undertaken, route options BW2 and BW3 appear to offer similar benefits over BW1. However, route option BW2 is preferred for the Ballymount area for the following reasons:

- *It strikes the right balance between cost and delivering reliable journey times compared to BW1 which is cheaper to construct but provides less bus lane priority;*
- *It delivers high quality cycle facilities along the entire length of the route, forming part of secondary cycle route 8A, which are not achievable along Greenhills Road. Cycle access to Greenhills Road, which is identified as a feeder route, could also be maintained in this option;*
- *Compared to option BW3, this option removes the need for additional signalised junctions associated with bus access to and from the current Greenhills Road alignment. Furthermore, it directly serves Ballymount Industrial Estate which is a major trip attractor with a large employment catchment;*
- *It delivers road links which are included as objectives in the South Dublin County Council Development Plan 2016 – 2022. It also allows Greenhills road to be downgraded to a local road which is more suitable for its current alignment and geometry; and*
- *It has less impact on the environment compared to other options."*

Figure 2.4.20 below is an extract from South Dublin County Council Development Plan 2016 – 2022 Table 6.5 Six Year Road Programme



Figure 2.4.20: Extract from South Dublin County Council Development Plan 2016 – 2022 Table 6.5 Six Year Road Programme

Figure 2.4.21 below is an extract from South Dublin County Council Public Consultation Part 8 Display Drawings 2020

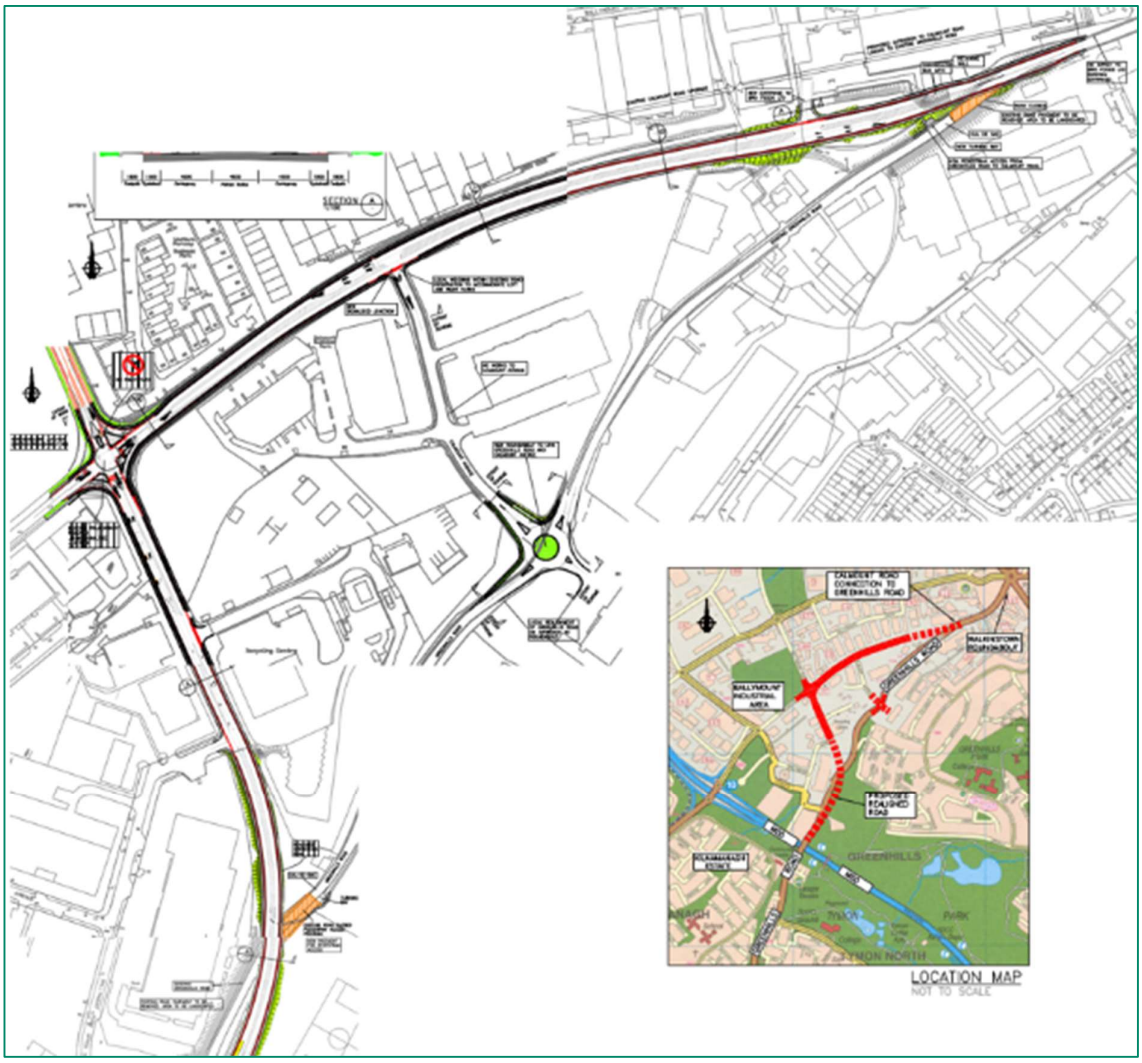


Figure 2.4.21: Extract from South Dublin County Council Public Consultation Part 8 Display Drawings 2020

2.5 Proposed Scheme at Bunting Road / Kildare Road / Old County Road / Clonard Road / Bangor Drive / Saul Road

2.5.1 Description of the Proposed Scheme at this Location

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.3.1 of Chapter 4 of Volume 1 of the EIAR, Proposed Scheme Description, on Walkinstown Road (R819) between Walkinstown Roundabout and the Long Mile Road (R110), it is proposed to provide one bus lane and one general traffic lane in each direction with minimum land take impacting properties on Walkinstown Road (R819) maintaining sufficient front driveway boundary setback lengths for a car to be parked. To accommodate this cross section, land acquisition will be required along the Walkinstown Road (R819). Land acquisition is proposed on the western side of the Walkinstown Road (R819) between Walkinstown Roundabout and Kilnamanagh Road. Between Kilnamanagh Road and Long Mile Road (R110), land acquisition is proposed on the eastern side of Walkinstown Road (R819). It is proposed to introduce a southbound right turn ban for general traffic from Walkinstown Road (R819) to Kilnamanagh Road to improve the efficiency of the junction and minimise bus delays. Kilnamanagh Road will remain accessible from the Walkinstown Road (R819) via Walkinstown Drive. It is also proposed to introduce a right turn ban for northbound right turning traffic from the Walkinstown Road (R819) to the southern entrance of the SuperValu supermarket (Walkinstown Shopping centre) during peak hours to improve the operation of the junction and reduce bus delays. Entry to the shopping centre will be possible via the alternative car park entrance.

City-bound cyclists will have an alternative segregated cycle route along Bunting Road (GDA Cycle Route 8A) and St. Mary's Road providing a more direct route linking Walkinstown Roundabout with Kildare Road.

It is proposed to upgrade the junction at Drimnagh Road (R110) / Walkinstown Road (R819) to enhance pedestrian and cycling facilities. To improve the safety of cycle facilities and reduce vehicle speeds, the existing left turn slip lane to the Walkinstown Road (R819) has been removed and additional planting and urban realm enhancements have been proposed. Proposals for parking adjacent to shop frontage on the Long Mile Road (R110) has been revised, with the existing perpendicular parking converted to a parallel parking layout. To accommodate the proposed revised grading arrangements for the junction a retaining wall structure has been proposed to the northern side of the Drimnagh Road (R110) at the interface with Slieve Bloom Park cul-de-sac.

On Drimnagh Road (R110) it is proposed to maintain one bus lane, one general traffic lane and one cycle track in each direction. The junction at Kildare Road, Saint Mary's Road and Drimnagh Road has been revised to provide improved cycle and pedestrian facilities. This will provide improved cycle connectivity between the Drimnagh Road (R110) and the proposed offline cycle route via Kildare Road.

On Crumlin Road (R110) bus priority will be maintained by incorporating Signal Controlled Priority and managing the flow of traffic in both directions along the Crumlin Road (R110). Widening of the road corridor here for dedicated bus and traffic lanes in both directions is not feasible due to the size of the front gardens and gradient constraints between the road level and front doors. The proposed arrangement requires the closure of Clonard Road and Bangor Drive for direct access onto Crumlin Road to facilitate traffic management within this portion of the Crumlin Road (R110) such that bus priority can be maintained, one-way access from the Crumlin Road (R110) onto Clonard Road and Bangor Drive will be possible. Egress and access for Bangor Drive and Clonard Road can be achieved via Windmill Road and Old County Road.

Due to width restrictions in the area of Crumlin Road (R110) there is insufficient space to provide dedicated cycle facilities. Therefore, it is proposed to provide an alternative cycle route along Kildare Road and Clogher Road.

The alternative cycle route will include segregated cycle tracks over most of its length either through the addition of kerbs to the existing cycle lanes or the construction of new kerbed cycle tracks. On

Clogher Road, between Sundrive Road and Kildare Road, the narrow cross-section prevents the provision of dedicated cycle facilities. Therefore, it is proposed to provide a bus / cycle gate at the junction of Clogher Road / Sundrive Road to reduce the amount of traffic on this road and making it suitable for designation as a Quiet Street.

At the Crumlin Road / Herberton Road / Sundrive Road junction, it is proposed to modify the existing layout and kerb alignments to provide improved pedestrian crossing facilities. On Crumlin Road (R110) between Herberton Road and Dolphin Road it is proposed to maintain one bus lane and one general traffic lane in each direction.

There is insufficient road width on this section to provide dedicated cycle tracks, with the proposed cycle route along Clogher Road providing an alternative route.

On Crumlin Road (R110) between Cooley Road and Dolphin Road the posted speed limit will be reduced to 30 kph from 50 kph with raised tables installed at side road junctions to improve pedestrian accessibility. At the Crumlin Road (R110) junction with Dolphin Road / Parnell Road (R111) on-road cycle lanes will be provided within the fully signalised junction and existing right turn bans will be maintained.

As outlined in the GDA Cycle Network Plan, this section of the corridor will provide access to secondary routes SO3 (R818 Cromwellsfort Road), SO4 (St. Peter's Road (R112) and Walkinstown Avenue (R112)) and 7E (Ballymount Road Lower). It will align with secondary route 8A on Bunting Road, secondary route 8C on Long Mile Road (R110), Drimnagh Road (R110), Kildare Road and Clogher Road as far as Parnell Road (R111) / Grand Canal primary route SO1 / N10. Junctions within this section will be upgraded to provide enhanced cycle facilities, where feasible.

Figure 2.5.1 and Figure 2.1.2 below is an extract from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing Proposed Scheme layout along Bunting Road, Kildare Road, Clogher Road and Crumlin Road.

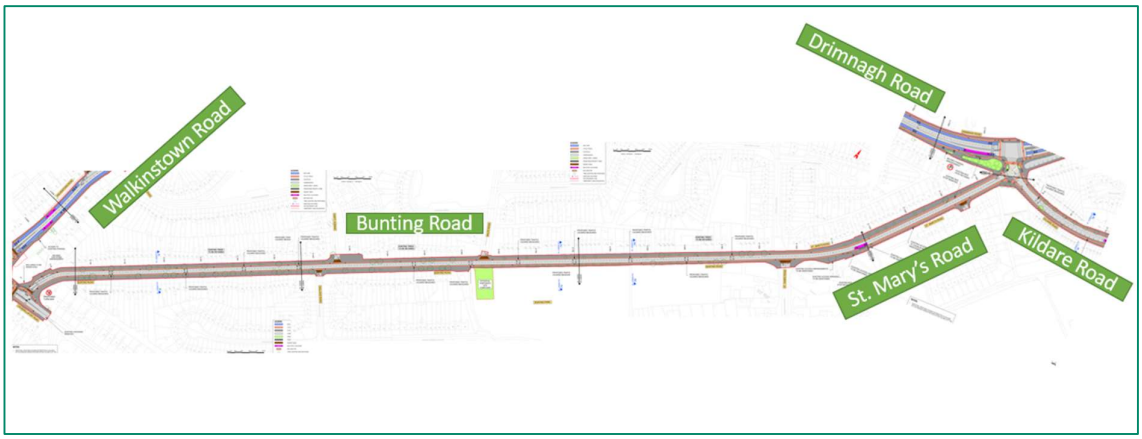


Figure 2.5.1: Extract from General Arrangement Drawings (Sheets 35, 36, 37 and 38)



Figure 2.5.2: Extract from General Arrangement Drawings (Sheets 24, 25, 26, 27, 38, 39 and 40)

2.5.2 Overview of submissions received

Table 2.5.2.1 below lists the 5 submissions within which issues were raised in respect of the Proposed Scheme at Kildare Road / Old County Road / Clonard Road / Bangor Road / Saul Road.

Table 2.5.2.1: Submissions Made in Respect of Bunting Road / Kildare Road / Old County Road / Clonard Road / Bangor Drive / Saul Road

No	Name	No	Name	No	Name
6	Nicola Kennedy and Others	23	Cllr. Pat Dunne and Joan Collins TD and 396 Others	42	Saint James' Gaels
7	Stannaway Road Residents	25	Bernard Sweeney and Susan Byrne		
19	Shay L'Estrange	32	Walkinstown Residents Associations		

Of the 5 submissions, 4 were from residents / residents' groups and 1 was from local representatives with residents co-signing.

A number of issues were raised, and these are listed below and described in Section 2.5.3 below.

Issues Raised

1. Increased traffic congestion and additional traffic on surrounding roads leading to noise & air pollution
2. Safety concerns arising from traffic diverting onto residential roads leading to danger to children playing, and walking / cycling
3. Loss of street parking.
4. Tree replacement unacceptable
5. Bus time improvement not justified
6. Quiet Road signage and enforcement of bus gate unclear
7. Removal of existing bus stops on Clogher Road
8. Construction traffic
9. Lack of community engagement
10. Disagree with EIAR statement of minimal impact on community
11. Combined effect of schemes

12. Request for mitigation
13. Bunting Road cycle route
14. St Marys Road / Kildare Road / Drimnagh Road
15. Proposed Construction Compound at Bunting Park

Other Issues Raised

The following issue was raised by submission 23

1. Advocacy for the proposed scheme

2.5.3 Common Issues Raised and Responses

2.5.3.1 Traffic congestion with associated noise and air pollution

Summary of Issue Raised

A submission expressed concern that there would be increased traffic congestion on Old County Road and proposed Construction Compound adjacent to the HSE building on Old County Road would add pollutants to the area.

2 submissions stated that restricting access to Crumlin Road from Clonard Road would lead to an unacceptable level of additional traffic at Old County Road junctions with Crumlin Road and Windmill Road,

4 submissions expressed the opinion that the Proposed Scheme would lead to rat-running/traffic increases on Downpatrick Road, Bangor Road, Slane Road and Saul Road and Stannaway Road with subsequent excessive exhaust fumes.

A submission expressed the opinion that residents of Stannaway Road would be subject to noise and air pollution affecting overall well-being and quality of life.

Response to Issue Raised

AM Peak Hour

Section 6.4.6.2.9.3 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR notes the following: *"Direct Reductions in General Traffic: The LAM indicates that, during the 2028 Opening Year scenario, there are reductions in general traffic noted along the Proposed Scheme during the AM Peak Hour, as illustrated by the blue lines in Diagram 6.40, which indicates where a reduction of at least -100 combined traffic flows occur."*

Extract from Section 6.4.6.2.9.3 Diagram 6.40 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR which illustrates the predicted difference in traffic flows on the road links in the AM Peak Hour for the 2028 Opening Year is shown (Direct Study Area) in Figure 2.5.3.

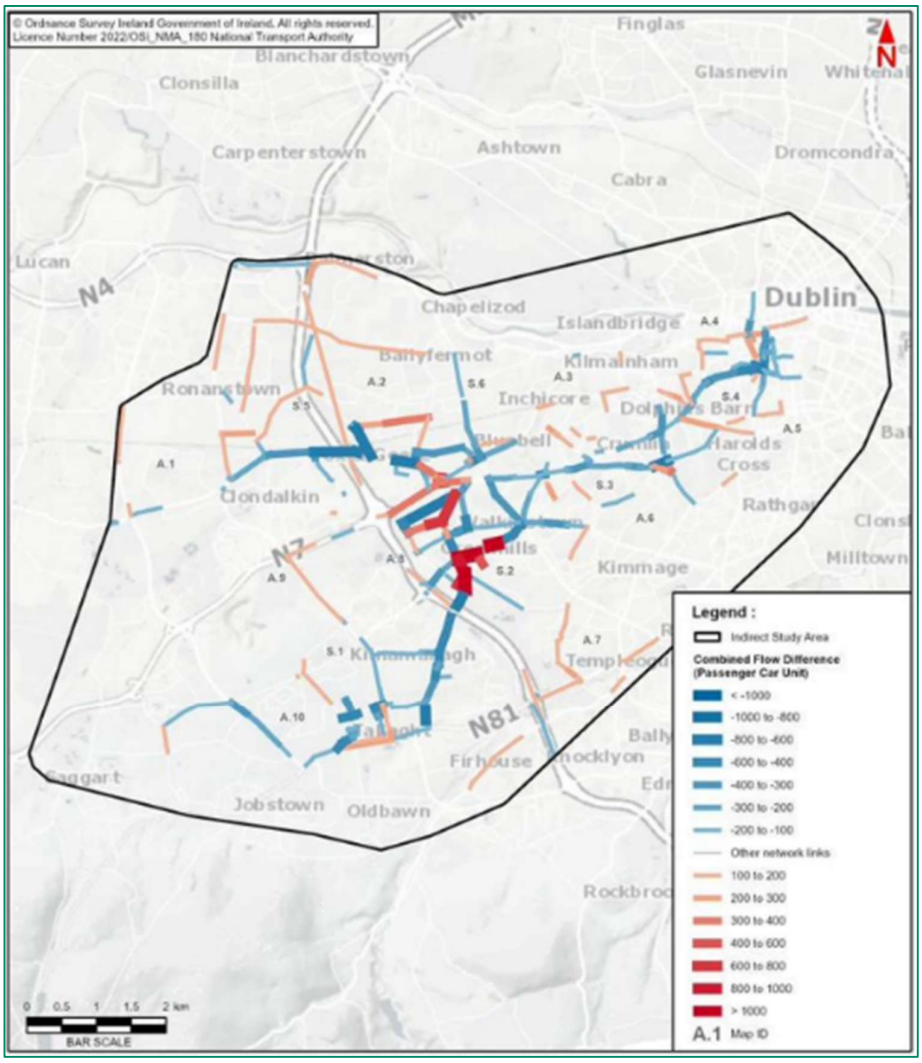


Figure 2.5.3: **Extract from the EIAR Section 6.4.6.2.9.3 Diagram 6.40: Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour, 2028 Opening Year**

For the Direct Study Area, the **reduction** in traffic for combined flows (Passenger Car Units per hour in two directions) expected in the AM Peak Hour 2028 Opening Year scenario (Direct Study Area) is noted in Table 6.73, page 153 of Chapter 6 in Volume 2 of the EIAR is 311 PCU (Passenger Car Unit) for Kildare Road, 610 PCU for Clogher Road and 305 PCU for Crumlin Road.

The **increase** in traffic for combined flows (Passenger Car Units per hour in two directions) expected in the AM Peak Hour 2028 Opening Year scenario (Indirect Study Area) is noted in Table 6.76, page 157 of Chapter 6 in Volume 2 of the EIAR is 311 PCU for Kildare Road and 307 PCU for Sundrive Road.

These road links where the 100 flow additional traffic threshold is exceeded requiring further assessed to determine whether these road links have the capacity to cater for the additional traffic volumes as a result of the Proposed Scheme. The worst performing arm of the junction was used for the purpose of the assessment to ensure a conservative impact assessment is undertaken.

Table 6.75 of Chapter 6 notes that Sundrive Road North of R111 / West of R137 will have a decrease in traffic flows of 232 PCUs in the AM peak hour, Kildare Road will have a decrease of 311 PCUs in the AM peak hour

Section 6.4.6.2.9.5 of Chapter 6 Traffic & Transport notes the results of the general Traffic Assessment and notes the following in relation to the Indirect Study Area AM Peak Hour:

"The results of the junction analysis illustrated in Table 6.85 demonstrate that of the total of 190 junctions assessed, 157 junctions are operating with a maximum V / C ratio of below 85% in the Do Something scenarios in the AM Peak Hour in the 2028 Opening Year. A further 26 junctions are operating with a maximum V / C ratio of between 85% - 100%. Therefore, the majority of junctions continue to operate well within capacity with the Proposed Scheme in place.

Overall, the Proposed Scheme is considered to have a ***Not Significant or Imperceptible and Long-term effect*** *at 176 junctions within the indirect study area. Five of the 190 junctions assessed are shown to have a significance of effect of* ***Negative, Slight and Long-term****, and four are shown to have* ***Negative, Moderate and Long-term*** *effects. Five junctions were assessed to have a* ***Positive, Moderate and Long-term effect****.*

Capacity issues are noted at the following seven junctions (i.e. they are predicted to operate with a V / C ratio of above 100% in the Do Something scenario):

- *Station Road / Ninth Lock Road (252361);*
- *Killeen Road / Park West Road (14214);*
- *Chapelizod Bypass / Kennelsfort Road Lower (22106);*
- *Spawell Roundabout (9148);*
- *Templeogue Road / Cypress Grove Road (9178);*
- *Citywest Road / Garter Avenue (24298); and*
- *Tallaght Bypass / Whitestown Way / Cookstown Way (24129).*

Six out of seven junctions operate with a maximum V / C ratio of above 100% in both the Do Minimum and Do Something scenarios, therefore, the significance of effect is considered to be ***Negative, Moderate and Longterm****, at worst. Spawell Roundabout operates with a V / C ratio of 85-100% in the Do Something, however, the sensitivity of this road link is deemed to be 'negligible', therefore, the significance of effect is* ***Not Significant*** *and* ***Long-term*** *overall.*

The results demonstrate that no junctions are predicted to have a significance of effect of significant or higher, therefore, no further assessment of the AM Peak Hour in the 2028 Opening Year is required."

PM Peak Hour

Section 6.4.6.2.9.4 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR notes the following:
"Direct Reductions in General Traffic Flows: The LAM indicates that during the 2028 Opening Year scenario, there are key reductions in general traffic noted along the Proposed Scheme during the PM Peak Hour, as illustrated by the blue lines in Diagram 6.41, which indicates where a reduction of at least -100 combined traffic flows occurs."

Extract from Section 6.4.6.2.9.4 Diagram 6.41 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR which illustrates the predicted difference in traffic flows on the road links in the PM Peak Hour for the 2028 Opening Year is shown in Figure 2.5.4.

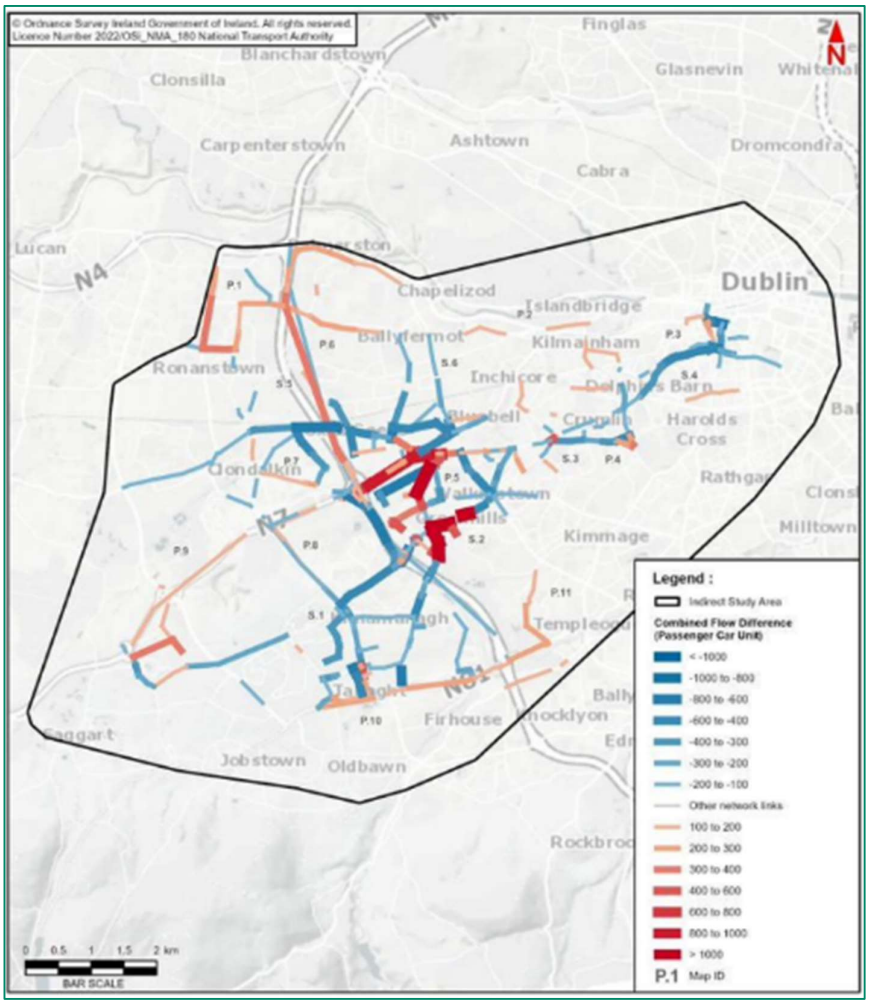


Figure 2.5.4: Extract from the EIAR Section 6.4.6.2.9.3 Diagram 6.41: Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour, 2028 Opening Year

The **reduction** in traffic for combined flows (Passenger Car Units per hour in two directions) expected in the PM Peak Hour 2028 Opening Year scenario (Direct Study Area) is noted in Table 6.78, page 160 of Chapter 6 in Volume 2 of the EIAR is 328 PCU for Kildare Road, 596 for Clogher Road and 291 for Crumlin Road.

The **increase** in traffic for combined flows (Passenger Car Units per hour in two directions) expected in the PM Peak Hour 2028 Opening Year scenario (Indirect Study Area) is noted in Table 6.81, page 163 of Chapter 6 in Volume 2 of the EIAR is 331 PCU for Kildare Road, 137 PCU for Crumlin Road and 281 PCU for Sundrive Road.

These road links where the 100 flow additional traffic threshold is exceeded requiring further assessed to determine whether these road links have the capacity to cater for the additional traffic volumes as a result of the Proposed Scheme. The worst performing arm of the junction was used for the purpose of the assessment to ensure a conservative impact assessment is undertaken.

Section 6.4.6.2.9.5 of Chapter 6 Traffic & Transport notes the results of the general Traffic Assessment and notes the following in relation to the Indirect Study Area PM Peak Hour:

"The results of the junction analysis illustrate that, of a total of 164 junctions assessed, 133 junctions are operating with a maximum V / C ratio of below 85% in the Do Something scenarios in the PM Peak Hour in the 2028 Opening Year. A further 22 junctions are operating with a maximum V / C ratio of between 85% - 100%.

Overall, as a result of redistributed general traffic associated with the Proposed Scheme, the effect at 161 out of 164 junctions assessed is predicted to be Not Significant and Long-term and Imperceptible and Long-term within the Indirect Study Area. Two are shown to have Negative, Moderate and Long-term effects in the 2028 Opening Year PM Peak Hour.

Capacity issues are noted at the following 9 junctions:

- *Chapelizod Bypass / Kennelsfort Road Lower (22106);*
- *Chapelizod Bypass / The Oval (22117);*
- *Memorial Road / Con Colbert Road (14124);*
- *Ballymount Road Lower / Ballymount Retail Centre (16166);*
- *Walkinstown Avenue / Long Mile Road (8196);*
- *Naas Road / Turnpike Road (16113);*
- *M50 Northbound / J9 Off-slip (16190);*
- *M50 J10 NB off slip to Naas Road (16183); and*
- *Glenview Roundabout / Tallaght Bypass (24103).*

Six out of 9 junctions operate with a maximum V / C ratio of above 100% in both the Do Minimum and Do Something scenarios, therefore, the significance of effect is considered to be ***Not Significant and Long-term****. At the remaining three junctions, the sensitivity of the road links is considered to be 'negligible', therefore, the overall significance of effect is* ***Not Significant and Long-Term****. One junction was assessed to have a* ***Positive, Moderate and Long-term effect****.*

The results demonstrate that no junctions are predicted to have a significance of effect of significant of higher, therefore, no further assessment of the PM Peak Hour in the 2028 Opening Year is required."

Section 6.4.6.2.9.6 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR states that:

"2028 and 2043 Local / Regional Roads Assessment: The majority of assessed junctions have V / C ratios of below 85%, i.e. they are operating within capacity for all assessed years in the Do Minimum and Do Something scenarios. This indicates that these junctions will be able to accommodate the additional general traffic volumes redistributed, as a result of the Proposed Scheme and the effect is deemed ***Imperceptible / Not Significant and Long-term****.*

A small number of junctions are predicted to operate over capacity (>100% V / C ratio) in the Do Something scenario, however, it is concluded that, in the majority of cases the performance of the junction is similar with and without the Proposed Scheme, or the sensitivity of the road link determines that the overall effect will not be significant.

The results demonstrate that no junctions are predicted to have a significance of effect of significant of higher, therefore, no further assessment is required.

Overall Summary: Overall, it has been determined that the potential impact of the reduction in general traffic flows along the Proposed Scheme will be ***Positive, Moderate and Long-term*** *whilst the potential impact of the redistributed general traffic along the surrounding road network will be* ***Negative, Sight and Long-term****.*

It should be noted that effects will be short-lived and localised. Section 5.4.2 of DMURS (2019) recognises that a certain level of traffic congestion is an inevitable feature within urban networks and that junctions may have to operate at saturation levels for short periods of time during the peak hours of the day.

Chapter 1 of the Smarter Travel Policy Document also acknowledges that it is not feasible or sustainable to accommodate continued demand for car use. It should therefore be considered that the traffic congestion that is outlined in the impact assessment is acceptable with regard to the urban location of the area.

Given that the redistributed traffic is not predicted to lead to a significant deterioration of the operational capacity on the surrounding road network, no further mitigation measures have been considered to alleviate the impact outside of the direct study area."

2.5.3.2 Safety Concerns

Summary of Issue Raised

Two submissions gave the opinion that traffic would rat-run on Downpatrick Road and Saul Road which would be unsafe for pedestrians and children cycling, playing and walking on these quiet roads. One submission was concerned that the banned right turn movement at the junction of Balfe Road and Drimnagh Road would lead to an increase in traffic on Bunting Road / Sy Mary's Road.

Response to Issue Raised

Section 6.3.3.1.10.2 General Traffic Impact Assessment Summary Appendix A6.1 Transport Impact Assessment of Volume 4 Part 2 of 4 of the EIAR notes: "*Given the improvements to bus priority, walking and cycling as a result of the Proposed Scheme, there will likely be an overall reduction in operational capacity for general traffic along the direct study area. This may in turn result in some redistribution of general traffic away from the main corridor onto the surrounding road network.*

Using the TII guidelines as an indicator for best practice, the LAM Opening Year 2028 model results were used to identify the difference in traffic flows between the Do Minimum and Do Something scenarios.

……..The general traffic impact assessment was undertaken by extracting operational capacities from the LAM at the key junctions along the above road links. To undertake a robust assessment, the outputs for the worst-performing arm at each junction have been assessed.

……Overall, it is determined that there will be a Low Negative impact from the redistributed general traffic as a result of the Proposed Scheme. Given that the redistributed traffic will not lead to a significant deterioration of the operational capacity on the surrounding road network, no mitigation measures have been considered to alleviate the impact outside of the direct study area.

During the night-time lower traffic flows aligned with more vehicular capacity at junctions will reduce or eliminate traffic redistribution from the Proposed Scheme Corridor. Thus, the impact during this period will be Negligible."

Section 6.3.3.2 Operational Phase Summary notes: *"The Proposed Scheme has been designed and outlined within this assessment to take cognizance in the relevant traffic and transport guidelines outlined in Chapter 9 (References). The assessment demonstrates that the Proposed Scheme will provide significantly enhanced facilities for sustainable modes, helping to provide an attractive alternative to the private car, and promoting a modal shift to walking, cycling and public transport.*

Despite some localised impacts, the assessment demonstrates that overall the surrounding road network has the capacity to accommodate the associated traffic and transport impacts.

Accordingly, it is concluded that the Proposed Scheme will deliver strong benefits from a sustainable transport point of view, allowing for greater capacity along the corridor to facilitate the movement of people, and will not result in a significant deterioration to the existing traffic conditions on the local road network during the operational phase."

Section 6.4.6.2.9.5 of Chapter 6 Traffic & Transport notes the results of the general Traffic Assessment and notes the following in relation to the Indirect Study Area AM Peak Hour:

"The results of the junction analysis illustrated in Table 6.85 demonstrate that of the total of 190 junctions assessed, 157 junctions are operating with a maximum V / C ratio of below 85% in the Do Something scenarios in the AM Peak Hour in the 2028 Opening Year. A further 26 junctions are operating with a maximum V / C ratio of between 85% - 100%. Therefore, the majority of junctions continue to operate well within capacity with the Proposed Scheme in place.

Overall, the Proposed Scheme is considered to have a ***Not Significant or Imperceptible and Long-term effect*** *at 176 junctions within the indirect study area. Five of the 190 junctions assessed are shown to have a significance of effect of* ***Negative, Slight and Long-term****, and four are shown to*

*have **Negative, Moderate and Long-term** effects. Five junctions were assessed to have a **Positive, Moderate and Long-term effect**.*

Capacity issues are noted at the following seven junctions (i.e. they are predicted to operate with a V / C ratio of above 100% in the Do Something scenario):

- *Station Road / Ninth Lock Road (252361);*
- *Killeen Road / Park West Road (14214);*
- *Chapelizod Bypass / Kennelsfort Road Lower (22106);*
- *Spawell Roundabout (9148);*
- *Templeogue Road / Cypress Grove Road (9178);*
- *Citywest Road / Garter Avenue (24298); and*
- *Tallaght Bypass / Whitestown Way / Cookstown Way (24129).*

*Six out of seven junctions operate with a maximum V / C ratio of above 100% in both the Do Minimum and Do Something scenarios, therefore, the significance of effect is considered to be **Negative, Moderate and Longterm**, at worst. Spawell Roundabout operates with a V / C ratio of 85-100% in the Do Something, however, the sensitivity of this road link is deemed to be 'negligible', therefore, the significance of effect is **Not Significant** and **Long-term** overall.*

The results demonstrate that no junctions are predicted to have a significance of effect of significant or higher, therefore, no further assessment of the AM Peak Hour in the 2028 Opening Year is required."

Section 6.4.6.2.9.5 of Chapter 6 Traffic & Transport notes the results of the general Traffic Assessment and notes the following in relation to the Indirect Study Area PM Peak Hour:

"The results of the junction analysis illustrate that, of a total of 164 junctions assessed, 133 junctions are operating with a maximum V / C ratio of below 85% in the Do Something scenarios in the PM Peak Hour in the 2028 Opening Year. A further 22 junctions are operating with a maximum V / C ratio of between 85% - 100%.

Overall, as a result of redistributed general traffic associated with the Proposed Scheme, the effect at 161 out of 164 junctions assessed is predicted to be Not Significant and Long-term and Imperceptible and Long-term within the Indirect Study Area. Two are shown to have Negative, Moderate and Long-term effects in the 2028 Opening Year PM Peak Hour.

Capacity issues are noted at the following 9 junctions:

- *Chapelizod Bypass / Kennelsfort Road Lower (22106);*
- *Chapelizod Bypass / The Oval (22117);*
- *Memorial Road / Con Colbert Road (14124);*
- *Ballymount Road Lower / Ballymount Retail Centre (16166);*
- *Walkinstown Avenue / Long Mile Road (8196);*
- *Naas Road / Turnpike Road (16113);*
- *M50 Northbound / J9 Off-slip (16190);*
- *M50 J10 NB off slip to Naas Road (16183); and*
- *Glenview Roundabout / Tallaght Bypass (24103).*

*Six out of 9 junctions operate with a maximum V / C ratio of above 100% in both the Do Minimum and Do Something scenarios, therefore, the significance of effect is considered to be **Not Significant and Long-term**. At the remaining three junctions, the sensitivity of the road links is considered to be 'negligible', therefore, the overall significance of effect is **Not Significant and Long-Term**. One junction was assessed to have a **Positive, Moderate and Long-term effect**.*

The results demonstrate that no junctions are predicted to have a significance of effect of significant of higher, therefore, no further assessment of the PM Peak Hour in the 2028 Opening Year is required."

Section 6.4.6.2.9.6 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR states that:

"2028 and 2043 Local / Regional Roads Assessment: The majority of assessed junctions have V / C ratios of below 85%, i.e. they are operating within capacity for all assessed years in the Do Minimum and Do Something scenarios. This indicates that these junctions will be able to accommodate the additional general traffic volumes redistributed, as a result of the Proposed Scheme and the effect is deemed ***Imperceptible / Not Significant and Long-term****.*

A small number of junctions are predicted to operate over capacity (>100% V / C ratio) in the Do Something scenario, however, it is concluded that, in the majority of cases the performance of the junction is similar with and without the Proposed Scheme, or the sensitivity of the road link determines that the overall effect will not be significant.

The results demonstrate that no junctions are predicted to have a significance of effect of significant of higher, therefore, no further assessment is required.

Overall Summary: Overall, it has been determined that the potential impact of the reduction in general traffic flows along the Proposed Scheme will be ***Positive, Moderate and Long-term*** *whilst the potential impact of the redistributed general traffic along the surrounding road network will be* ***Negative, Sight and Long-term****.*

It should be noted that effects will be short-lived and localised. Section 5.4.2 of DMURS (2019) recognises that a certain level of traffic congestion is an inevitable feature within urban networks and that junctions may have to operate at saturation levels for short periods of time during the peak hours of the day.

2.5.3.3 Loss of Parking

Summary of Issue Raised

The submissions raised concerns that the cycle tracks and buses on Kildare Road would not allow for on-street parking to be retained as stated on plans and that this would lead to the loss of all on-street parking on the mid-section of Kildare Road and Clogher Road where residents have to park on the side of the road.

Response to Issue Raised

Section 6.4.6.1.4.4 of EIAR Chapter 6 Traffic and Transport discuss the impact on existing parking along Section 3 of the Proposed Scheme which includes Kildare Road and Clogher Road. The changes to parking along the proposed 'Quiet Routes' for cyclists, along the Bunting Road / St Mary's Road corridor, and the Kildare Road / Clogher Road corridor have been considered and the following is stated:

"The areas of parking change along the proposed 'Quiet Routes' for cyclists are as follows:

- There are currently a 111 informal parking spaces on Bunting Street, St. Mary's Road, Kildare Road and Clogher Road. The Proposed Scheme will result in a removal of 44 spaces. However, to mitigate this, 67 parking spaces have been provided on Kildare Road. This is considered to have a **Negligible and Long-term** effect at this location.

Section 3.13.6 of the Parking Survey Report included in Appendix G1 to the Preliminary Design Report included in the Supplementary Information provided with the application for the Proposed Scheme notes the following:

"To mitigate loss of informal parking sixty-seven parking spaces have been provided in the current design on Kildare Road, no other mitigation measure could be identified on Kildare Road and Clogher Road without compromising safety of cyclists using the proposed segregated cycle tracks."

Section 3.13.8 of Appendix G1 notes:

"The consequences of non-removal of existing informal on-street parking would be a loss of segregated cycle facilities and increased journey times for all potential roadway users. Due to the available road and footway cross-section, informal on-street parking mitigations should be implemented where space is available, this mitigation measure has been incorporated in the proposed design."

Figure 2.5.5 below is an extract from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing Proposed Scheme layout along Kildare Road and Clogher Road showing the parking spaces provided with segregated cycle tracks and buses sharing the general traffic lanes.



Figure 2.5.5: Extract from General Arrangement Drawings (Sheets 38, 39 and 41)

2.5.3.4 Tree Replacement

Summary of Issue Raised

One submission expressed concern at the loss of 22 trees on Kildare Road.

Response to Issue Raised

The Landscaping General Arrangement Drawings, provided in Figures: Part 1 of 3 of Volume 3 of the EIAR, show the planting proposals along Kildare Road, see Figure 2.5.6.



Figure 2.5.6: Extract from Landscaping General Arrangement Drawings (Sheets 38 and 40)

These drawings indicate that a total of 37 trees are proposed to replace 22 trees that will be lost as a result of the installation of the proposed cycle track, representing a 68% increase.

Chapter 17, Landscape (Townscape) & Visual of the EIAR has considered the potential landscape and visual impacts associated with the Construction and Operational Phases of the Proposed Scheme.

Section 17.4.3.1.3 notes the following in relation to the Crumlin to Grand Canal section of the Proposed Scheme: *"The potential townscape / streetscape impact of the Construction Phase on this section is assessed to be Negative, Very Significant and Temporary / Short-Term."*

Section 17.4.4.1.3 notes the following in relation to the Crumlin to Grand Canal section of the Proposed Scheme: *"The Operational Phase will not appreciably alter the overall townscape character of this section of the Proposed Scheme, but it will alter the local streetscape both positively and negatively depending on location. The junction of Long Mile Road / Walkinstown Road / Drimnagh Road, and the western section of Kildare Road will experience the most notable improvement in streetscape amenity while Walkinstown Road will experience a notable degradation of streetscape amenity from trees removed during construction with limited proposed replacement. The overall change across the section is negative in the short-term becoming positive over the long-term. The magnitude of change in the baseline environment is high. The potential townscape / streetscape and visual impact of the Operational Phase on this section is assessed to be Negative, Significant and Short-Term becoming Positive, Moderate, Long-Term."*

2.5.3.5 Bus time saving

Summary of Issue Raised

One submission queried how the proposed 200 metre quiet street treatment could have any impact on bus times.

Response to Issue Raised

EIAR Chapter 2 Need for the Proposed Scheme sets out the objectives of the Proposed Scheme, of which the first two are:

- *"Enhance the capacity and potential of the public transport system by improving bus speeds, reliability and punctuality through the provision of bus lanes and other measures to provide priority to bus movements over general traffic movements;*

- *Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable;"*

Section 4.5.3.1 of Chapter 4 of Volume 2 of the EIAR describes the Proposed Scheme requirement for the change to the section of Clogher Road between Sundrive Road and Kildare Road and notes the following:

"Due to width restrictions in the area of Crumlin Road (R110) there is insufficient space to provide dedicated cycle facilities. Therefore, it is proposed to provide an alternative cycle route along Kildare Road and Clogher Road.

The alternative cycle route will include segregated cycle tracks over most of its length either through the addition of kerbs to the existing cycle lanes or the construction of new kerbed cycle tracks. On Clogher Road, between Sundrive Road and Kildare Road, the narrow cross-section prevents the provision of dedicated cycle facilities. Therefore, it is proposed to provide a bus / cycle gate at the junction of Clogher Road / Sundrive Road to reduce the amount of traffic on this road and making it suitable for designation as a Quiet Street."

The width restrictions on Crumlin Road do not allow both of the scheme objectives mentioned above to be achieved along Crumlin Road; either the bus speeds, reliability and punctuality can be achieved by the omission of safe infrastructure for cyclists along Crumlin Road (as per the Proposed Scheme), or safe infrastructure for cyclists can be achieved at the expense of bus speeds, reliability and punctuality along Crumlin Road.

The alternative cycle routing via the quiet street treatment and proposed cycle tracks along Kildare Road and Clogher Road as part of the Proposed Scheme will achieve both of the objectives mentioned for this section of the route.

In addition, for bus services along Kildare Road and Clogher Road, a signalised bus gate is proposed on Clogher Road to provide buses with priority at the Sundrive Road / Clogher Road junction.

Section 6.4.6.3 of Chapter 6 of Volume 2 of the EIAR notes the following:

"Bus Network Performance Indicators: A micro-simulation modelling assessment has been developed and network performance indicators of the bus operations along the 'end to end' corridor. A micro-simulation modelling assessment has been developed and network performance indicators of the bus operations along the 'end to end' corridor. The results of the assessment demonstrate that the total bus journey times on all modelled bus services will improve by between 8% and 12% during the AM and PM Peak hours of the 2028 Opening Year and 2043 Design Year. The Proposed Scheme will reduce total bus journey times along the Proposed Scheme by up to 12% in 2028 and 12% in 2043. Based on the AM and PM peak hours alone, this equates to 7.6 hours of savings in 2028 and 7.2 hours in 2043 combined across all buses when compared to the Do Minimum. On an annual basis this equates to approximately 5,750 hours of bus vehicle savings in 2028 and 5,450 hours in 2043, when considering weekday peak periods only. Journey time variation and reliability are shown to improve in all Do Something scenarios compared to the Do Minimum. Overall, it is anticipated that the improvements in journey times and reliability for bus users along the Proposed Scheme will have a Positive, Very Significant and Long-term effect."

2.5.3.6 Quiet Street Signage

Summary of Issue Raised

A submission stated that the Proposed Scheme drawings are contradictory as they state only cyclists and local access is permitted yet Clogher Road/Sundrive Road junction allows access for buses and bicycles. The submission states that the drawings are unclear about how the quiet street can be shared with local access and how it can be enforced, adding that it is unclear how the junction with

Saul Road / Kildare Road / Clogher Road will be modified and if residents of Saul Road will be able to use this junction to access properties.

Response to Issue Raised

The note on Sheet 41 of General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR states *"Quiet Street Cycle Route Shared with Local Traffic":*

All general traffic and cyclists will be able use the road space on Clogher Road up to the bus gate which is on the western arm of the Sundrive Road / Clogher Road junction. The bus gate signage prohibits general traffic eastbound or westbound using the eastern section of Clogher Road at this junction.

Local traffic may use Clogher Road to access properties on Clogher Road, Saul Road and Slane Road from Kildare Road junction only.

General traffic access to Clogher Road from the western arm of the Sundrive Road / Clogher Road junction will be prohibited.

Figure 2.5.7 below indicates as blue dashed line the general traffic routes available on Clogher Road at this location.

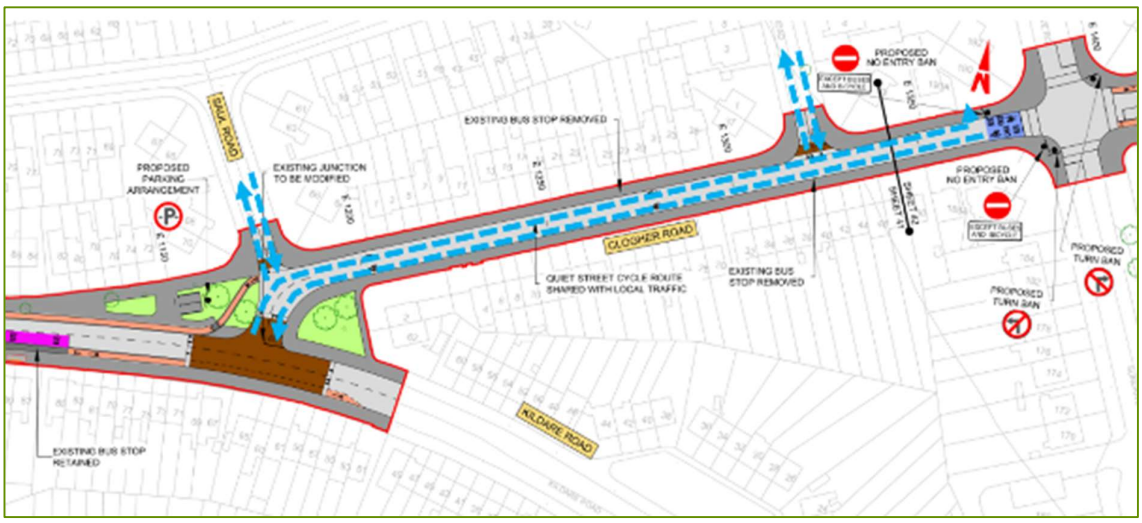


Figure 2.5.7: General Traffic Routes on Clogher Road (blue dashed line)

The NTA acknowledges the comments raised in relation to enforcement. Enforcement of road traffic laws, including parking is a matter for local authority Traffic Wardens and An Garda Síochána.

The junction modification referred to in the General arrangement Drawing Sheet 41 refers to the raised table treatment and junction realignment at the Kildare Road and Clogher Road junction. This junction modification removes the straight through continuous eastbound link between Kildare Road and Clogher Road and the eastbound traffic onto Clogher Road will be via reconfigured Kildare Road / Clogher Road junction. Access to Saul Road will be possible at this modified junction from Kildare Road.

2.5.3.7 Bus Stop Removal

Summary of Issue Raised

A submission expresses the opinion that removal of bus stops on Clogher Road will negatively affect residents in the locality.

Response to Issue Raised

As noted in Section 4.6.4.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR:

"To improve the efficiency of the bus service along the Proposed Scheme the positions and number of bus stops have been reviewed as part of a bus stop assessment.

The criteria for consideration when locating a bus stop are as follows:

- *Driver and waiting passengers are clearly visible to each other;*
- *Location close to key facilities;*
- *Location close to main junctions without affecting road safety or junction operation;*
- *Location to minimise walking distance between interchange stops;*
- *Where there is space for a bus shelter;*
- *Location in pairs, 'tail to tail' on opposite sides of the road;*
- *Close to (and on exit side of) pedestrian crossings;*
- *Away from sites likely to be obstructed; and*
- *Adequate footway width.*

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections on route, reducing to approximately 250m in urban centres. It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided."

As part of the design of the Proposed Scheme a detailed review of bus stop locations was undertaken as set out in Bus Stop Review Analysis in Appendix H.2 (using the methodology as set out in Appendix H.1) of the Preliminary Design Report provided as Supplementary Information. This exercise was carried out to review existing bus stops along the route of the Proposed Scheme and, where appropriate to rationalise these stops in line with best practice criteria mentioned above.

Bus Stop Review Analysis Appendix H2 notes the following in relation to the existing bus stops on Clogher Road at this section of the Proposed Scheme:

Bus Stop 1401

"Existing stop proposed to be removed. Stop is located in close proximity to previous and the next stop (within 200m), therefore opportunity to rationalise stops at this location."

Bus Stop 3355

"Existing stop proposed to be removed. Stop is located in close proximity to previous and the next stop (within 200m), therefore opportunity to rationalise stops at this location."

2.5.3.8 Construction Traffic

Summary of Issue Raised

Submission expresses the opinion that Proposed Scheme will lead to increase in construction traffic and re-directed commuter traffic on Stannaway Road.

Response to Issue Raised

Section6.4.5.4.6.2 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR notes the following:

"Typical work hours on site are between 07:00 and 23:00 with staff working across early and late shifts, with these hours to be agreed with DCC/SDCC. The adopted shift patterns help minimise travel by personnel during the peak hour periods of 08:00 to 09:00 and 17:00 to 18:00.

The appointed contractor will prepare a Construction Stage Mobility Management Plan (CSMMP) which will be developed prior to construction, as described in Appendix A5.1 CEMP in Volume 4 of this EIAR, to actively discourage personnel from using private vehicles to travel to site. The CSMMP will promote the use of public transport, cycling and walking by personnel. Private parking at the Construction Compound will be limited. Vehicle-sharing will be encouraged, subject to public health guidelines, where travel by private vehicle is a necessity e.g., for transporting heavy equipment. A combination of CSMMP measures, as well as work shift patterns, means that fewer than 10 trips by private vehicle are envisaged to and from site during peak periods.

***Heavy Goods Vehicles (HGVs)**: Additional construction traffic will be generated during the Construction Phase of the Proposed Scheme, for the purpose of the following:*

- *Clearance of existing site material and waste;*
- *Deliveries of construction material; and*
- *Removal of construction waste material.*

Chapter 5 (Construction) of this report provides a breakdown of the expected operation for the construction of the Proposed Scheme during each subsection. It should be noted that the CTMP will control vehicular movement along the construction route, including restrictions on the number of HGVs accessing and egressing the construction works throughout the day to mitigate the impacts to general traffic on the surrounding road network.

Based on construction activities associated with the Proposed Scheme, the maximum number of HGVs expected to be in operation across the Proposed Scheme during peak haulage activities is 28 vehicles.

In a typical hour during peak haulage activity of the Proposed Scheme, 40% of lorries are anticipated to be in operation on the public road network which equates to approximately 11 lorries. A total of 11 two-way lorry movements are therefore expected in a typical hour during peak haulage activity of the Proposed Scheme.

***Overall Peak Hour Impacts**: The contents of Table 6.17 [EIAR Chapter 6] outline the anticipated maximum construction traffic generation by site operatives and HGVs during the AM and PM Peak Hours.*

*Given that the above impacts are minimal and comfortably below the thresholds set out in TII's Guidelines for Transport Assessments, it is considered appropriate to define the general traffic impacts of the Construction Phase to have a **Negative, Slight and Short-term effect**. Therefore, no further analysis is required for the purpose of this assessment.*

It should be noted that further detail on the restrictions to construction vehicle movements during the peak periods of the day will be contained within the appointed contractor's CTMP prior to construction."

The Construction Traffic Management Plan Contents (CTMP) of Construction and Environment Management Plan (CEMP) in Appendix A5.1 in Volume 4 of the EIAR, Section 5.2.3.3 Routing of Construction Vehicles states: *"Access to and egress from the Construction Compounds is envisaged to be along dedicated construction vehicle routes. It is assumed that all national roads and regional roads in the immediate vicinity of the Proposed Scheme would be used by construction vehicles."*

Figure 2.5.8 below is an extract from Appendix A5.1 Image 5.4 showing the construction access routes.



Figure 2.5.8: Extract from EIAR Appendix A5.1 Construction Access Routes (Image 5.4)

2.5.3.9 Community Engagement

Summary of Issue Raised

A submission stated that no community engagement took place between local residents in relation to the Proposed Scheme.

Response to Issue Raised

In May 2017 the NTA launched the BusConnects Programme and then in June 2018 published the Core Bus Corridors Project Report. The report was a discussion document outlining proposals for the delivery of Core Bus Corridor Routes across Dublin.

Since the commencement of the non-statutory period of the CBC Infrastructure Works, there has been a total of three rounds of non-statutory public consultation.

First Round of Non-Statutory Public Consultation - The first round of non-statutory public consultation on the Emerging Preferred Route Options was from November 2018 until May 2019 divided into three phases. The reason it was divided into three phases was primarily due to the fact that the BusConnects Infrastructure team carried out all aspects of the first round without external design service providers having been appointed at that stage. Moreover, the BusConnects Infrastructure team sought to gain maximum engagement from the public from the commencement of the CBC Infrastructure Works to raise awareness, establish relationships and gain immediate insight and knowledge of the issues at an early stage.

It was also important that at the start of the non-statutory consultation that considerable time and resources were dedicated by the BusConnects Infrastructure team to initiate contact with potential impacted properties. Each of the potentially impacted property owners were offered the opportunity to

meet with members of the BusConnects Infrastructure team on a one-to-one basis which meant a significant amount of resources had to be dedicated to this process.

Second Round of Non-Statutory Public Consultation – The non-statutory public consultation for the Preferred Route Options ran from March 2020 to April 2020 as Ireland entered the first lockdown due to the Covid-19 pandemic. The consultation continued in deference to the number of online submissions received during this period. A number of public facing elements of the consultation were cancelled in line with Government health guidelines, however, all other elements of the consultation including online versions of the brochures, supporting documentation were available. Other communication tools including the Freephone, email and digital aspects remained active for submissions to be received.

Third Round of Non-Statutory Public Consultation – This round of non-statutory public consultation for the Preferred Route Options from November 2020 to December 2020 was added due to the disruption caused to the second-round consultation process. It was important that further engagement was facilitated to communicate design development changes prior to concluding the determination of the Preferred Route Options. Methods had emerged whereby traditional public information events could be replaced by virtual online alternatives to offset the restrictions that continued associated with the Covid-19 Pandemic. Accordingly, all elements of the public consultation and stakeholder engagement were conducted virtually or online in line with the Government health guidelines.

In summary, there has been extensive public consultation throughout the development of the Proposed Scheme proposals.

2.5.3.10 Impact on Community

Summary of Issue Raised

Submission 10 disagreed with the suggestion that the impact on the community will be minimal and believe that the Proposed Scheme will have significant short-term, medium-term and long-term consequences.

Response to Issue Raised

The NTA notes the comment regarding the impact of the Proposed Scheme on the community.

The methodology for the assessment of community impacts is outlined in Section 10.2.4.1 of Chapter 10 of Volume 2 of the EIAR.

Section 10.6.2 of Chapter 10 notes the following:

"As outlined within Section 10.4.4 and summarised in Table 10.15, the Proposed Scheme will deliver positive impacts in terms of accessibility to community facilities and commercial businesses for pedestrians, cyclists and bus users during the Operational Phase. Negative impacts are expected on the accessibility of private vehicles as a result of the of proposed bus gates. However, these are not expected to be significant. The Proposed Scheme is also expected to benefit individuals and businesses whose workers live along the corridor. Retail and leisure businesses along the route could gain a double benefit from both increased sales and improved staff productivity (see Appendix A10.2 in Volume 4 of this EIAR), albeit it is acknowledged that there may be potential impacts on some businesses located within the bus gates.

These improvements will help to achieve the aims and objectives of the Proposed Scheme by providing an attractive alternative to the use of private vehicles and promoting a modal shift to walking, cycling and public transport, allowing for greater capacity along the corridor to access residential, community and commercial receptors. As discussed in Appendix A10.2 in Volume 4 of this EIAR, the Proposed Scheme will also ensure to connect people with essential services such as healthcare facilities and jobs (EY 2021).

In order to accommodate the Proposed Scheme and to ensure it can be readily utilised by sustainable modes of transport, localised impacts from permanent land take are expected on a number of properties. Slight negative impacts are expected on private vehicles travelling in the Tallaght Village community area, around the location of the bus gates. However, the design of the Proposed Scheme, ensures that the surrounding road network will have the capacity to accommodate the redistributed

traffic during the Operational Phase whilst still achieving the aims and objectives of the Proposed Scheme.

Accordingly, it is concluded that the Proposed Scheme will deliver strong benefits for users of sustainable modes of transport, with positive accessibility and amenity impacts for community areas in the study area and align with specific objectives identified in Section 10.1."

2.5.3.11 Cumulative Impact of adjacent CBC Schemes

Summary of Issue Raised

One submission stated that there was no engagement on the consequences of the cumulative impact of the Tallaght/Clondalkin scheme and the Kimmage bus corridor scheme on Stannaway Road, asserting that Stannaway Road will bear heavy consequences of the combined effect of the two schemes.

Response to Issue Raised

Section 21.2.7 of EIAR Chapter 21 Cumulative Impacts Environmental Interactions considers the cumulative traffic impacts for the operation scenario and states: *"For operational cumulative effects including the Proposed Scheme, the assessment has been undertaken based on a scenario where all the other 11 Core Bus Corridor schemes are also operational."*

Section 21.3.2.1 of Chapter 21 summaries the detailed assessment of cumulative impacts on Traffic and Transport, which is set out in Appendix A6.1 in Volume 4 of the EIAR (Traffic Impact Assessment Report), as follows:

"Traffic Related Cumulative Effects

To examine the potential cumulative traffic effects that the Proposed Scheme may have in combination with any of the other Core Bus Corridor schemes, an area of influence for each scheme was determined to understand the scale of traffic displacement and its interactions with other schemes. The 'area of influence' is the area in which traffic flows are likely to change as a result of the Proposed Scheme measures as indicated by the transport modelling. The outcome of this assessment revealed that the Proposed Scheme has direct and indirect interface with the proposed Kimmage, Liffey Valley and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes.

In terms of direct interfaces, the Kimmage to City Centre Core Bus Corridor Scheme proceeds along New Street South and interacts with the proposed implementation of traffic management measures for the Proposed Scheme at the Kevin Street Upper junction. Works proposed to the junction include the introduction of kerblines realignment, cyclist protection islands build-outs, footway paving, pedestrian crossings, cycle tracks and landscaping at Kevin Street Upper / New Street South / Patrick Street junction. The traffic management measures to be implemented by the Proposed Scheme are located at Kevin Street Upper / New Street South / Dean Street / Patrick Street junction as shown on General Arrangement drawing BCIDA-ACM-GEO_GA-0809_XX_00-DR-CR-0033 in Volume 3 of this EIAR.

The Liffey Valley to City Centre Core Bus Corridor Scheme proceeds along Cornmarket and High Street and interacts with proposed implementation of traffic management measures for the Proposed Scheme at the Nicholas Street / Christchurch Place junction. Works proposed to the junction include the introduction of kerblines realignment, cyclist protection islands build-outs, footway paving, pedestrian crossings, cycle tracks and landscaping at High Street / Nicholas Street / Christchurch Place / Winetavern Street junction. The traffic management measures to be implemented by the Proposed Scheme are located at High Street / Nicholas Street / Christchurch Place / Winetavern Street junction as shown on General Arrangement drawing BCIDA-ACM-GEO_GA-0809_XX_00-DR-CR-0034 in Volume 3 of this EIAR.

The BusConnects Infrastructure team have coordinated the respective scheme designs to provide flexibility in the proposals such that implementation of physical works can be coordinated or delivered in sequence should both schemes be consented. Once in place, both Core Bus Corridor Schemes will provide increased capacity, faster journey times and improved reliability for buses which should lead

to considerable mode shift from car transport to public transport, which will reduce traffic levels generally across the road network in and around both corridors.

In terms of indirect effects, modelling has indicated that both the Proposed Scheme and the Kimmage and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes have overlapping traffic ZoI e.g., each scheme results in traffic displacement effecting the other corridor.

When all three schemes are operational (as well as all other proposed Core Bus Corridor schemes), this has the effect of constraining the opportunity for traffic to displace onto adjoining / adjacent roads when compared to the effect when only one of the Core Bus Corridor schemes is operational. In addition to this, with all the Core Bus Corridor schemes operational, there is predicted to be a higher modal shift from private car trips to sustainable modes of travel compared to the singular scheme scenario. This is due to the combined effect of all Core Bus Corridor schemes being operational and the journey time savings and reliability for bus travel and the interchange opportunities that this provides to travel around Dublin in combination with the BusConnects network re-design proposals. In addition, the Core Bus Corridor schemes will facilitate a step change in the level of segregated cycling provision in comparison with existing conditions along the entire length of the corridors resulting in more people cycling.

The result of the above is that the cumulative effect of all Core Bus Corridors in operation and in tandem with the roll out of the wider Greater Dublin Area Transport Strategy measures, future growth in overall travel demand is catered for by sustainable modes. No significant negative effects over and above those considered in the standalone assessments for the Operational Phase were predicted in the cumulative impact assessment and therefore no additional mitigation measures are considered necessary."

In summary, the cumulative impact of the Tallaght/Clondalkin scheme and the Kimmage bus corridor scheme on Stannaway Road has been assessed and concluded that the two schemes have the effect of constraining the opportunity for traffic to displace onto adjoining / adjacent roads when compared to the effect when only one of the Core Bus Corridor schemes is operational. In addition to this, with all the Core Bus Corridor schemes operational, there is predicted to be a higher modal shift from private car trips to sustainable modes of travel compared to the singular scheme scenario.

2.5.3.12 Mitigation

Summary of Issue Raised

Submittal requested major traffic calming required on surrounding roads if bus gate on Clogher Road is implemented in consultation with residents.

Submission 10 stated that if the Proposed Scheme is implemented without appropriate mitigation measures it will exacerbate the existing problems and make the situation untenable for residents.

Response to Issue Raised

The NTA notes the suggestions made regarding traffic calming in surrounding roads. Such a proposal is not included as it is not required to achieve the Proposed Scheme objectives. It is also noted that the Proposed Scheme would not preclude the future introduction of such a measure at a future date should the local authority wish to give consideration to this.

Section 6.3.3.1.10.2 General Traffic Impact Assessment Summary Appendix A6.1 Transport Impact Assessment of Volume 4 Part 2 of 4 of the EIAR notes: "*Given the improvements to bus priority, walking and cycling as a result of the Proposed Scheme, there will likely be an overall reduction in operational capacity for general traffic along the direct study area. This may in turn result in some redistribution of general traffic away from the main corridor onto the surrounding road network.*

Using the TII guidelines as an indicator for best practice, the LAM Opening Year 2028 model results were used to identify the difference in traffic flows between the Do Minimum and Do Something scenarios.

……..The general traffic impact assessment was undertaken by extracting operational capacities from the LAM at the key junctions along the above road links. To undertake a robust assessment, the outputs for the worst-performing arm at each junction have been assessed.

……Overall, it is determined that there will be a Low Negative impact from the redistributed general traffic as a result of the Proposed Scheme. Given that the redistributed traffic will not lead to a significant deterioration of the operational capacity on the surrounding road network, no mitigation measures have been considered to alleviate the impact outside of the direct study area.

During the night-time lower traffic flows aligned with more vehicular capacity at junctions will reduce or eliminate traffic redistribution from the Proposed Scheme Corridor. Thus, the impact during this period will be Negligible."

Section 6.3.3.2 Operational Phase Summary notes: *"The Proposed Scheme has been designed and outlined within this assessment to take cognizance in the relevant traffic and transport guidelines outlined in Chapter 9 (References). The assessment demonstrates that the Proposed Scheme will provide significantly enhanced facilities for sustainable modes, helping to provide an attractive alternative to the private car, and promoting a modal shift to walking, cycling and public transport.*

Despite some localised impacts, the assessment demonstrates that overall the surrounding road network has the capacity to accommodate the associated traffic and transport impacts.

Accordingly, it is concluded that the Proposed Scheme will deliver strong benefits from a sustainable transport point of view, allowing for greater capacity along the corridor to facilitate the movement of people, and will not result in a significant deterioration to the existing traffic conditions on the local road network during the operational phase."

Section 6.4.6.2.9.5 of Chapter 6 Traffic & Transport notes the results of the general Traffic Assessment and notes the following in relation to the Indirect Study Area AM Peak Hour:

"The results of the junction analysis illustrated in Table 6.85 demonstrate that of the total of 190 junctions assessed, 157 junctions are operating with a maximum V / C ratio of below 85% in the Do Something scenarios in the AM Peak Hour in the 2028 Opening Year. A further 26 junctions are operating with a maximum V / C ratio of between 85% - 100%. Therefore, the majority of junctions continue to operate well within capacity with the Proposed Scheme in place.

Overall, the Proposed Scheme is considered to have a ***Not Significant or Imperceptible and Long-term effect*** *at 176 junctions within the indirect study area. Five of the 190 junctions assessed are shown to have a significance of effect of* ***Negative, Slight and Long-term****, and four are shown to have* ***Negative, Moderate and Long-term*** *effects. Five junctions were assessed to have a* ***Positive, Moderate and Long-term effect****.*

Capacity issues are noted at the following seven junctions (i.e. they are predicted to operate with a V / C ratio of above 100% in the Do Something scenario):

- *Station Road / Ninth Lock Road (252361);*
- *Killeen Road / Park West Road (14214);*
- *Chapelizod Bypass / Kennelsfort Road Lower (22106);*
- *Spawell Roundabout (9148);*
- *Templeogue Road / Cypress Grove Road (9178);*
- *Citywest Road / Garter Avenue (24298); and*
- *Tallaght Bypass / Whitestown Way / Cookstown Way (24129).*

Six out of seven junctions operate with a maximum V / C ratio of above 100% in both the Do Minimum and Do Something scenarios, therefore, the significance of effect is considered to be ***Negative, Moderate and Longterm****, at worst. Spawell Roundabout operates with a V / C ratio of 85-100% in the Do Something, however, the sensitivity of this road link is deemed to be 'negligible', therefore, the significance of effect is* ***Not Significant*** *and* ***Long-term*** *overall.*

The results demonstrate that no junctions are predicted to have a significance of effect of significant or higher, therefore, no further assessment of the AM Peak Hour in the 2028 Opening Year is required."

Section 6.4.6.2.9.5 of Chapter 6 Traffic & Transport notes the results of the general Traffic Assessment and notes the following in relation to the Indirect Study Area PM Peak Hour:

"The results of the junction analysis illustrate that, of a total of 164 junctions assessed, 133 junctions are operating with a maximum V / C ratio of below 85% in the Do Something scenarios in the PM Peak Hour in the 2028 Opening Year. A further 22 junctions are operating with a maximum V / C ratio of between 85% - 100%.

Overall, as a result of redistributed general traffic associated with the Proposed Scheme, the effect at 161 out of 164 junctions assessed is predicted to be Not Significant and Long-term and Imperceptible and Long-term within the Indirect Study Area. Two are shown to have Negative, Moderate and Long-term effects in the 2028 Opening Year PM Peak Hour.

Capacity issues are noted at the following 9 junctions:

- *Chapelizod Bypass / Kennelsfort Road Lower (22106);*
- *Chapelizod Bypass / The Oval (22117);*
- *Memorial Road / Con Colbert Road (14124);*
- *Ballymount Road Lower / Ballymount Retail Centre (16166);*
- *Walkinstown Avenue / Long Mile Road (8196);*
- *Naas Road / Turnpike Road (16113);*
- *M50 Northbound / J9 Off-slip (16190);*
- *M50 J10 NB off slip to Naas Road (16183); and*
- *Glenview Roundabout / Tallaght Bypass (24103).*

Six out of 9 junctions operate with a maximum V / C ratio of above 100% in both the Do Minimum and Do Something scenarios, therefore, the significance of effect is considered to be ***Not Significant and Long-term****. At the remaining three junctions, the sensitivity of the road links is considered to be 'negligible', therefore, the overall significance of effect is* ***Not Significant and Long-Term****. One junction was assessed to have a* ***Positive, Moderate and Long-term effect****.*

The results demonstrate that no junctions are predicted to have a significance of effect of significant of higher, therefore, no further assessment of the PM Peak Hour in the 2028 Opening Year is required."

Section 6.4.6.2.9.6 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR states that:

"2028 and 2043 Local / Regional Roads Assessment: The majority of assessed junctions have V / C ratios of below 85%, i.e. they are operating within capacity for all assessed years in the Do Minimum and Do Something scenarios. This indicates that these junctions will be able to accommodate the additional general traffic volumes redistributed, as a result of the Proposed Scheme and the effect is deemed ***Imperceptible / Not Significant and Long-term****.*

A small number of junctions are predicted to operate over capacity (>100% V / C ratio) in the Do Something scenario, however, it is concluded that, in the majority of cases the performance of the junction is similar with and without the Proposed Scheme, or the sensitivity of the road link determines that the overall effect will not be significant.

The results demonstrate that no junctions are predicted to have a significance of effect of significant of higher, therefore, no further assessment is required.

Overall Summary: Overall, it has been determined that the potential impact of the reduction in general traffic flows along the Proposed Scheme will be ***Positive, Moderate and Long-term*** *whilst the*

potential impact of the redistributed general traffic along the surrounding road network will be ***Negative, Sight and Long-term****.*

It should be noted that effects will be short-lived and localised. Section 5.4.2 of DMURS (2019) recognises that a certain level of traffic congestion is an inevitable feature within urban networks and that junctions may have to operate at saturation levels for short periods of time during the peak hours of the day.

2.5.3.13 Bunting Road Cycle Route

Summary of Issue Raised

Submission 32 stated that the Bunting Road cycle route was welcomed but cited the existing footway adjacent to the park is undersized, that the existing hedge should be removed from the park which, it asserts, obscures criminality and expressing concern that the cycle track may impact the roots of the trees.

Response to Issue Raised

The NTA note the support for the proposed cycle route along Bunting Road.

The existing cross section of Bunting Road is shown in Figure 2.5.9



Figure 2.5.9: Existing view of Bunting Road (Image source: Google)

The relevant extract of the General Arrangement Drawings contained in EIAR Volume 3 Part 1 or 4 showing Bunting Road is shown in Figure 2.5.10.

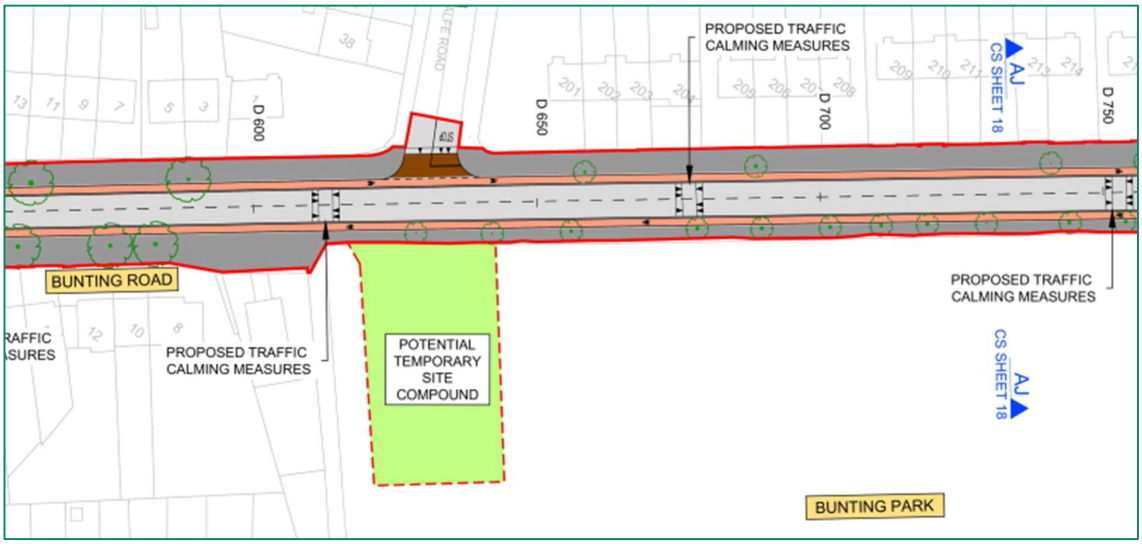


Figure 2.5.10: Extract of General Arrangement Drawings at Bunting Road

As can be seen from Figure 2.5.10, it is proposed to remove the verge between the existing road and the existing footway to provide the segregated cycle track and to widen the existing footway alongside the park.

This is also shown in the relevant extract of the Typical Cross Sections contained in EIAR Volume 3 Part 1 or 4 showing Bunting Road is shown in Figure 2.5.11, which also shows that the existing hedge alongside the park is to be retained.

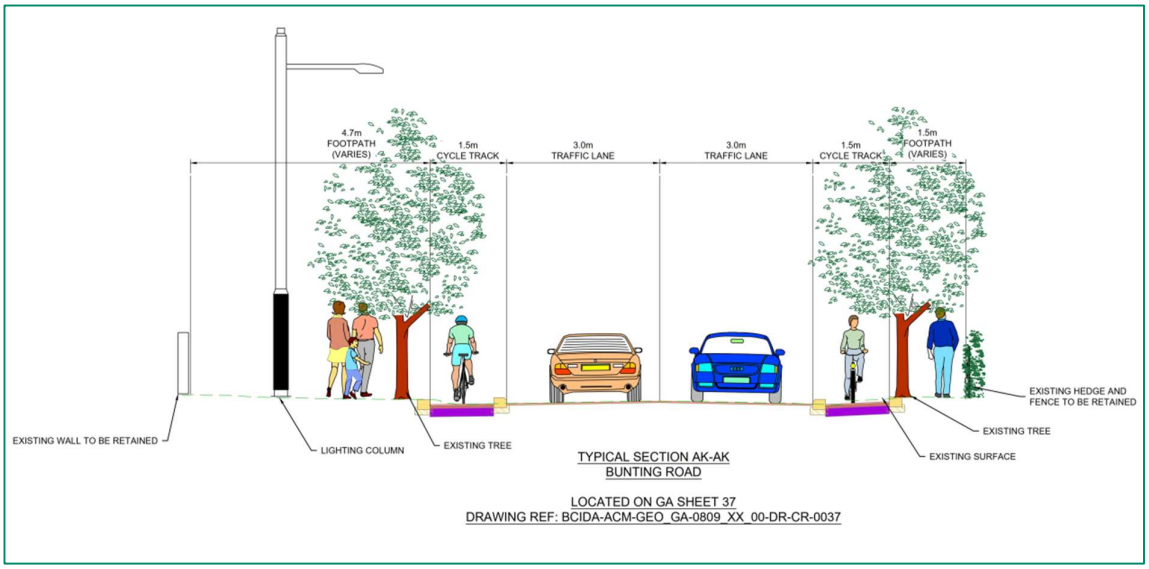


Figure 2.5.11: Typical Cross Section AK-AK on Bunting Road

Within Section 4.5.3.9 of EIAR Chapter 4 that describes the proposed landscape and urban realm proposals at this location, it states: *"Along Bunting Road and St. Mary's Road the tree lined street will be preserved by using no dig methods to lay the cycle track under the tree canopies."*

In summary, the existing footway will be widened and the existing trees will be retained.

The issue raised relating to the requested removal of the existing hedge is outside the scope of the Proposed Scheme and is a matter for Dublin City Council.

2.5.3.14 St Marys Road / Kildare Road / Drimnagh Road junction

Summary of Issue Raised

Submission 32 expressed the view that the introduction of a left turn from Drimnagh Road to St Marys is a health and safety risk from the point of view of visibility and requested a review of the RSA (road Safety Audit) comments.

Response to Issue Raised

As described in Section 4.5.3.1 of EIAR Chapter 4 Proposed Scheme Description, in order to achieve the objectives of the Proposed Scheme , *"the junction at Kildare Road, Saint Mary's Road and Drimnagh Road has been revised to provide improved cycle and pedestrian facilities. This will provide improved cycle connectivity between the Drimnagh Road (R110) and the proposed offline cycle route via Kildare Road."*

The existing junction layout is shown in Figure 2.5.12 and the relevant extract of the General Arrangement Drawings contained in EIAR Volume 3 Part 1 or 4 showing Bunting Road is shown in Figure 2.5.13.



Figure 2.5.12: Existing layout of St Marys Road / Drimnagh Road / Kildare Road junction (Image source: Google)

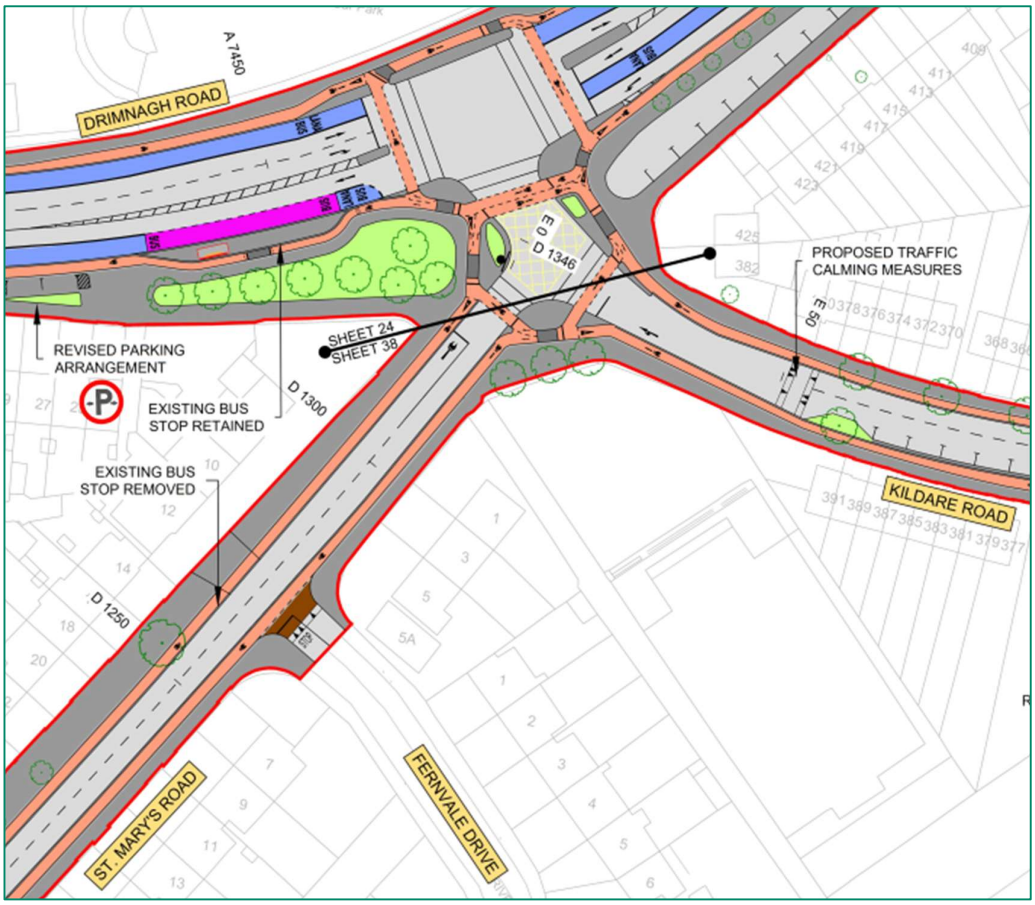


Figure 2.5.13: Extract of General Arrangement Drawings at St Marys Road / Drimnagh Road / Kildare Road junction

As shown in the preceding Figures, the existing left turn movement from Drimnagh Road to St Marys Road is to be modified by the removal of the left turn slip lane.

The Junction Design Report, provided as Appendix A6.3 of EIAR Volume 4 Part 2 of 4, provides the following detailed description of the junction at Kildare Road, Saint Mary's Road and Drimnagh Road:

"Summary

The existing junction is to be upgraded as per the BusConnects Preliminary Design Guidance Booklet to enhance pedestrian, cyclist and bus priority infrastructure.

Pedestrian Infrastructure

The proposed junction will be upgraded to remove the existing left turn slips on Drimnagh Road and Kildare Road. This will facilitate a more compact junction with reduced pedestrian crossing distances. The existing staggered crossings are proposed to be omitted and replaced with new direct single stage crossings on all arms of the junction. Raised pedestrian controlled crossings will also be incorporated across the orbital cycle track at the junction to ensure pedestrian priority over cyclists.

Cyclists Infrastructure

The proposed inbound and outbound cycle infrastructure will comprise of cycle tracks along Drimnagh Road. Furthermore, the design proposes an offline cycle route along Kildare Road towards Dublin City Centre, with cycle tracks proposed on both sides of the carriageway. An orbital cycle track is proposed across the junction to connect all arms. The segregated cycling infrastructure and cyclist crossings will facilitate cyclists crossing during the same stage as pedestrians, to maximise capacity at the junction.

Bus Priority Infrastructure

For both inbound and outbound directions, a bus lane is proposed continuously up to the junction stop line along Drimnagh Road. For the outbound direction, a Junction Type 2 is proposed, whereby a break is proposed on the bus lane to facilitate a left turn lane. This will assist to provide additional capacity at the junction to enhance capacity for all modes."

In addition, the traffic signalling arrangements are also proposed to be amended across the whole junction. The Junction Design Report also provides the indicative method of control for this traffic signalled junction, as shown in Figure 2.5.14, with annotation added for clarity.

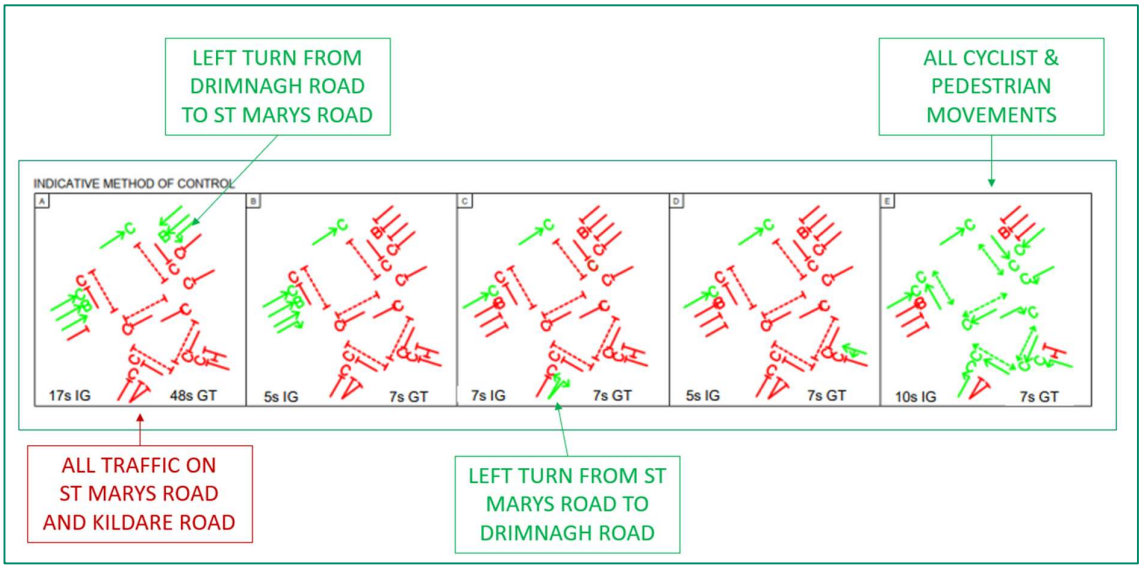


Figure 2.5.14: Extract of Junction Design Report showing indicative method of control for St Marys Road / Drimnagh Road / Kildare Road junction

As shown in the indicative method of control, in Stage A straight through general traffic in both directions have a green signal, as does the left turn movement from Drimnagh Road to St Marys Road, with all traffic on St Marys Road and Kildare Road having a red signal. While the submission does not state what the precise concern is with regards to visibility, the indicative method of control

will ensure that any traffic making the left turn movement from Drimnagh Road to St Marys Road will encounter no conflicts with other general traffic, cyclists or pedestrians.

The Road Safety Audit for the Proposed Scheme is provided as Appendix M of the Preliminary Design report included as part of the Supplementary Information. The report does not identify any problems or concerns associated with visibility at this junction.

2.5.3.15 Proposed construction compound TC8 at Bunting Park

Summary of Issue Raised

Submissions 32 and 42 stated that the proposed construction compound in Bunting Park is very close to the sports pitches, citing a run off area of 5m must be maintained around the pitch and the associated ball stops set 8m behind the posts, which they believed could not be achieved with the construction compound as proposed.

In addition, the submissions raised concerns that the compound would provide cover for the existing anti-social behaviour that takes place in the park after dark.

Submission 42 also raised a concern in respect of the impact that construction compound may have on the drainage of the park, although noting the area where the construction compound is proposed to be located does not flood.

Response to Issues Raised

Pitch Safety
On page 120 of the GAA Club Manual Chapter 8 Providing Facilities, it states that at least 5 meters run off space around the playing area should be provided for safety reasons.

Figure 2.5.15 shows the extent of the proposed temporary construction compound at Bunting Park superimposed on the aerial background mapping. The extents of the compound are approximately 10.0m from the edge of the playing area. As such there is no impact on safety in respect of the run-off zone at this location. In addition, there will be no impact on the required ball stops.



Figure 2.5.15: Extent of Temporary Compound TC8 on aerial imagery (Image Source: Google)

As stated in Section 5.5.5 of EIAR Chapter 5, *"On completion of construction, all construction facilities and equipment such as plant, materials, temporary signage, and laydown areas, Construction*

Compounds, etc. will be removed. The area which was occupied by the Construction Compounds will be reinstated (refer to the Landscaping General Arrangement Drawings (BCIDA-ACM-ENV_LA-0809_XX_00-DR-LL-9001) in Volume 3 of this EIAR).”

In summary, the pitch will remain usable at all times while the temporary construction compound is in place and the park will be reinstated after construction works are completed.

Anti-social behaviour

In respect of any temporary lighting arrangements during construction, Section 5.5.2.9 of Chapter 5 Construction of Volume 2 of the EIAR states the following: *“The majority of the Proposed Scheme is already artificially lit. However temporary lighting will be required at times along the Proposed Scheme at certain locations during the Construction Phase, as necessary. Where it is necessary to disconnect public lighting during the construction works or to undertake works outside of daylight hours where existing lighting is low, appropriate temporary lighting will be provided. Temporary lighting will also be installed at the Construction Compounds for the duration of the Construction Phase”*

Section 5.5.2.9 goes on to state that: *“The standard of temporary lighting installed during the Construction Phase will meet the standard of the existing carriageway and will be appropriate to the speed and volume of traffic during construction. Temporary construction lighting will generally be provided by tower mounted floodlights, which will be cowled and angled downwards to minimise spillage of light from the site.”*

As stated in Section 5.5.2.8 Construction Compounds of Chapter 5 Construction of Volume 2 of the EIAR: *“As part of preparatory works, the Construction Compounds will be set up which will include installation of the necessary facilities including the site office, welfare facilities, etc. Controlled access to the Construction Compounds will be implemented, fencing will be erected, and lighting will be installed. The Construction Compounds will be secured with Closed-Circuit Television (CCTV) to ensure safe storage of all material, plant and equipment.”*

The temporary lighting and CCTV which will be installed at the construction compound are anticipated to deter anti-social behaviour from the vicinity of the compound and will ensure that there is no adverse impact on the safety of the entrance to the park.

Drainage

As described in Section 5.4.4.1.1 Construction Compounds of Appendix 5.1 of Volume 4 of the EIAR *“The general measures for Construction Compounds will apply, however as most of the compounds are located on greenfield sites with no retaining wall to prevent overland flows of polluting substances to local surface water drains, additional measures are required. Site fencing will include a silt fence for the perimeter of the site to prevent over land flows. Surface water drains at access points will be covered.”*

Further, Section 5.4.5.1.1 Construction Compound Establishment of Appendix 5.1 of Volume 4 of the EIAR notes *“All surface water runoff will be intercepted and directed to appropriate treatment systems / settlement facilities for the removal of pollutants prior to discharge. Further information of the Construction Compounds is provided in Section 5.7 in Chapter 5 (Construction) in Volume 2 of this EIAR.”*

It is therefore not anticipated that the temporary construction compound will give rise to any drainage issues within the park.

2.5.3.16 Other Issues Raised

Summary of Issues Raised

1. Advocacy for the proposed scheme – Submission 23

Submission 23 noted their support in general for improving Public Transport in the city and surrounding area of Dublin 12, adding that improvements for safer cycling and pedestrian movement are also to be welcomed.

Response to Other Issues Raised

2. Advocacy for the proposed scheme

The NTA welcomes the support expressed for the improvement of improving public transport and delivery of improvements for safer cycling and pedestrian movement in Dublin 12.

2.6 Proposed Scheme at Naas Road / Long Mile Road Junction

2.6.1 Description of the Proposed Scheme at this Location

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.5.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description, at the New Nangor Road (R134) / Naas Road (R810) junction a new pedestrian and cycling bridge with accessible ramps and stairs on all approaches to the junction has been proposed to provide increased pedestrian and cycling safety, permeability and accessibility at this junction. This will require land acquisition and boundary treatment on the periphery of the existing road boundary to accommodate the proposed bridge and ancillary ramp structures.

A proposed continuous inbound bus lane with dedicated left turn bypass facility will provide enhanced bus priority between the New Nangor Road (R134) and the Naas Road (R810). This will require land acquisition and boundary modifications including new retaining structures in conjunction with the new bridge access ramps and steps. A new bus lane is proposed within the junction for the outbound buses heading towards New Nangor Road (R134) to improve bus priority along the corridor. As a result, the general traffic lane allocation from the Long Mile Road (R110) will be revised to two straight ahead lanes towards the New Nangor Road (R134) and two left turn lanes towards the Naas Road (R810).

As outlined in the GDA Cycle Network Plan, this section of the corridor aligns with the proposed Primary Route 7B / N10 until cyclists re-join New Nangor Road beyond the M50 overbridge. The route also aligns with Secondary Route 8C2 along its extents.,

The relevant extract from the General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.6.1.1.

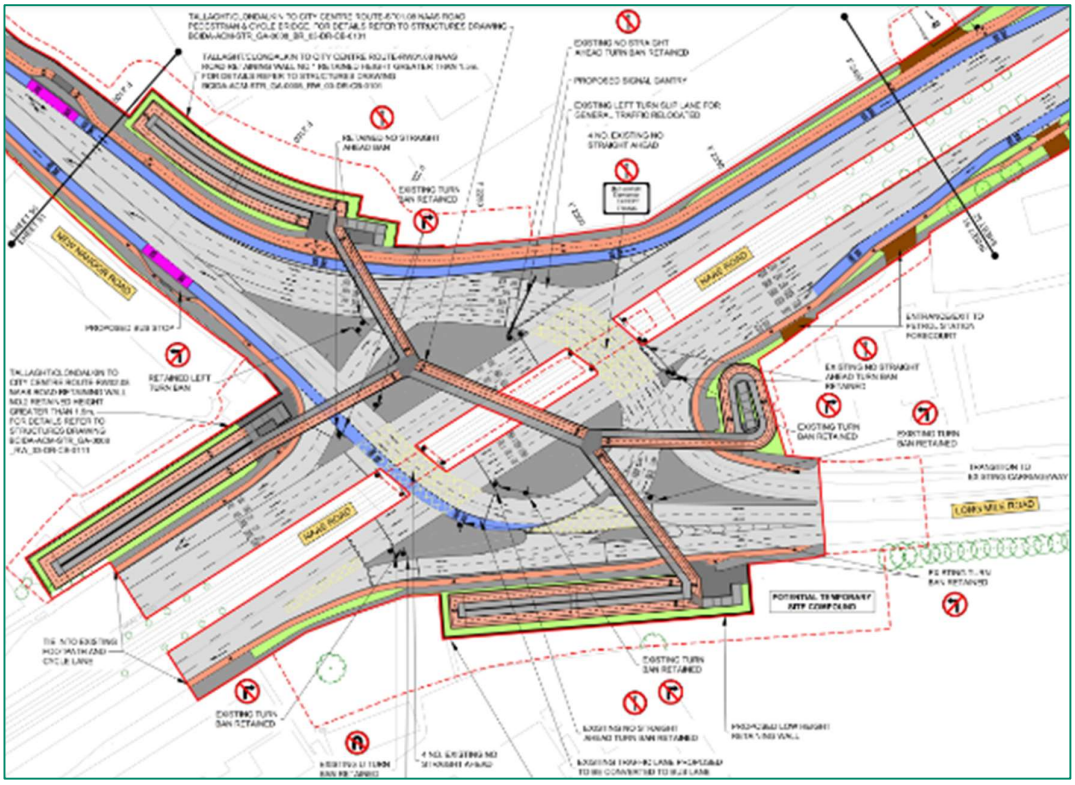


Figure 2.6.1.1: General Arrangement of Proposed Scheme adjacent to Maxol (Sheet 51)

2.6.2 Overview of Submissions Received

Two submissions were received which raised issues in respect of the Proposed Scheme at this location:

1. Maxol Limited
2. Woodies DIY

While there was some commonality between the issues raised by the two submissions, in the main the issues related to the specific location of the individual properties.

2.6.3 Maxol Limited

2.6.3.1 Description of the Proposed Scheme - Maxol Limited

The relevant extract from the General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.6.3.1 showing the site of Maxol Limited.

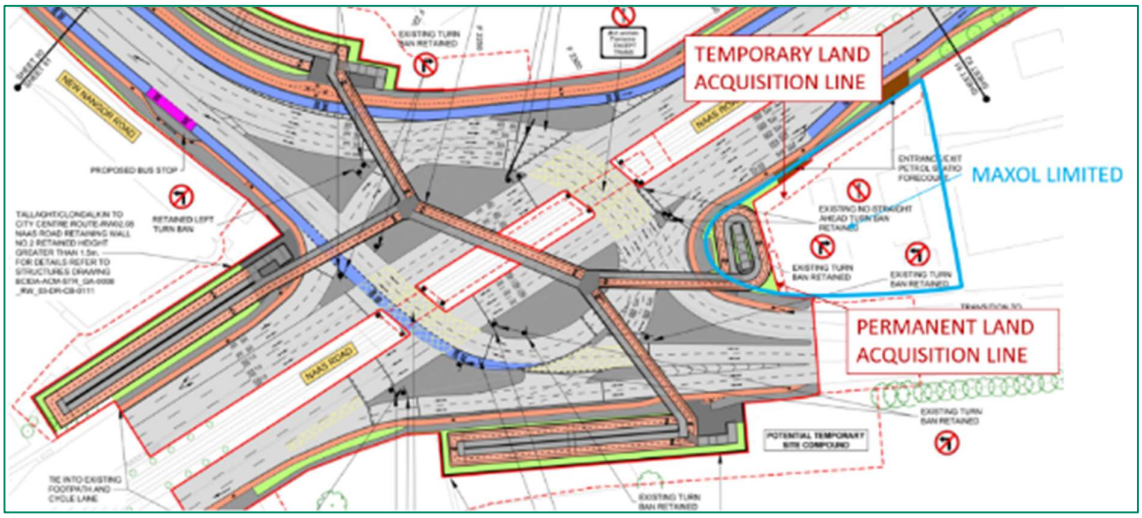


Figure 2.6.3.1: General Arrangement of Proposed Scheme adjacent to Maxol (Sheet 51)

Details of the proposed bridges and associated ramps are shown on drawing BCIDA-ACM-STR_GA-0809_BR_00-DR-CB-0101 (ST02 Naas Road Pedestrian and Cycle Bridge Plan) as part of the Bridges and Major Retaining Structures drawings included in EIAR Volume 3 Part 2 of 3. An extract from this drawing is shown in Figure 2.6.3.2.

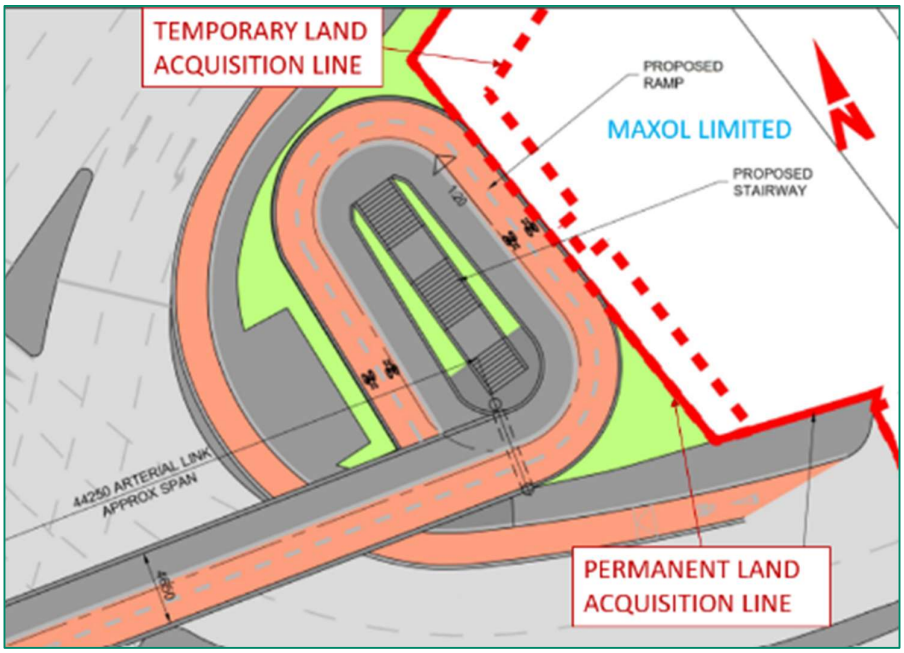


Figure 2.6.3.2 Extract from Drawing of ST02 Naas Road Pedestrian and Cycle Bridge Plan Proposed, showing the curved ramp adjacent to Maxol Limited

The proposed ramp starts underneath the proposed bridge, rising in a clockwise direction and has risen to a height of 2.3m above ground level at the closest point to the existing vent stack on the Maxol site.

The looped ramp continues to rise in a clockwise direction and the next loop is at a height of 5.2m above ground level at the closest point to the vent stack, from where the ramp meets the proposed bridge over the Naas Road.

The relevant extract from the CPO Deposit Maps showing the proposed permanent and temporary land acquisition areas at the Maxol Petrol Filling Station is shown in Figure 2.6.3.3.

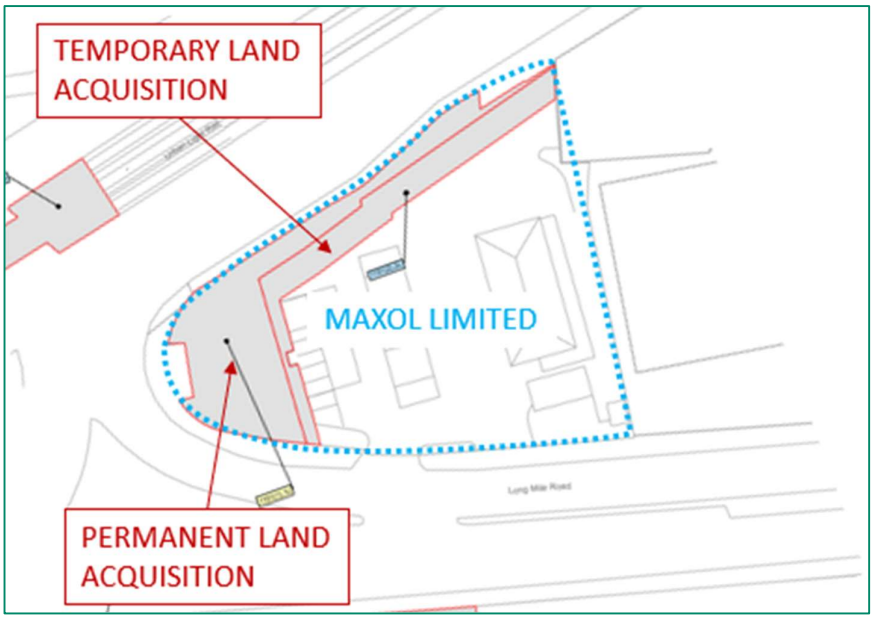


Figure 2.6.3.3: Extract from CPO Deposit Maps at Maxol Limited

The required permanent land acquisition is 661m^2 and the required temporary land acquisition is 379m^2. The proposed permanent and temporary land acquisition lines overlain on aerial photography are shown in Figure 2.6.3.4.



Figure 2.6.3.4: Proposed Land Acquisition lines adjacent to Maxol

Section 17.5.2.1.20 of EIAR Volume 2 Chapter 17 provides a description of photomontage view 3 looking from the new Nangor Road towards the Naas Road / Longmile Road junction. Figure 17.2 of Volume 3 of the EIAR, Figures: Part 3 of 3, Chapter 17 Landscape provides the location of this view and the as existing and as proposed views as shown in Figures 2.6.3.5, 2.6.3.6 and 2.6.3.7.

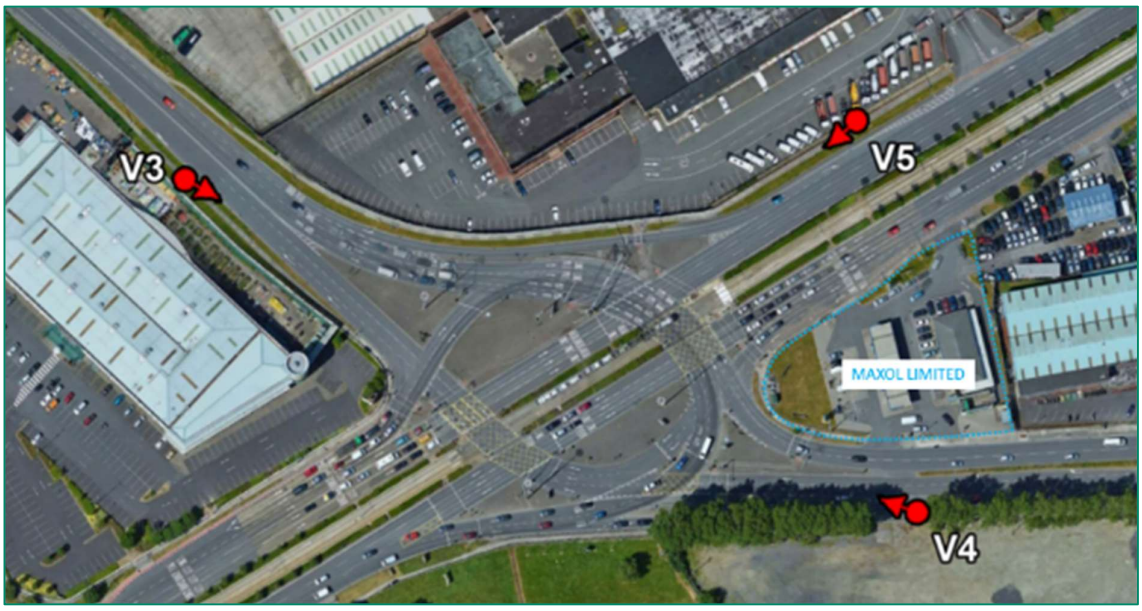


Figure 2.6.3.5: Extract form EIAR Figure 17.2: Location of View 3



Figure 2.6.3.6: Extract form EIAR Figure 17.2: View 3 As Existing



Figure 2.6.3.7: Extract form EIAR Figure 17.2: View 3 As Proposed

2.6.3.2 Summary of Issues Raised by Maxol Limited

This submission objected to CPO for the reasons summarised in the following section.

i) cyclists will not use ramps
ii) ramps will reduce visibility of the PFS
iii) Proximity of the ramp to the petrol filling station operational facilities
iv) Clarification in respect of no land take on Naas Road

2.6.3.3 Responses to Issues Raised by Maxol Limited

i) Cyclists will not use ramps

The submission asserts that cyclists will have to travel a significant longer distance compared to crossing by the existing at-grade signals. The submission notes that the Proposed Scheme will provide a continuous connection for cyclists that does not exist currently, but expresses the view that cyclists are more likely to follow existing at-grade crossing routes.

Section 3.4.1.2.1 of EIAR Chapter 3 Consideration of Reasonable Alternatives notes that the draft Preferred Route Option proposed an overbridge for pedestrians and cyclists at this location which would greatly reduce conflicts with traffic.

Section 4.4.2.1 of the Preferred Route Option (PRO) Report, provided as part of the Supplementary Information, provides details of the consideration of the option for the proposed overbridge. Section 4.2.2.1 states: "*The R134 New Nangor Road/R110 Long Mile Road/R810 Naas Road junction is a very large and complex traffic signal-controlled intersection, catering for large traffic flows and has the LUAS red line running through the middle of it. For pedestrians to cross the road at present they must use signal-controlled crossing, crossing one link at a time. At present it can take between 4 and 5 minutes to cross the R110 Long Mile Road using these signals, and the EPR Option (Figure 4-9) did not propose any changes to the facilities for pedestrians or cyclists. While the pedestrian and cycle flows are low at present this is likely to change in the years to come as the regeneration of the lands around the intersection gets underway. For this reason, consideration has been given to how pedestrians and cyclists can be better catered for at this location.*"

Section 4.4.2 of the PRO Report summarises the assessment of this alternative option ("Option 2") when compared to the EPR Option as follows:

"Overall, the alternative arrangement provides a more reliable and direct crossing facility for pedestrians and cyclists compared to the multiple toucan crossings in the EPR Option, each with a delay for users while they wait at each crossing.

When compared to the EPR Option, the alternative option improves significantly the safety of pedestrian and cyclists by removing the conflict with vehicular traffic.

Furthermore, the proposed improvements will make for a significantly more pleasant journey for pedestrians and cyclists using the junction as they will no longer be interacting with vehicular traffic.

Also, the alternative arrangement will improve the junction performance for general traffic due to no longer having to incorporate phases for pedestrians and cyclists, which offsets the additional capital costs of the proposed structures.

Although the alternative option requires increased land take than the EPR Option, it is noted that the alternative offers improved connection with lands zoned "to facilitate enterprise and/or residential led regeneration", as well as passing through an area designated a Key District Centre in the Naas Road Lands Local Area Plan. The alternative offers an improvement in encouraging/supporting planned development and in providing for economic opportunities. Thus, in terms of accessibility, social inclusion and integration the alternative proposal is considered to have some advantages over the EPR Option arrangement. There is no significant difference between the two alternatives in terms of impact on the environment."

Table 4.4 of the PRO Report provides the Assessment Summary, see Figure 2.6.3.8.

Table 4-4: Assessment Summary

Assessment Criteria	Option 1 (EPR)	Option 2 (Alt)
Economy		
Integration		
Accessibility & Social Inclusion		
Safety		
Environment		
Overall		

Figure 2.6.3.8: Table 4.4 of PRO Report

Section 4.4.2.2 of the PRO Report concludes that *"the Preferred Route Option for the pedestrian and cyclist facilities will be the provision of a grade separated bridge at the R134 New Nangor Road/R110 Long Mile Road/R810 Naas Road junction; as despite the high capital cost, there would be more advantages through improved traffic performance, integration, accessibility and particularly better safety in comparison to the at-grade crossings."*

As noted above, Section 4.4.2 of the PRO Report states that *"the alternative arrangement will improve the junction performance for general traffic due to no longer having to incorporate phases for pedestrians and cyclists."* This absence of at-grade pedestrian and cyclists in the Proposed Scheme is reflected in the design of the junction shown on the General Arrangement Drawings (see Figure 2.6.3.1) and on the junction design details provided in pages 33-36 of the Junction Design Report which forms Appendix A6.3 of Chapter 6 Traffic and Transport Appendices in EIAR Volume 4 Part 2 of 4. As such the at-grade crossing points referred to by the submission will not be available as option for pedestrians and cyclists, with the proposed ramps, steps and bridges providing the only available route.

ii) Ramps will reduce visibility of the PFS and detract from visual amenity

The submission notes that the curved ramp will result in a significant scale structure in close proximity to the petrol filling station and expresses the view that it will reduce the visibility of the petrol filling station and detract from the visual amenity of the area. The submissions asserts that the petrol filling station forms a clear and distinctive visual landmark.

As shown in Figure 2.6.3.9 the existing petrol filling station is a single storey facility located at the major junction between Naas Road (R810) and Long Mile Road (R110). The area is heavily trafficked and the streetscape includes significant visual clutter associated with the scale of the road infrastructure and the LUAS line in the centre of Naas Road.



Figure 2.6.3.9: View of Maxol petrol filling station from Naas Road (R810) (Image Source: Google)

Section 17.4.4.1.5 of EIAR Chapter 17 Landscape (Townscape) and Visual summarises the operational phase impact on the townscape and streetscape character for Section 5 of the Proposed Scheme which runs from Woodford Walk (R113) / New Nangor Road (R134) to Long Mile Road (R110) / Naas Road (R810) / New Nangor Road (R134) junction. This Section states: "*The baseline townscape is of low / medium sensitivity and the operation of the Proposed Scheme involves modest changes along the road corridor, including at the Grand Canal and along industrial facilities on Nangor Road where permanent land acquisition will be required. The most substantial change is the provision of a new cycle and pedestrian / cycle overbridge, with ramps and steps spanning the Nangor Road / Naas Road / Long Mile Road junction. Although this will form a new detracting element, the streetscape character is composed of a large dual carriageway junction with low sensitivity.*

The operational phase will not appreciably alter the existing townscape character of this section of the Proposed Scheme but there will be localised improvements to streetscape amenity from provision of additional tree planting, most notably along New Nangor Road. The magnitude of change in the baseline environment is medium."

Section 17.4.4.1.5 goes on to state that: "*The potential townscape / streetscape and visual impact of the Operational Phase on this section is assessed to be* ***Negative, Slight / Moderate and Short-Term becoming Positive, Moderate, Long-Term****."*

iii) Proximity of the ramp to the petrol filling station operational facilities

The submission highlights that the proposed permanent land acquisition is in close proximity to the existing petroleum vent stack, the vapour recovery pipe and the offset fuel delivery points. The submission asserts that these elements are all classed as within the hazard zones, which are subject to minimum dimensions from buildings, sources of ignition and public roads / footpaths, and hence give rise to health and safety implications. Specifically in relation to the petroleum vent stack, the submissions states that this must be 4.5m above ground level to comply with regulations to guard against a lighted flame or cigarette, and that these issues appear not to have been addressed in the EIAR.

Figure 2.6.3.10 shows the location of these facilities, which are located immediately adjacent to the existing customer parking spaces with a gravel pathway between them and the parking spaces.

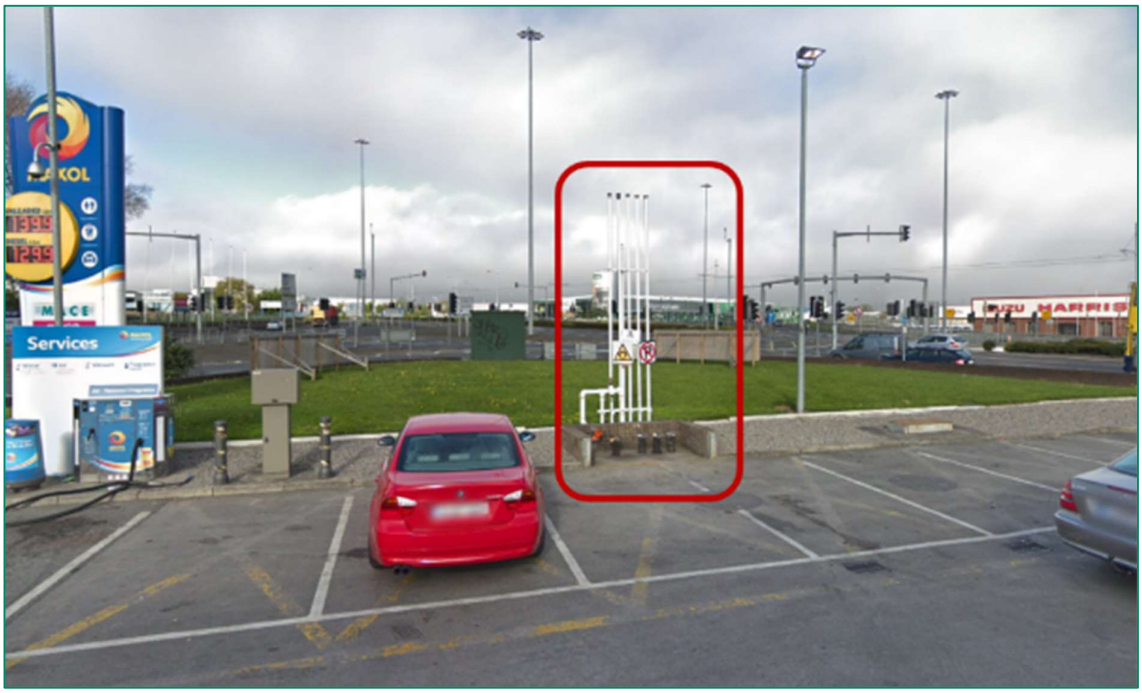


Figure 2.6.3.910 Existing Petro Filling Station Vent Stack facilities (Image Source: Google)

The proposed permanent and temporary land acquisition lines at these facilities are shown in Figure 2.6.3.11. This shows that the vent stacks and vapour recovery pipe are within the temporary land acquisition and the offset fuel delivery points are outside the proposed temporary landtake.

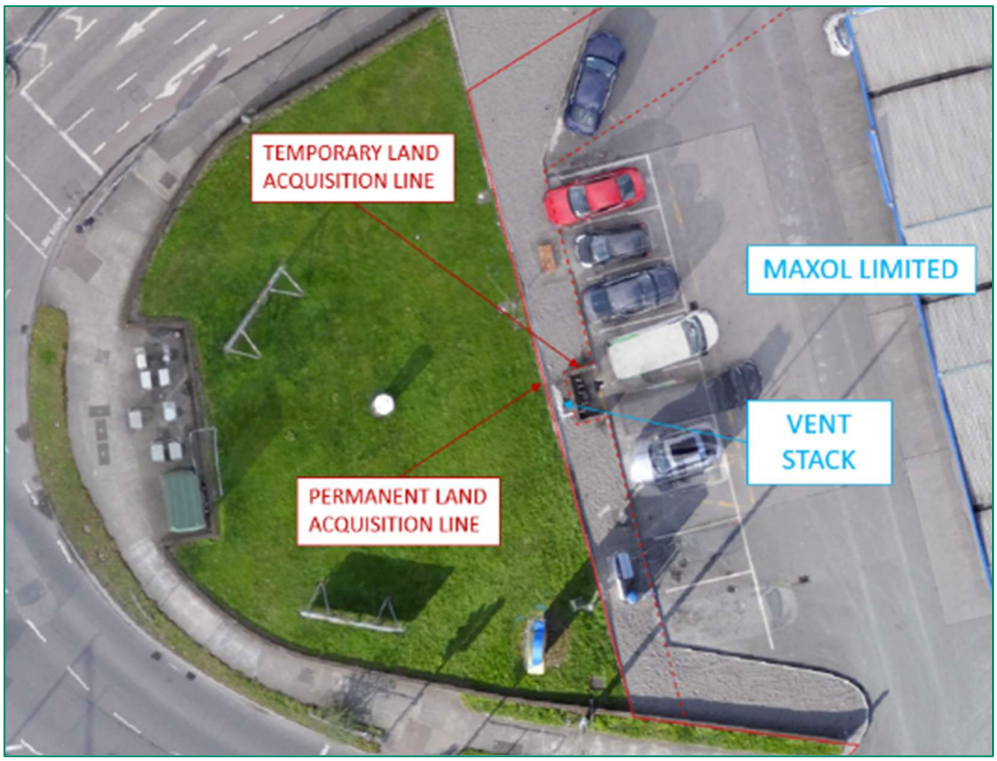


Figure 2.6.3.11 Proposed Land acquisition lines at the vent stack facilities

The Regulations to which the submission refers are believed to be S.I. No. 630 of 2019 Dangerous Substances (Flammable Liquids and Fuels Retail Stores) Regulations, 2019.

Schedule 1 of S.I. No. 630 of 2019 identifies publications for good practice for retail and kerbside retail flammable liquids and fuels stores, noting that *"As per Regulation 5(3), updated or revised versions of these guidance documents will be published periodically on the relevant websites of Local Authorities, the Appeals Authority, and the Minister."*

Schedule 1 identifies the "*Publications which all stores must adhere to as far as is reasonably practicable*" as:

- Energy Institute Design, construction, modification, maintenance and decommissioning of filling stations (known as the Blue Book).
- PELG Petrol filling stations – Guidance on managing the risks of fire and explosion (The Red Guide).

In respect of the hazardous zones classifications referred to in the Red Guide (& HSA Guidance), these are defined by BSEN 60079-10-1996 Electrical apparatus for explosive gas atmospheres. Part 10: Classification of Hazardous Areas. The zone classifications and extents are determined from a site specific risk assessment, as noted in the Health and Safety Authority guidance document "*Fire & Explosion Risks in Service Stations*".[1]

While the edge of the proposed looped ramp located in the existing green area may potentially be within the hazardous zone of the existing petroleum vent stack, the vapour recovery pipe and the offset fuel delivery points, it should be noted that the ramp starts underneath the bridge at the existing

[1] https://www.hsa.ie/eng/your_industry/flammable_liquids_and_fuels_retail_stores_-_new/information_and_guidance/fire_explosion_risks_at_service_stations.pdf

public footpath some 15m from the vent stack and has risen to a height of 2.3m above ground level at the closest point to the vent stack.

The looped ramp continues to rise and the next loop is at a height of 5.2m above ground level at the closest point to the vent stack. The vent stack will be extended vertically to maintain the necessary height above the ramp and a solid boundary wall will be provided below the section of the ramp at this location.

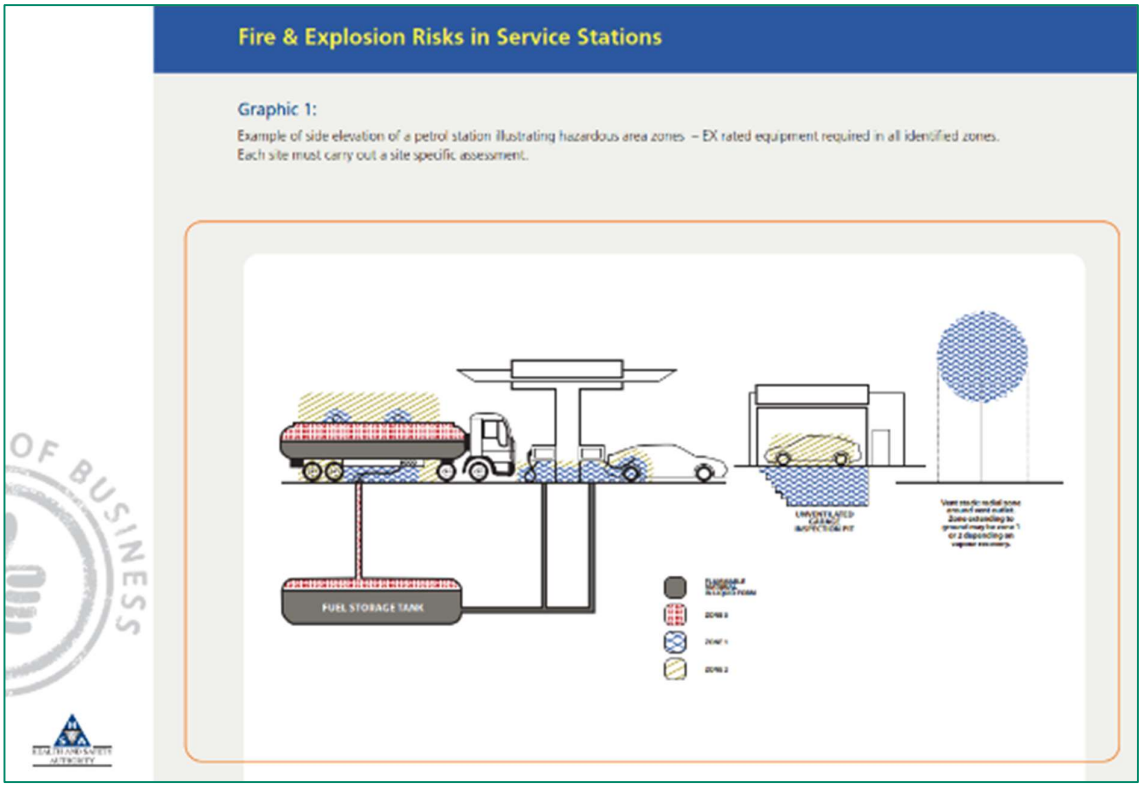


Figure 2.6.3.12 Extract from HSA Guidance Sheet "*Fire & Explosion Risks in Service Stations*"

Further details of the proposed bridge and ramps is provided in the Proposed Scheme Preliminary Design Report, Appendix J2 Preliminary Design Report for ST02 Naas Road Pedestrian/Cycle Bridge Preliminary Design Report. Section 3.3.7 of this Appendix notes that where required, a steel mesh will be attached to the vertical and horizontal bracing creating a fully enclosed superstructure. Section 4.3 of this Appendix highlights that *"All bridge spans will be fully enclosed superstructure reducing the risk of anti-social behaviour, objects being dropped onto vehicles passing beneath the bridge and users falling or jumping from the bridge deck."* This approach of attaching a steel mesh will also be applied to the end of all ramps where they meet the bridge spans, as well as the side of the ramps facing the petrol filling station. The steel mesh will be appropriately sized to guard against a lighted flame or cigarette.

The raising of the vent stack and / or locally amend the ramp parapet will have no material effect and does not change the landscape and visual assessment presented in the EIAR.

The NTA will continue liaising with the landowner following any approvals to address any further safety concerns relating to the operation of the filling stations.

iv) Clarification in respect of no land take on Naas Road

The submission believes that no changes are proposed to the Naas Road frontage of the existing petrol filling station and requests clarification of this.

The existing Naas Road frontage is shown in Figure 2.6.3.13, from which it can be seen that the nearside left turning lane includes an advisory cycle lane.



Figure 2.6.3.13 Existing Naas Road frontage (Image source: Google)

The relevant extract form the Proposed Scheme General Arrangement drawings is shown in Figure 2.6.3.14, which shows that while no changes are proposed to the general traffic lanes on the Naas Road, a segregated cycle track is proposed along this section of the route and this broadly follows the line of the existing footpath.

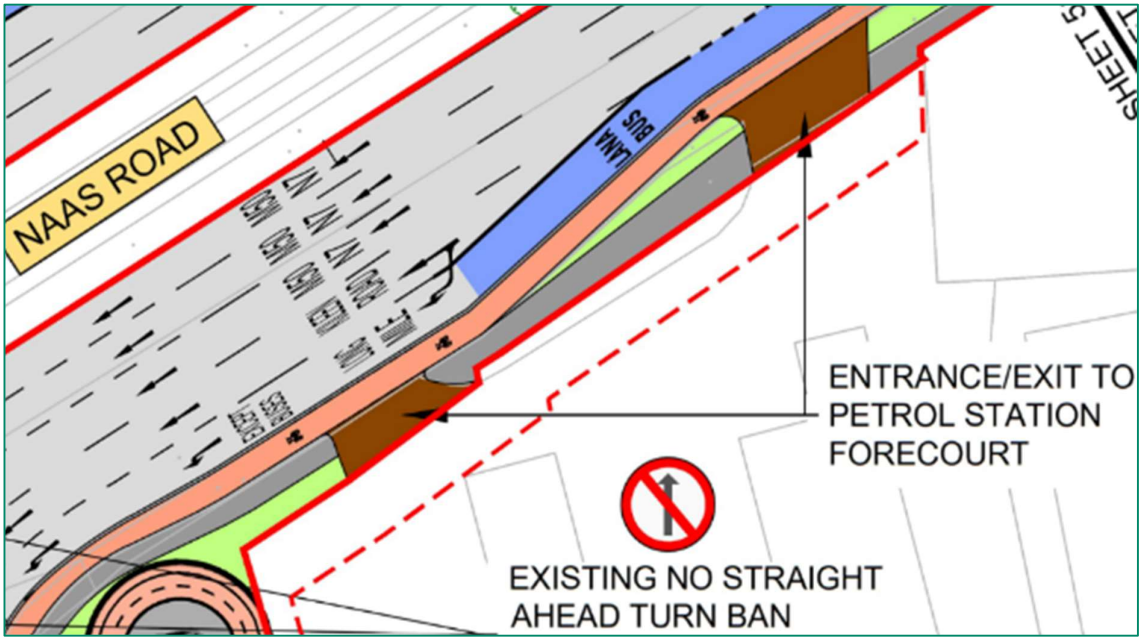


Figure 2.6.3.14 Extract from Proposed Scheme General Arrangement drawings showing proposed cycle track at Naas Road frontage (Image source: Google)

The proposed permanent and temporary land acquisition lines are shown in Figure 2.6.3.15. As can be seen some permanent land acquisition is required to provide the new footpath across the green area between the two access / egress points.



Figure 2.6.3.15 Proposed Land Acquisition lines overlain on aerial photography at Naas Road frontage

In summary, along the Naas Road frontage, strip of land is required to be permanently acquired to facilitate construction of the footpath of the Proposed Scheme, as well as to tie-in the existing petrol filling station access and egress.

The proposed works will modify the existing entry and exit points of the forecourt to the petrol filling station to facilitate tie-in. As a result of the realigned footpath, which encroaches towards the forecourt area by between 0.4m to 4.4m. This minor impact to the existing forecourt area does not affect the line of 4 parallel car parking spaces at this location. The operational ability of the forecourt remains unchanged and the arrangement of how vehicles access and egress the petrol filling station is not affected by the Proposed Scheme. Therefore, it is not envisaged that the Proposed Scheme will impact on business operations.

2.6.4 Woodies DIY

2.6.4.1 Description of the Proposed Scheme - Woodies DIY

The relevant extract from the General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.6.4.1 showing the location of Woodies DIY.

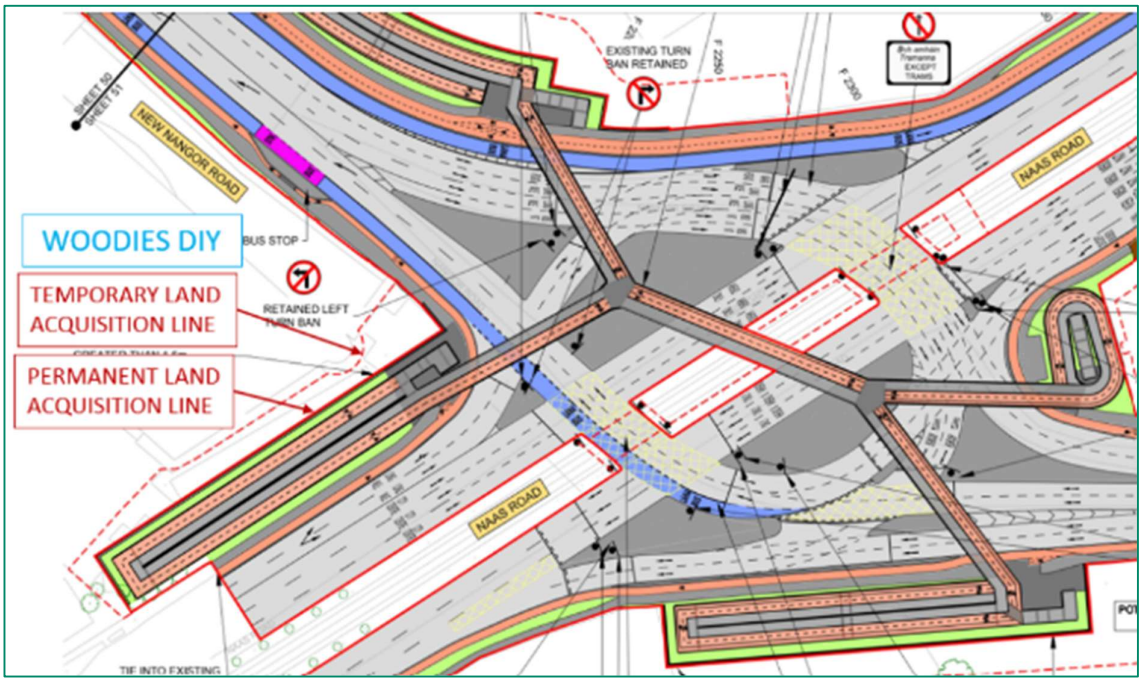


Figure 2.6.4.1: General Arrangement of Proposed Scheme at Woodies DIY (Sheet 51)

The relevant extract from the CPO Deposit Maps showing the proposed permanent and temporary land acquisition areas at the Woodies DIY is shown in Figure 2.6.4.2.

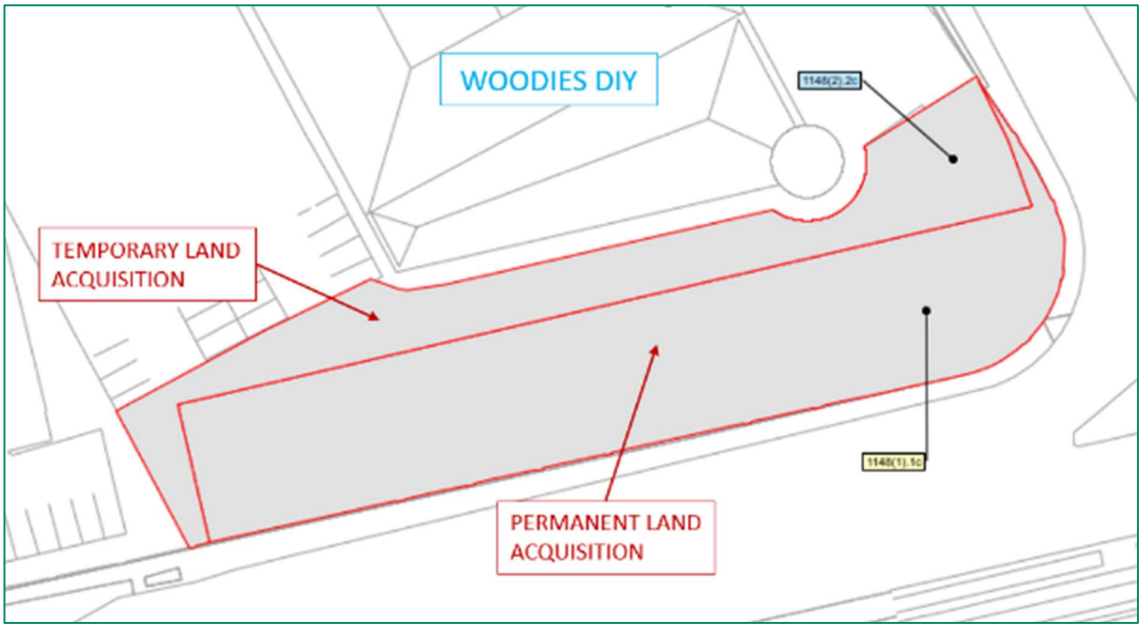


Figure 2.6.4.2: Extract from CPO Deposit Maps at Woodies DIY

The proposed permanent and temporary land acquisition lines overlain on aerial photography are shown in Figure 2.6.4.3.

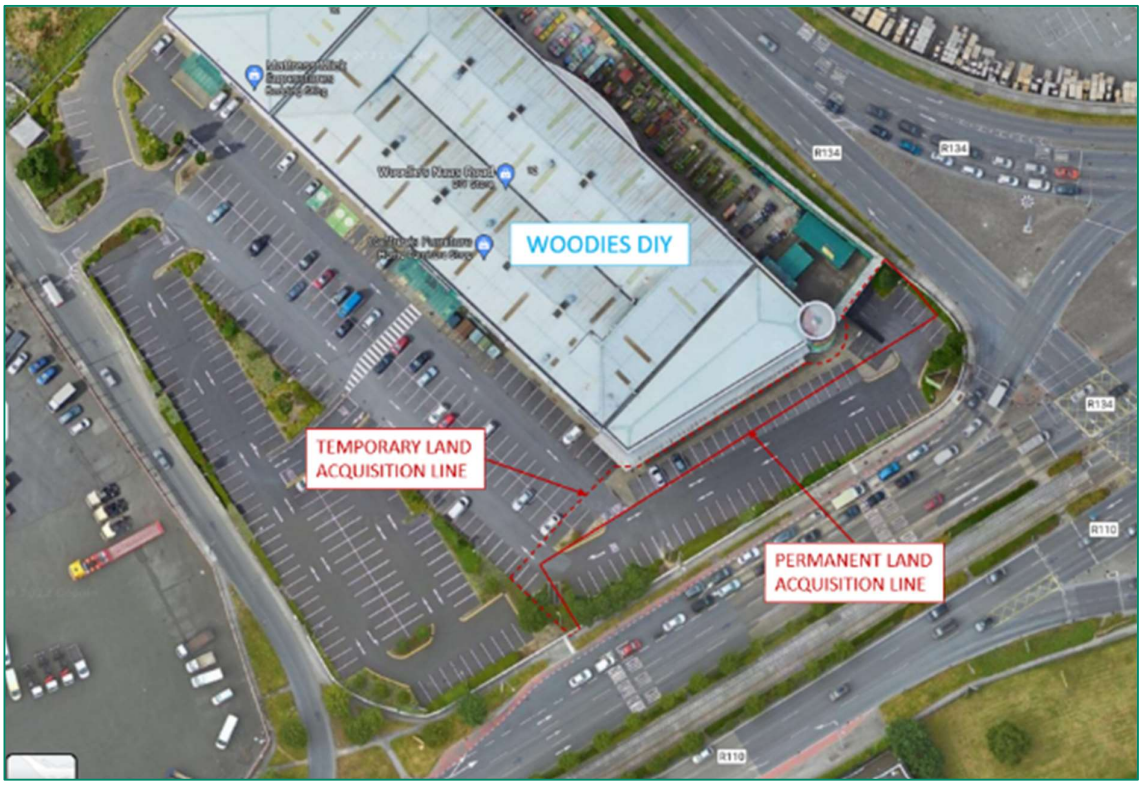


Figure 2.6.4.3: Proposed Land Acquisition lines at Woodies DIY (Image source: Google)

2.6.4.2 Summary of the Issues Raised by Woodies DIY

The issues raised by this submission were as follow:

i) The proposed pedestrian bridge ramp will impact deliveries

ii) The proposed pedestrian bridge will reduce visibility of the property

iii) There are concerns about vandalism to glazed panels, as well as a risk of litter and anti-social behaviour / damage

iv) No details provided in respect of access/egress during construction and associated timescale

v) No information provided to justify the proposed bridges

2.6.4.3 Responses to the Issues Raised by Woodies DIY

i) The proposed pedestrian bridge ramp will impact deliveries

The submission states that the proposed pedestrian bridge ramp will impact the ability to manage delivery to EZ Living, who are a sub-tenant of Woodies, at least temporarily. The submission states that that despite the issue being raised with NTA's designers only a narrow access route is provided.

As stated in Section 3.4.3 of Chapter 3 Consideration of Reasonable Alternatives, a third round of non-statutory public consultation on the draft Preferred Route Option (PRO) took place from the 4 November to 16 December 2020. The brochure for this public consultation included the draft PRO General Arrangement Drawings, included as Part 2 of the Public Consultation Report provided as part of the Supplementary Information; the relevant extract from the draft PRO General Arrangement Drawings is shown in Figure 2.6.4.4.

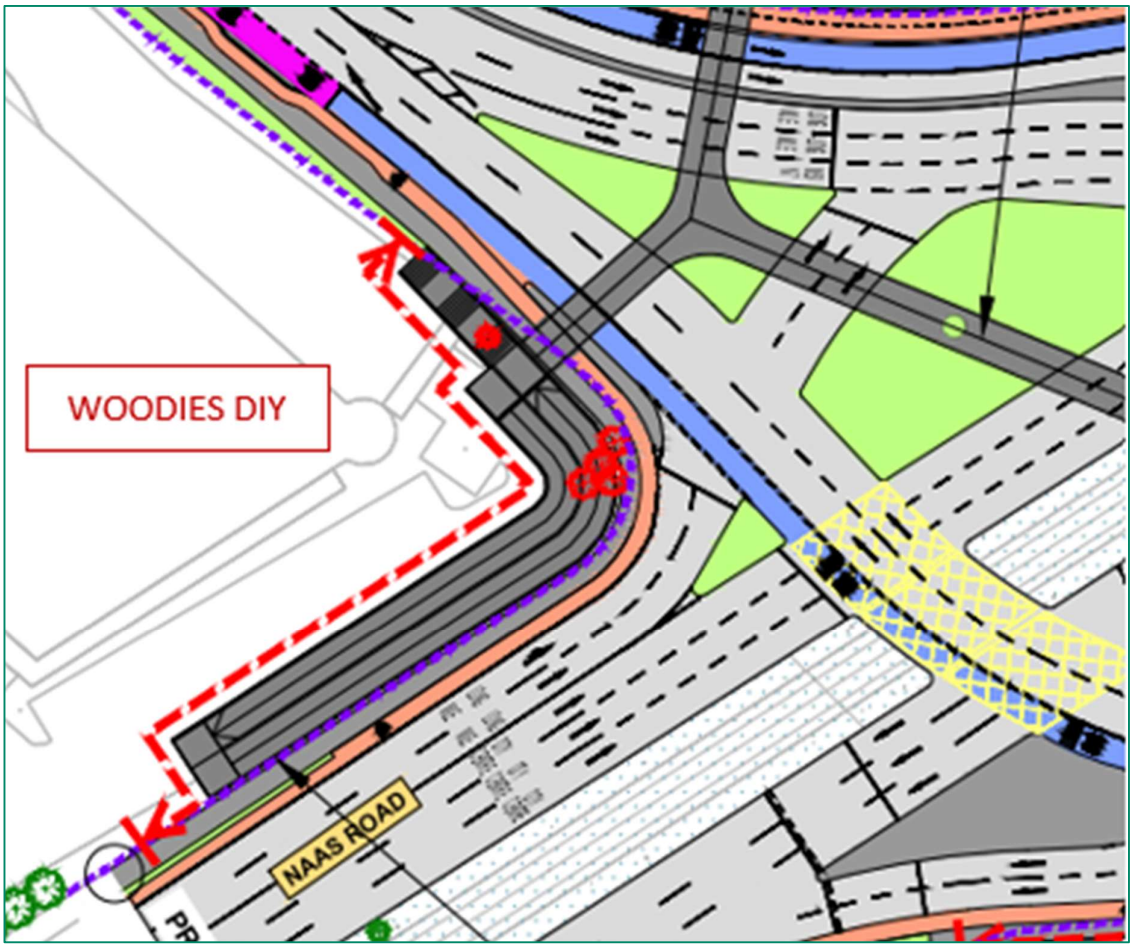


Figure 2.6.4.4: Extract from draft PRO Consultation Brochure

No submission was received from Woodies DIY in response to the public consultation on the draft PRO.

In July 2021 as part of the landowner referencing exercise, the NTA wrote to Woodies DIY seeking to confirm their landowner details. In response to this contact was established with their land agents in October 2021, at which time they raised concerns with the draft PRO layout in respect of the impact on deliveries to the south-east corner of the building. (Concerns were also raised in respect of the impact on their existing glazed structure on the north-east façade of the building; this issue is covered under item 2.6.4.3 iii) below.)

Figures 2.6.4.5 – 2.6.4.7 illustrate the existing delivery arrangements.

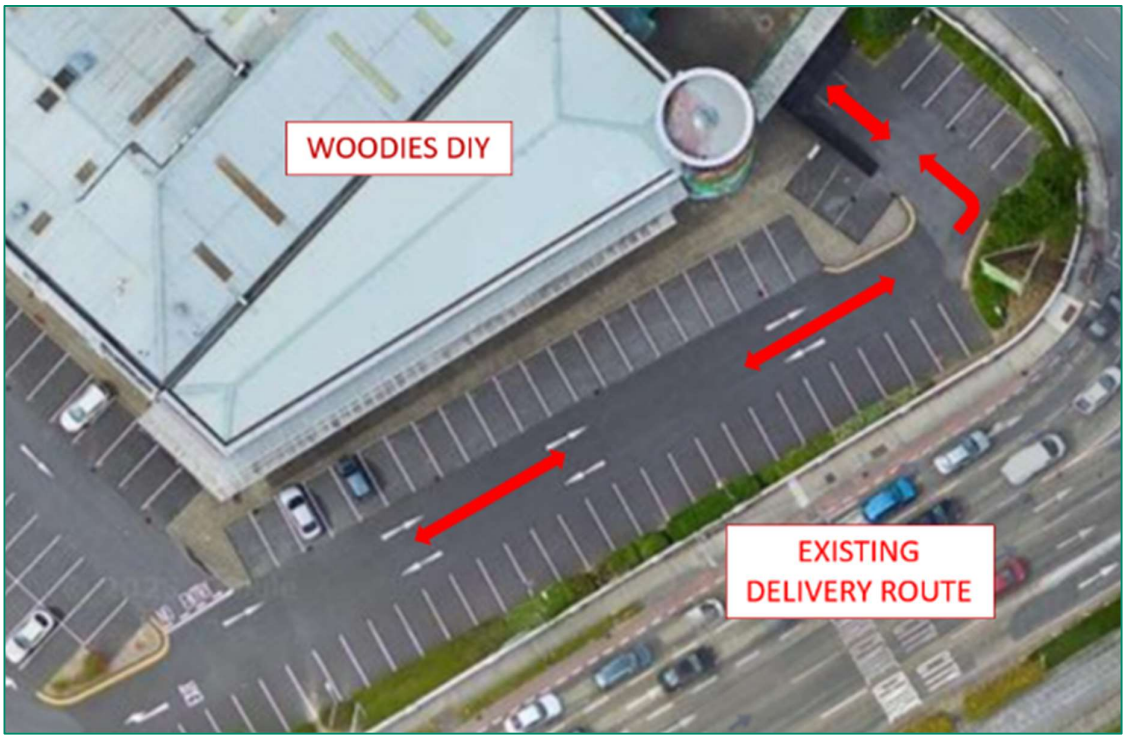


Figure 2.6.4.5: Existing delivery route (Image source: Google)



Figure 2.6.4.6: Existing delivery route (Image source: Google)



Figure 2.6.4.7: Existing delivery platform and ramp (Image source: Google)

As shown in Figure 2.6.4.7, goods are delivered on to a platform and then taken down a ramp to the delivery doors for the building.

In response to the concerns raised, on 14 February 2022 the NTA arranged a meeting with representatives for Woodies DIY to discuss the issues. To address their concerns, alternative layout options for the proposed pedestrian / cyclist ramp were considered and an alternative arrangement was developed that would allow for deliveries and avoid impact on the glazed panels.

A drawing of these proposals was issued to Woodies DIY on 21 February 2022, as shown in Figure 2.6.4.8.

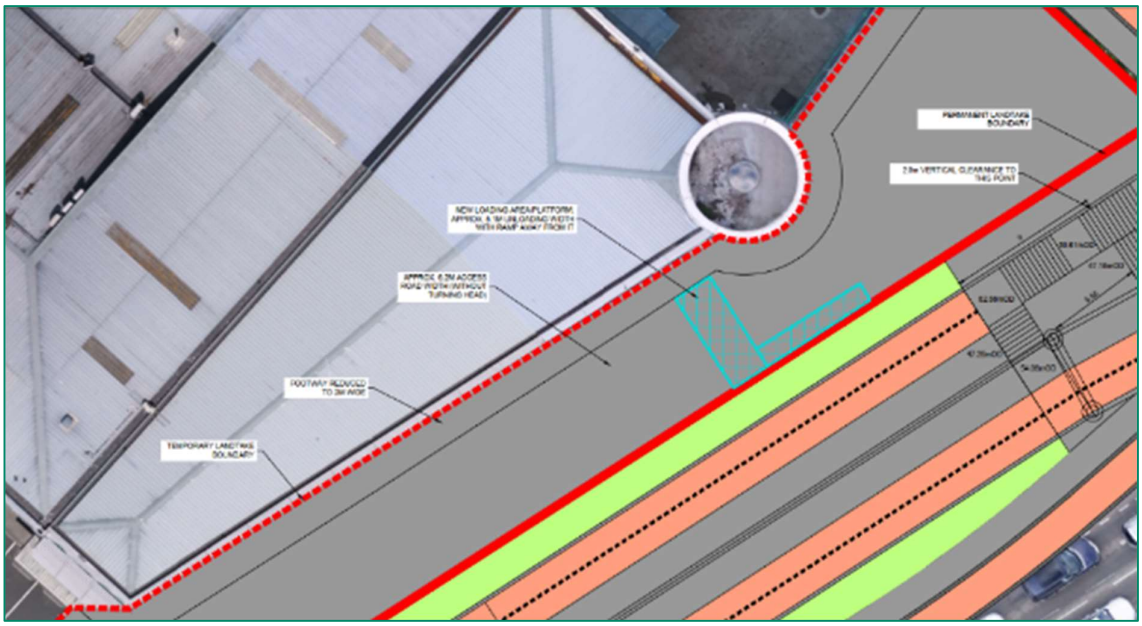


Figure 2.6.4.8: Alternative delivery proposal February 2022

Figure 2.6.4.9 provides further clarity of the alternative delivery proposals.

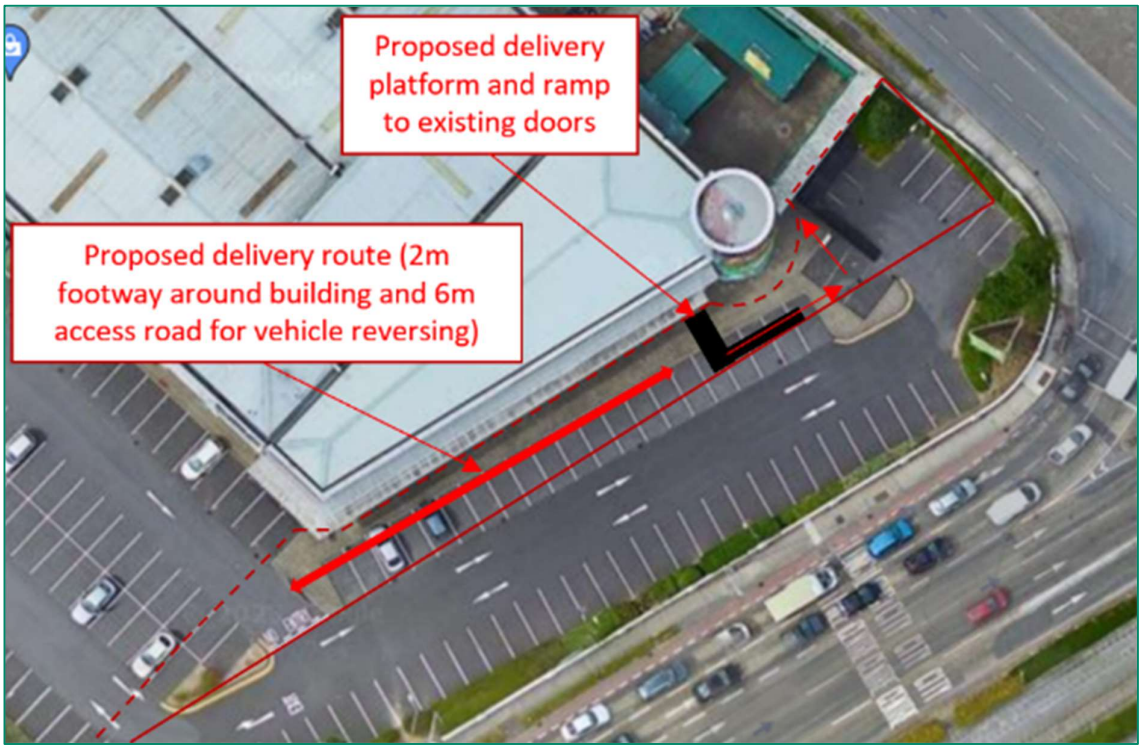


Figure 2.6.4.9: Alternative delivery proposals (Image source: Google)

On three occasions the NTA endeavoured to have a further meeting with the representatives of Woodies DIY during 2022 but did not receive any responses to these requests. The alternative ramp layout and temporary land to facilitate the revised delivery arrangement have been incorporated into the Proposed Scheme, as shown in the relevant extract from the General Arrangement drawings included in EIAT Volume 3 Part 1 of 3 as shown in Figure 2.6.4.10.

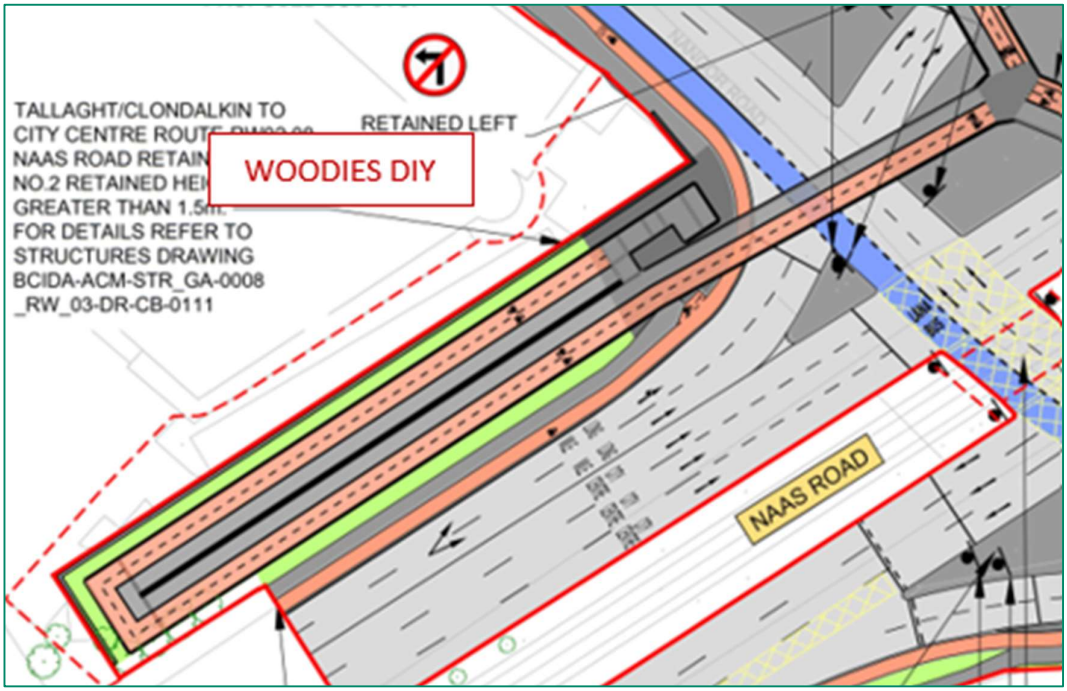


Figure 2.6.4.10: Extract from General Arrangement drawings

Deliveries during construction phase

Section 4.5.5.7.2 of EIAR Chapter 4 Proposed Scheme Description provides an overview of the retaining walls included in the Proposed Scheme. At this location retaining wall RW05 is proposed for the new boundary between Woodies DIY and the Naas Road. Table 4.34 provides the following summary of RW05, which it notes will be a reinforced concrete gravity retaining wall: *"RW05 will be located along the eastbound carriageways of New Nangor Road (R134) at its junction with the Naas Road (R810). The wall is required to retain widened fill material to accommodate the approach stairs and ramp to ST02 Naas Road Pedestrian and Cycle Bridge."*

Details of the RW05 provided in EIAR Volume 3 Figures Part 2 of 3: 18. Bridges and Major Retaining Structures. Figure 2.6.4.11 shows the relevant extract from these drawings.

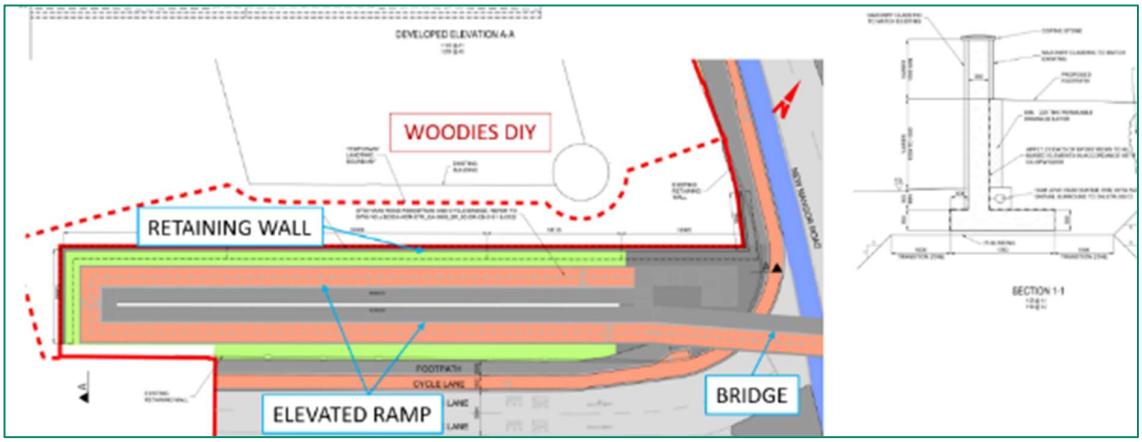


Figure 2.6.4.11 Extract of Bridges and Major Retaining Structures Drawings – RW05

Section 5.5.4.2.5 of EIAR Chapter 5 Construction provides further details of the wall and the construction methodology, noting that the wall will be approximately 113m in length with a maximum retained height of approximately 1.5m. This retaining wall will partially replace the existing retaining wall currently located along the north side of Naas Road.

Section 5.5.4.2.5 goes on to describe the construction methodology as follows: *"Once the existing retaining wall has been demolished, the ground will be stripped to formation level and existing services will be diverted as required to enable the wall construction. The proposed new retaining wall will be constructed in reinforced concrete. Blinding will be installed at formation level, then formwork and reinforcing steel for the wall will be fixed in place. Concrete will then be poured in sections and formwork removed after initial curing of the concrete has taken place. After a sufficient curing period, the area behind the retaining wall will be backfilled before the coping stone and a boundary fence is fitted to the top of the wall. Masonry cladding similar to that on the existing wall, will be added to the new wall. Reinstatement of adjacent areas will then be completed, including pavement, footway and cycleway surfacing construction activities.*

Access to the works area will be primarily from the verge areas along Naas Road. Temporary land take will be required from the adjacent property to facilitate construction.

Once the new wall has been constructed, construction of the ramps and stairs required for the Naas Road Pedestrian and Cycle Bridge (Structure Reference: ST-02) at this location, can commence."

It is anticipated that the proposed amendments to the existing car park, the delivery platform and the delivery ramps will be undertaken prior to works commencing on retaining wall RW05 to ensure that access/egress for deliveries will be maintained. These works will be undertaken within the area of temporary land acquisition. As described in Section 5.5.4.2.5, for the construction of RW05 access to the works area will be primarily from the verge areas along Naas Road. The width of temporary land take required to facilitate construction of the wall at this location will only need to be a narrow strip to allow workers to access the northern face of the wall, leaving adequate space for delivery vehicles to reverse to the relocated delivery platform.

As noted in Section 5.5.3.2 of EIAR Chapter 5 arrangements will be made on a case-by-case basis to maintain continued access to businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with business owners prior to construction starting in the area. The duration of the works will vary from property to property, but access and egress will be maintained at all times.

It is considered that the Proposed Scheme adequately addresses the concerns raised and will allow the delivery of goods to the same doors in the building to be maintained both during the operational and construction phases.

ii) Concern that the proposed pedestrian bridge will reduce visibility of the property

The submission is concerned that the proposed pedestrian bridge will reduce visibility of the Woodies and EZ Living buildings and believes that the drawings do not accurately inform the blocking of the east elevation view, affecting profile and detrimental impact on streetscape and visual impact.

Section 17.4.4.1.5 of EIAR Chapter 17 Landscape (Townscape) and Visual summarises the operational phase impact on the townscape and streetscape character for Section 5 of the Proposed Scheme which runs from Woodford Walk (R113) / New Nangor Road (R134) to Long Mile Road (R110) / Naas Road (R810) / New Nangor Road (R134) junction.

Section17.4.4.1.5 states: "*The baseline townscape is of low / medium sensitivity and the operation of the Proposed Scheme involves modest changes along the road corridor, including at the Grand Canal and along industrial facilities on Nangor Road where permanent land acquisition will be required. The most substantial change is the provision of a new cycle and pedestrian / cycle overbridge, with ramps and steps spanning the Nangor Road / Naas Road / Long Mile Road junction. Although this will form a new detracting element, the streetscape character is composed of a large dual carriageway junction with low sensitivity.*

The operational phase will not appreciably alter the existing townscape character of this section of the Proposed Scheme but there will be localised improvements to streetscape amenity from provision of additional tree planting, most notably along New Nangor Road. The magnitude of change in the baseline environment is medium."

Section 17.4.4.1.5 goes on to state that: "*The potential townscape / streetscape and visual impact of the Operational Phase on this section is assessed to be* ***Negative, Slight / Moderate and Short-Term becoming Positive, Moderate, Long-Term****."*

Figures 2.6.4.12 provides an extract of EIAR Figure 17.2 included in Volume 3 Part 3 of 3 showing the existing view of the Woodies DIY building from the westbound carriageway of the Naas Road.

The area is heavily trafficked and the streetscape includes significant visual clutter associated with the scale of the road infrastructure and the LUAS line in the centre of Naas Road. None the less, the Woodies DIY building is a visually prominent structure.

Figure 2.6.4.13 provides an extract of EIAR Figure 17.2 included in Volume 3 Part 3 of 3 showing the proposed view of the Woodies DIY building from same location on the westbound carriageway of the Naas Road.

While the proposed bridge and associated ramps are visually prominent, the Woodies DIY building remains visible.



Figure 2.6.4.12: Extract from EIAR Figure 17.2: Naas Road View 04: As existing



Figure 2.6.4.13: Extract from EIAR Figure 17.2: Naas Road View 04: As proposed

In summary, the area is considered to be of low landscape and visual significance and sensitivity. The existing Woodies DIY building is visually prominent in views. The proposed elevated bridge is a significant structure and it will also be a visually prominent feature at this junction location. However, given the existing context the proposed bridge will not result in an adverse townscape or visual impact on the area, and it will not significant affect the visibility of the Woodies DIY building.

iii) Concerns about vandalism to glazed panels

The submission expressed concerns around/damage to the large glazed panels on the north-east façade, and to the stores in general, arising from the elevated position of the proposed footbridge, asserting that no solution has been forthcoming.

As stated in Section 3.4.3 of Chapter 3 Consideration of Reasonable Alternatives, a third round of non-statutory public consultation on the draft Preferred Route Option (PRO) took place from the 4 November to 16 December 2020. The brochure for this public consultation included the draft PRO General Arrangement Drawings, included as Part 2 of the Public Consultation Report provided as part of the Supplementary Information; the relevant extract from the draft PRO General Arrangement Drawings is shown in Figure 2.6.4.14.

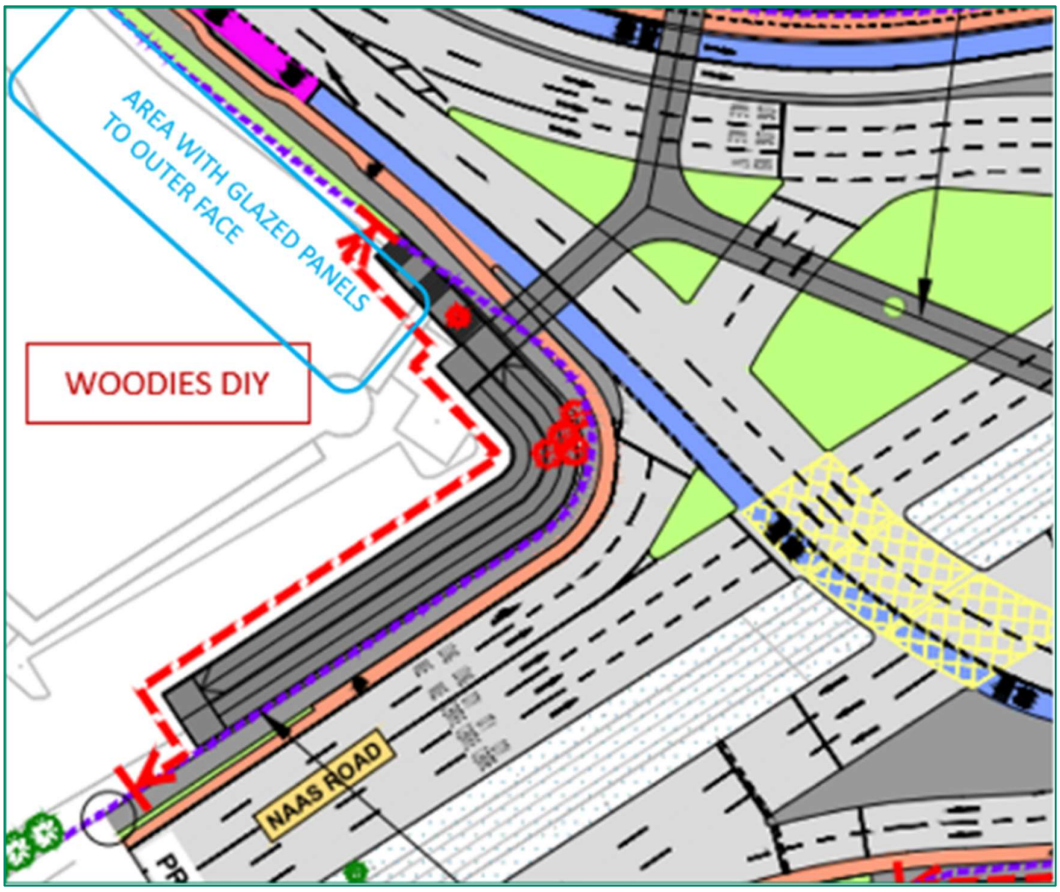


Figure 2.6.4.14: Extract from draft PRO Consultation Brochure showing location of the glazed panels

No submission was received from Woodies DIY in response to the public consultation on the draft PRO.

In July 2021 as part of the landowner referencing exercise, the NTA wrote to Woodies DIY seeking to confirm their landowner details. In response to this contact was established with their land agents in October 2021, at which time they raised concerns with the draft PRO layout in respect of the impact on their existing glazed structure on the north-east façade of the building. (Concerns were also raised in respect of the impact on deliveries to the south-east corner of the building; this issue is covered under item 2.9.3 i) above.)

In response to the concerns raised, on 14 February 2022 the NTA arranged a meeting with representatives for Woodies DIY to discuss the issues. To address their concerns, alternative layout options for the proposed pedestrian / cyclist ramp were considered and an alternative arrangement was developed that would avoid impact on the glazed panels and allow for deliveries.

The NTA endeavoured to have a further meeting with the representatives of Woodies DIY during 2022 but did not receive any responses to these requests. The alternative ramp layout and temporary land to avoid any direct impact on the glazed panels have been incorporated into the Proposed Scheme, as shown in the relevant extract from the General Arrangement drawings included in EIAT Volume 3 Part 1 of 3 as shown in Figure 2.6.4.15.

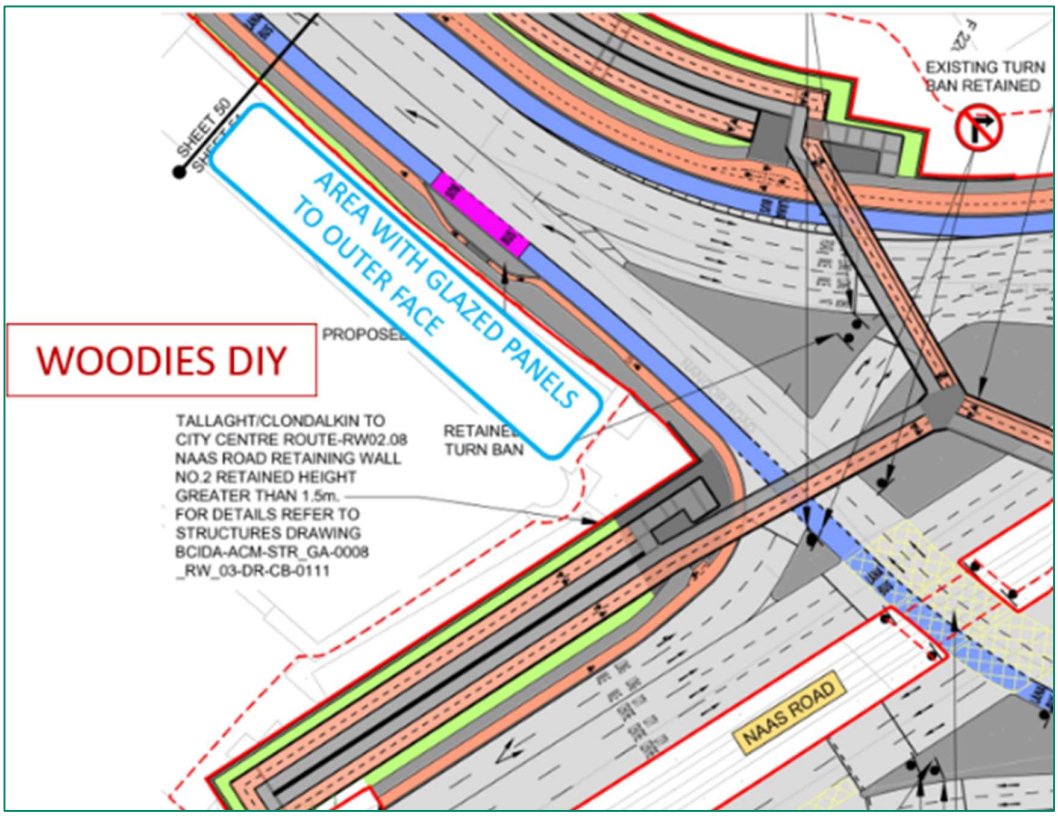


Figure 2.6.4.15: Extract from General Arrangement drawings showing area with glazed panels avoided

The location of the area with glazed panels is shown in Figure 2.6.4.16, which shows that the land acquisition (both permanent and temporary) avoids them.



Figure 2.6.4.16 Location of glazed panels at Woodies DIY (Image source: Google)

Figure 2.6.4.17 shows the view of Woodies DIY from the New Nangor Road with the glazed panels highlighted.



Figure 2.6.4.17 Location of glazed panels at Woodies DIY (Image source: Google)

Details of the proposed bridge and ramps are provided in EIAR Volume 3 Figures Part 2 of 3: 18. Bridges and Major Retaining Structures. Figure 2.6.4.18 shows the relevant extract from these drawings.

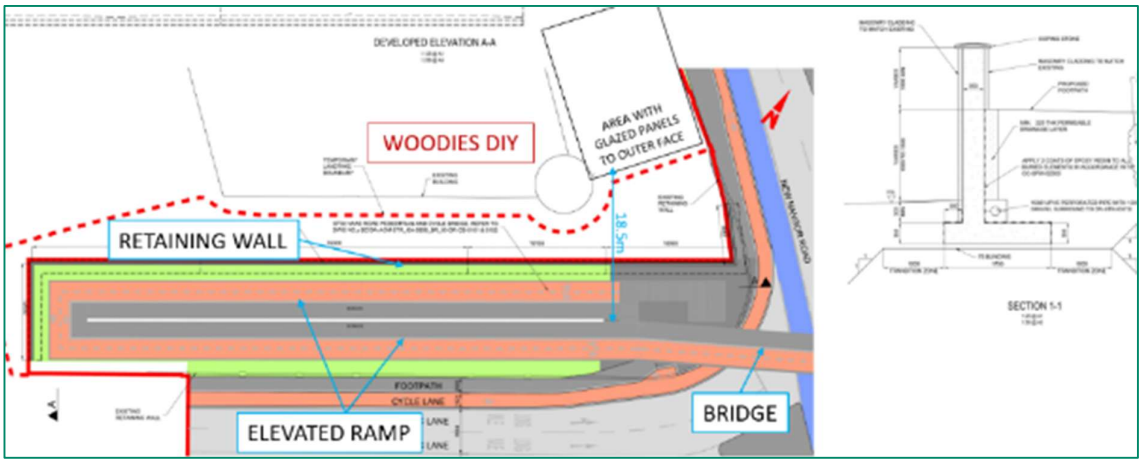


Figure 2.6.4.18 Extract of Bridges and Major Retaining Structures Drawings with key features annotated

As shown in Figure 2.6.4.18, a retaining wall (Reference RW05) is proposed along the new boundary which will replicate the existing boundary treatment along the Naas Road. The ramp is proposed to commence at existing ground level at the point closest to the glazed panels and increases in height westwards before u-turning and increasing in height to meet the proposed bridge across the adjacent road junction. At the commencement of the bridge the ramp will be approximately 18.5m from the edge of the glazed panels.

Further details of the proposed bridge and ramps is provided in the Proposed Scheme Preliminary Design Report, Appendix J2 Preliminary Design Report for ST02 Naas Road Pedestrian/Cycle Bridge Preliminary Design Report. Section 3.3.7 of this Appendix notes that where required, a steel mesh will be attached to the vertical and horizontal bracing creating a fully enclosed superstructure. Section 4.3 highlights that *"All bridge spans will be fully enclosed superstructure reducing the risk of anti-social behaviour, objects being dropped onto vehicles passing beneath the bridge and users falling or jumping from the bridge deck."* It is envisaged that this approach will also be applied to the ends of all the ramps where they meet the bridges, including at this specific location.

It is considered that the Proposed Scheme adequately addresses the concerns raised and will prevent any damage to the large glazed panels on the north-east façade, and to the stores in general, arising from any anti-social behaviour associated with the elevated position of the proposed footbridge.

iv) No details provided in respect of access/egress during construction and associated timescale

The submission raised concerns about a lack of details of how the works will be carried out in respect of access/egress, traffic management during the works and timescale of the works.

The temporary land acquisition is required to allow construction of the revised arrangements on the land to be retained by Woodies DIY.

Within EIAR Volume 2 Chapter 5 Construction, Section 5.5.3 sets out that the Proposed Scheme *"will be constructed in a manner which will minimise, as much as practicable, any disturbance to residents, businesses, and road users."*

In respect of the construction impact on parking and access, Section 5.5.3.2 sets out that "*When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with residents and business owners prior to construction starting in the area. The duration of the works will vary from property to property, but access and egress will be maintained at all times."*

Section 5.5.3.2 goes on to state that *"Access will be maintained for emergency vehicles along the Proposed Scheme, throughout the Construction Phase."*

In summary the extent of the temporary land is necessary to complete the construction works at this location.

Section 5.3.5.2 of EIAR Chapter 5 Construction describes the proposed construction works for the various elements of the Proposed Scheme at Section 5b: Naas Road / Long Mile Road Junction as follows: *"Section 5b encompasses the existing Naas Road / Long Mile Road traffic signalised roundabout junction. The construction activities at Section 5b will comprise pavement reconstruction and resurfacing of the roads, footways, and cycle tracks, and new kerbs. A new pedestrian and cycle bridge will be constructed at this location, providing pedestrian and cycle connectivity between the New Nangor Road, Naas Road and Long Mile Road. (Structure Reference: ST02). The structure will be made up of a central single span and four connected arterial structures that span each corner of the roundabout junction. Access ramps and stairs will be provided at the end supports of each of the four arterial structures. Further information on the construction methodology is provided in Section 5.5.4.1.2. A new retaining wall structure will be constructed along the northern side of New Nangor Road, to the rear of the ramp structure associated with the new pedestrian and cycle overbridge (Structure Reference: RW04). Further information on the construction methodology is provided in Section 5.5.4.2.4. Another new retaining wall will be constructed along the northern side of Naas Road, to the rear of the ramp structure associated with the new pedestrian and cycle overbridge (Structure Reference: RW05). Further information on the construction methodology is provided in Section 5.5.4.2.5. A low height retaining wall will be constructed to the rear of the ramp structure associated with the new pedestrian and cycle overbridge between the Long Mile Road and Naas Road. Construction activities will also consist of the installation of additional signage, new road markings, new and amended traffic signal infrastructure and new road lighting. Some trees will be removed from the verge areas to facilitate construction of the bridge ramps and stairs. Construction Compound TC13 will be located along the Long Mile Road, south of the New Nangor Road / Naas Road / Long Mile Road junction and is expected to be used primarily for the construction of the new pedestrian and cycle bridges. Various utility diversions and / or protections will be required; including gas mains and telecommunications infrastructure. The expected construction duration will be approximately nine months."*

Section 5.5.4.1.2 of Chapter 5 provides the following details of the construction of the Naas Road Pedestrian and Cycle Bridge: *"The Naas Road Pedestrian and Cycle bridge will carry pedestrians and cyclists between the New Nangor Road, Naas Road, and the Long Mile Road. The bridge structure will have five separate spans consisting of a fully through Warren Truss structure. The bridge is formed of a 55.5m long central span over the Naas Road and the Luas Red Line, and four arterial spans (ranging from approximately 42m to 46m) spanning the outer corners of the junction. The width of the new pedestrian/cycle bridges on the arterial spans will be 4.65m wide, providing a 2.65m segregated cycle track and 2m pedestrian footway. The width of the central span will be 5.65m wide, providing a 3.15m segregated cycle track and 2.5m pedestrian footway. A minimum internal vertical clearance of 2.7m will be provided along the length of the bridges. A minimum vertical clearance of 5.7m will be provided between the carriageway below and the underside of the bridge. The steel deck will be finished with an anti-skid surfacing.*

The central span of the bridge has been designed as single span over the main carriageways of the Naas Road and the Luas Red Line. The arterial bridge spans crossing the other approach roads, have also been designed as single spans to each corner of the junction. The central bridge span will be supported on two braced steel central supports, located on the central island of the junction. The ends of the four arterial bridge spans will also be supported on the central supports and on new braced steel end supports. The braced steel supports will be constructed on reinforced concrete rotary bored piled foundations. Painted steel ramp structures and stairs will be provided at each corner of the bridge to facilitate pedestrian and cyclist access over the bridges. The ramp structures will vary in length from approximately 119m to 150m.

Access to the works area will be primarily from the verge areas on New Nangor Road, Naas Road, the Long Mile Road and the central island of the roundabout junction. The ground surface will be prepared, and ground excavated to facilitate the construction of the foundations. The concrete foundations will be poured and allowed to cure. The braced steel supports will be prefabricated off site, before being delivered to site and lifted into place by mobile cranes. The braced steel supports will be erected first before the Warren Truss structures are assembled and lifted into place. The ramps and stairs will then be installed. Reinstatement of adjacent areas will then be completed.

Two new retaining walls adjacent to the southbound carriageway on the New Nangor Road (Structure Reference: RW04) and adjacent to the eastbound carriageway on Naas Road (Structure Reference: RW05) will be constructed in advance of the ramps and stairs being installed for the Naas Road Pedestrian and Cycle Bridge (Structure Reference: 02). Refer to Section 5.5.4.2.4 and Section 5.5.4.2.5 for more details."

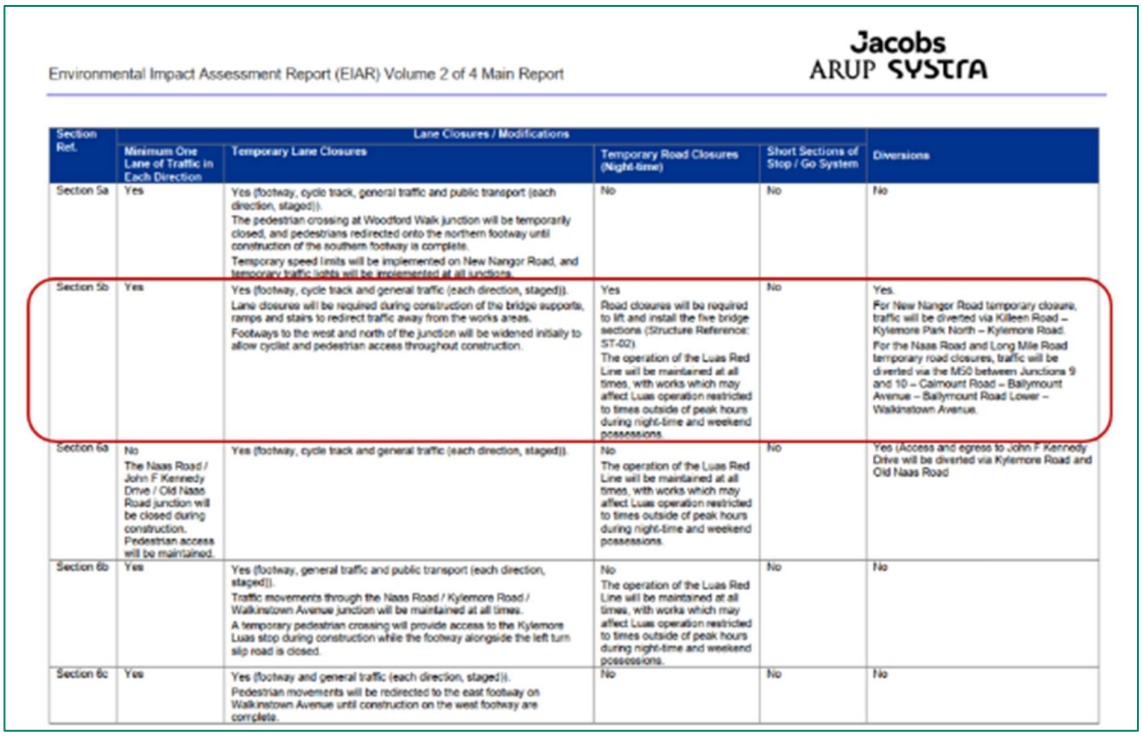
Section 5.5.4.2.5 provides the following details in respect of the proposed retaining wall RW05 adjacent to Woodies DIY: *"A new retaining wall is required along the eastbound carriageway on the Naas Road at the junction with New Nangor Road. The wall is required to retain widened fill material to accommodate the approach stairs and ramp to the Naas Road Pedestrian and Cycle Bridge (Structure Reference: ST-02). The wall will be approximately 113m in length with a maximum retained height of approximately 1.5m. This retaining wall will partially replace the existing retaining wall currently located along the north side of Naas Road.*

Once the existing retaining wall has been demolished, the ground will be stripped to formation level and existing services will be diverted as required to enable the wall construction. The proposed new retaining wall will be constructed in reinforced concrete. Blinding will be installed at formation level, then formwork and reinforcing steel for the wall will be fixed in place. Concrete will then be poured in sections and formwork removed after initial curing of the concrete has taken place. After a sufficient curing period, the area behind the retaining wall will be backfilled before the coping stone and a boundary fence is fitted to the top of the wall. Masonry cladding similar to that on the existing wall, will be added to the new wall. Reinstatement of adjacent areas will then be completed, including pavement, footway and cycleway surfacing construction activities.

Access to the works area will be primarily from the verge areas along Naas Road. Temporary land take will be required from the adjacent property to facilitate construction.

Once the new wall has been constructed, construction of the ramps and stairs required for the Naas Road Pedestrian and Cycle Bridge (Structure Reference: ST-02) at this location, can commence."

Construction Traffic Management for pedestrians and cyclists, public transport, and general traffic is described in Section 5.8 of EIAR Chapter 5. Table 5.8 details the anticipated lane closures / modifications, road closures and diversions for each sub-section of the Proposed Scheme, as shown in Figure 2.6.4.19.



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Jacobs ARUP SYSTRA

Section Ref.	Lane Closures / Modifications				
	Minimum One Lane of Traffic in Each Direction	Temporary Lane Closures	Temporary Road Closures (Night-time)	Short Sections of Stop / Go System	Diversions
Section 5a	Yes	Yes (footway, cycle track, general traffic and public transport (each direction, staged)). The pedestrian crossing at Woodford Walk junction will be temporarily closed, and pedestrians redirected onto the northern footway until construction of the southern footway is complete. Temporary speed limits will be implemented on New Nangor Road, and temporary traffic lights will be implemented at all junctions.	No	No	No
Section 5b	Yes	Yes (footway, cycle track and general traffic (each direction, staged)). Lane closures will be required during construction of the bridge supports, ramps and stairs to redirect traffic away from the works areas. Footways to the west and north of the junction will be widened initially to allow cyclist and pedestrian access throughout construction.	Yes Road closures will be required to lift and install the five bridge sections (Structure Reference: ST-02). The operation of the Luas Red Line will be maintained at all times, with works which may affect Luas operation restricted to times outside of peak hours during night-time and weekend possessions.	No	Yes. For New Nangor Road temporary closure, traffic will be diverted via Killeen Road – Kylemore Park North – Kylemore Road. For the Naas Road and Long Mile Road temporary road closures, traffic will be diverted via the M50 between Junctions 9 and 10 – Calmount Road – Ballymount Avenue – Ballymount Road Lower – Walkinstown Avenue.
Section 6a	No The Naas Road / John F Kennedy Drive / Old Naas Road junction will be closed during construction. Pedestrian access will be maintained.	Yes (footway, cycle track and general traffic (each direction, staged)).	No The operation of the Luas Red Line will be maintained at all times, with works which may affect Luas operation restricted to times outside of peak hours during night-time and weekend possessions.	No	Yes (Access and egress to John F Kennedy Drive will be diverted via Kylemore Road and Old Naas Road
Section 6b	Yes	Yes (footway, general traffic and public transport (each direction, staged)). Traffic movements through the Naas Road / Kylemore Road / Walkinstown Avenue junction will be maintained at all times. A temporary pedestrian crossing will provide access to the Kylemore Luas stop during construction while the footway alongside the left turn slip road is closed.	No The operation of the Luas Red Line will be maintained at all times, with works which may affect Luas operation restricted to times outside of peak hours during night-time and weekend possessions.	No	No
Section 6c	Yes	Yes (footway and general traffic (each direction, staged)). Pedestrian movements will be redirected to the east footway on Walkinstown Avenue until construction on the west footway are complete.	No	No	No

Figure 2.6.4.19: Extract from EIAR Table 5.8 Lane Closures / Modifications, Road Closures and Diversions

In addition, the Construction Environmental Management Plan for the Proposed Scheme is included as Appendix A5.1 of EIAR Volume 4 Appendices Part 1 of 4. Section 5.2 of Appendix A5.1 is the Construction Traffic Management Plan and demonstrates the manner in which the interface between the public and construction-related traffic will be managed and how vehicular movement will be controlled.

Section 5.2.2.3 of Appendix A5.1 describes the temporary traffic management designs and notes that if *"An Bord Pleanála decides to grant approval for the Proposed Scheme, Temporary Traffic Management designs (drawings and method statements) will be prepared by the appointed contractor in compliance with the former Department of Transport, Tourism and Sport (DTTAS) (now the Department of Transport) Traffic Signs Manual, Chapter 8, Temporary Traffic Measures and Signs for Roadworks (hereafter referred to as the Traffic Signs Manual) (DTTAS 2019), to facilitate the safe and efficient construction of the Proposed Scheme."*

Table 5.4 of Appendix A5.1 provides details of the anticipated traffic management provisions, as shown in Figure 2.6.4.20.

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Appendices

Jacobs ARUP SYSTRA

Section No.	Estimated Construction Duration	Traffic Management Provisions
Section 4c	2 months	• One lane maintained in each direction with phased lane as required. Access for residents and businesses maintained throughout construction
Section 4d	4 months	• One lane maintained in each direction with phased lane as required. Access for residents and businesses maintained throughout construction
Section 4e	2 months	• One lane maintained in each direction with phased lane as required.
Section 5a	3 months	• One lane maintained in each direction with phased lane as required. • Pedestrian crossing at Woodford Walk junction will be temporarily closed, and pedestrians redirected onto the northern footway until construction of the southern footway is complete
Section 5b	9 months	• One lane maintained in each direction with phased lane as required. • Temporary nighttime closures will be required on New Nangor Road, Naas Road and Long Mile Road to lift and install the five bridge sections with diversion in place. • Operation of Luas Red Line will be maintained at all times, with works which may affect Luas operation restricted to times outside of peak hours during night-time and weekend possessions.
Section 6a	1 month	• Naas Road / John F Kennedy Drive / Old Naas Road junction will be closed during construction with pedestrian access maintained. Temporary diversion will be in place. • The operation of the Luas Red Line will be maintained at all times, with works which may affect Luas operation restricted to times outside of peak hours during night-time and weekend possessions.
Section 6b	2 months	• One lane maintained in each direction with phased lane as required. • A temporary pedestrian crossing will provide access to the Kylemore Luas stop during construction while the footway alongside the left turn slip road is closed. • The operation of the Luas Red Line will be maintained at all times, with works which may affect Luas operation restricted to times outside of peak hours during night-time and weekend possessions.
Section 6c	1 month	• One lane maintained in each direction with phased lane closures in place as required.
Section 6d	1.5 months	• One lane maintained in each direction with phased lane closures in place as required.
Section 6e	3 months	• One lane maintained in each direction with phased lane closures in place as required.

Figure 2.6.4.20: Extract from EIAR Appendix A5.1 Table 5.4 Anticipated Traffic Management Provisions

In respect of how the property and all businesses in the area will continue to function during construction, Section 5.2.3.1 of Appendix A5.1 states that "*When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with homes and businesses prior to construction starting in the area.*"

Section 5.2.2.4 of Appendix A5.1 describes the envisaged construction traffic generation and estimates the peak daily number of lorry movements for each sub-section of the Proposed Scheme. This information has then been used in the assessment of the temporary traffic impacts that construction will have, which is set out in Section 6.4.5 of EIAR Volume 2 Chapter 6 Traffic and Transport.

Section 6.4.5.3 sets out that *"Access to and egress from the construction compounds is permitted via dedicated construction vehicles routes. The haulage of material on site is anticipated to be minimal. There will however be the removal of excavated material and the delivery of construction materials to site. It is anticipated that the exporting and delivery of materials will be executed as efficiently as possible using dedicated Construction Access Routes. Construction vehicles will be directed to access work sections via the Proposed Scheme and dedicated routes on the National and Regional Road Network where practicable, to minimise use of the local road network."*

Section 6.4.5.4 provides details of the predicted construction impact on pedestrians, cyclists, public transport, parking and loading, and general traffic. It states that for "*construction activities on or adjacent public roads, all works will be undertaken in accordance with Department of Transport's 'Traffic Signs Manual, Chapter 8 Temporary Traffic Measures and Signs for Roadworks' and*

associated guidance. Chapter 5 (Construction) contains temporary traffic management proposals for the Proposed Scheme. These proposals maintain safe distance between road users and road workers, depending on the type of construction activities taking place and existing site constraints. Temporary diversions, and in some instances temporary road closures, may be required where a safe distance cannot be maintained to undertake works necessary to complete the Proposed Scheme. All road closures and diversions will be determined by the NTA, who may liaise with the local authority and An Garda Siochana, as necessary. The need for temporary access restrictions will be confirmed with residents and businesses prior to their implementation."

Section 6.4.5.4.6.2 provides details of the construction traffic generation and notes that the impacts *"are minimal and comfortably below the thresholds set out in TII's Guidelines for Transport Assessments, it is considered appropriate to define the general traffic impacts of the Construction Phase to have a Negative, Slight and Short-term effect. Therefore, no further analysis is required for the purpose of this assessment."*

In summary, the EIAR provides extensive details of traffic management during construction and how the access / egress to businesses will be maintained at all times, and the anticipated timescale for the construction works at this location. The NTA will liaise with Woodies DIY Limited as the scheme progresses to refine any agreed access arrangement to maintain the operation of the locations.

v) No information provided to justify the proposed bridges

The submission asserts that no information has been provided to justify the proposed bridges, querying demand for the facilities.

Section 3.4.1.2.1 of EIAR Chapter 3 Consideration of Reasonable Alternatives notes that the draft Preferred Route Option proposed an overbridge for pedestrians and cyclists at this location which would greatly reduce conflicts with traffic.

Section 4.4.2.1 of the Preferred Route Option (PRO) Report, provided as part of the Supplementary Information, provides details of the consideration of the option for the proposed overbridge. Section 4.2.2.1 states: "*The R134 New Nangor Road/R110 Long Mile Road/R810 Naas Road junction is a very large and complex traffic signal-controlled intersection, catering for large traffic flows and has the LUAS red line running through the middle of it. For pedestrians to cross the road at present they must use signal-controlled crossing, crossing one link at a time. At present it can take between 4 and 5 minutes to cross the R110 Long Mile Road using these signals, and the EPR Option (Figure 4-9) did not propose any changes to the facilities for pedestrians or cyclists. While the pedestrian and cycle flows are low at present this is likely to change in the years to come as the regeneration of the lands around the intersection gets underway. For this reason, consideration has been given to how pedestrians and cyclists can be better catered for at this location."*

Section 4.4.2 of the PRO Report summarises the assessment of this alternative option ("Option 2") when compared to the EPR Option as follows:

"Overall, the alternative arrangement provides a more reliable and direct crossing facility for pedestrians and cyclists compared to the multiple toucan crossings in the EPR Option, each with a delay for users while they wait at each crossing.

When compared to the EPR Option, the alternative option improves significantly the safety of pedestrian and cyclists by removing the conflict with vehicular traffic.

Furthermore, the proposed improvements will make for a significantly more pleasant journey for pedestrians and cyclists using the junction as they will no longer be interacting with vehicular traffic.

Also, the alternative arrangement will improve the junction performance for general traffic due to no longer having to incorporate phases for pedestrians and cyclists, which offsets the additional capital costs of the proposed structures.

Although the alternative option requires increased land take than the EPR Option, it is noted that the alternative offers improved connection with lands zoned "to facilitate enterprise and/or residential led regeneration", as well as passing through an area designated a Key District Centre in the Naas Road Lands Local Area Plan. The alternative offers an improvement in encouraging/supporting planned development and in providing for economic opportunities. Thus, in terms of accessibility, social inclusion and integration the alternative proposal is considered to have some advantages over the EPR Option arrangement. There is no significant difference between the two alternatives in terms of impact on the environment."

Table 4.4 of the PRO Report provides the Assessment Summary, see Figure 2.6.4.21.

Table 4-4: Assessment Summary

Assessment Criteria	Option 1 (EPR)	Option 2 (Alt)
Economy		
Integration		
Accessibility & Social Inclusion		
Safety		
Environment		
Overall		

Figure 2.6.4.21: Table 4.4 of PRO Report

Section 4.4.2.2 of the PRO Report concludes that *"the Preferred Route Option for the pedestrian and cyclist facilities will be the provision of a grade separated bridge at the R134 New Nangor Road/R110 Long Mile Road/R810 Naas Road junction; as despite the high capital cost, there would be more advantages through improved traffic performance, integration, accessibility and particularly better safety in comparison to the at-grade crossings."*

As noted above, Section 4.4.2 of the PRO Report states that *"the alternative arrangement will improve the junction performance for general traffic due to no longer having to incorporate phases for pedestrians and cyclists."* This absence of at-grade pedestrian and cyclists in the Proposed Scheme is reflected in the design of the junction shown on the General Arrangement Drawings (see Figure 2.6.3.1) and on the junction design details provided in pages 33-36 of the Junction Design Report which forms Appendix A6.3 of Chapter 6 Traffic and Transport Appendices in EIAR Volume 4 Part 2 of 4. As such the at-grade crossing points referred to by the submission will not be available as option for pedestrians and cyclists, with the proposed ramps, steps and bridges providing the only available route.

2.7 Individual Properties / Locations

2.7.1 Overview of Submissions

Eight submissions were made in respect of individual properties / locations; these are listed below with ABP submission reference number and detailed in the following sub-sections:

- *01 Fairfield Inns Ltd*
- *04 Jacinta Kenny*
- *11 Killen Motor Group*
- *27 Tesco Ireland Limited*
- *35 Leila and Stephen Early*
- *37 Blackwin Limited*
- *48 Calmount Holdings Limited32*
- *32 Walkinstown – Walkinstown Residents Association*

2.7.2 1 - Fairfield Inns Limited, Walkinstown Roundabout.

2.7.2.1 Description of Proposed Scheme at this location

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.2.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description, the layout of Walkinstown Roundabout has been designed to provide enhanced cycle and pedestrian connectivity around this busy junction as well as improving safety for pedestrians, cyclists, bus and general traffic.

A two-way segregated cycle track has been proposed around the junction to allow cyclists to adopt the most direct route around the roundabout (i.e., both directions) and to reduce interactions with motor vehicles. Parallel pedestrian / cyclist raised table crossings have been implemented on all arms to improve pedestrian and cyclist safety.

Set back crossings have been used on all arms to promote pedestrian / cyclist desire lines with consideration for vehicle exit lane storage off the roundabout. Cycle detection loops have also been implemented on the two-way segments on approach to the crossings to help promote cycling journey time efficiencies and minimise delays for cyclists crossing multiple arms of the junction.

The number of general traffic entry lanes / flares, circulation lanes and angle of entry have been reconfigured to promote safer vehicle movements.

Landscaping proposals and revised parking arrangements are also proposed to enhance the area. City bound cyclists will be directed to the offline cycle route along Bunting Road and St. Mary's Road, providing a more direct route linking Walkinstown Roundabout with Kildare Road.

The relevant extract from the General Arrangement Drawings in the EIAR, Volume 3, Figures Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.7.2.1.

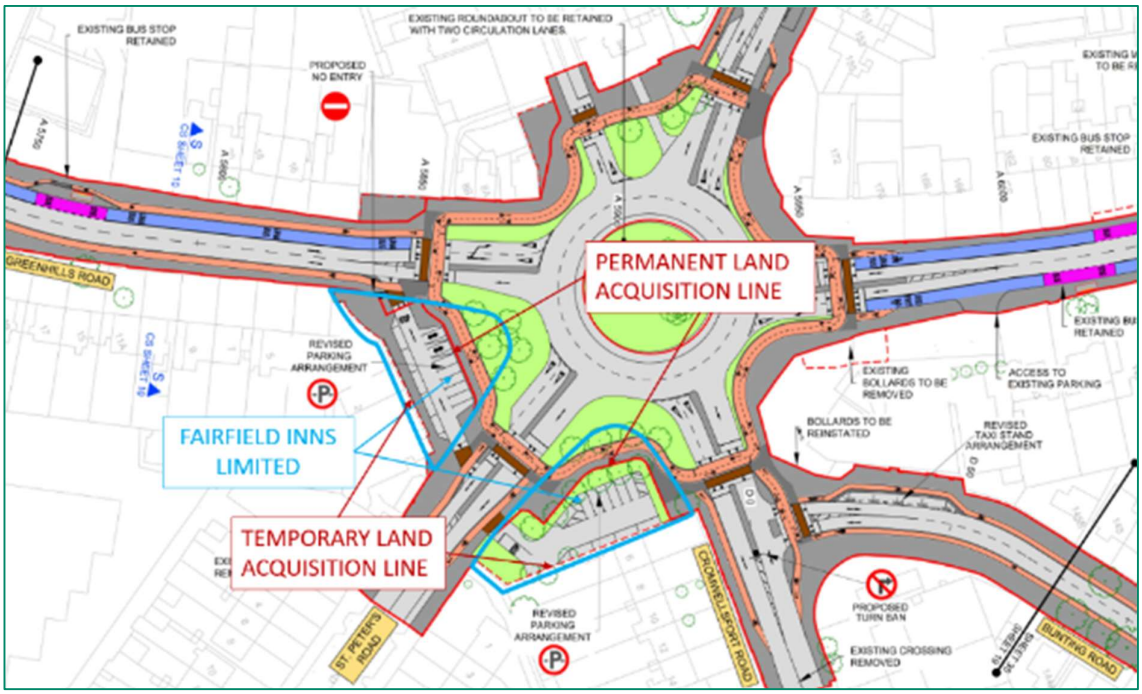


Figure 2.7.2.1: General Arrangement of Proposed Scheme at Walkinstown Roundabout (Sheet 19)

In order to achieve the desired design for the Proposed Scheme, permanent and temporary land acquisition is proposed at this property at two locations which are existing car parking areas. The first is located between Greenhills Road and St Peter's Road and the second is located between St Peter's Road and Cromwellsfort Road. The permanent land acquisition areas of these two locations are 368m^2 and 409m^2 respectively, and the temporary land acquisition areas of these two locations are 593m^2 and 705m^2 respectively.

The relevant extract from the CPO Deposit Maps showing the proposed permanent and temporary land acquisition areas at the Fairfield Inns Limited property is shown in Figure 2.7.2.2.

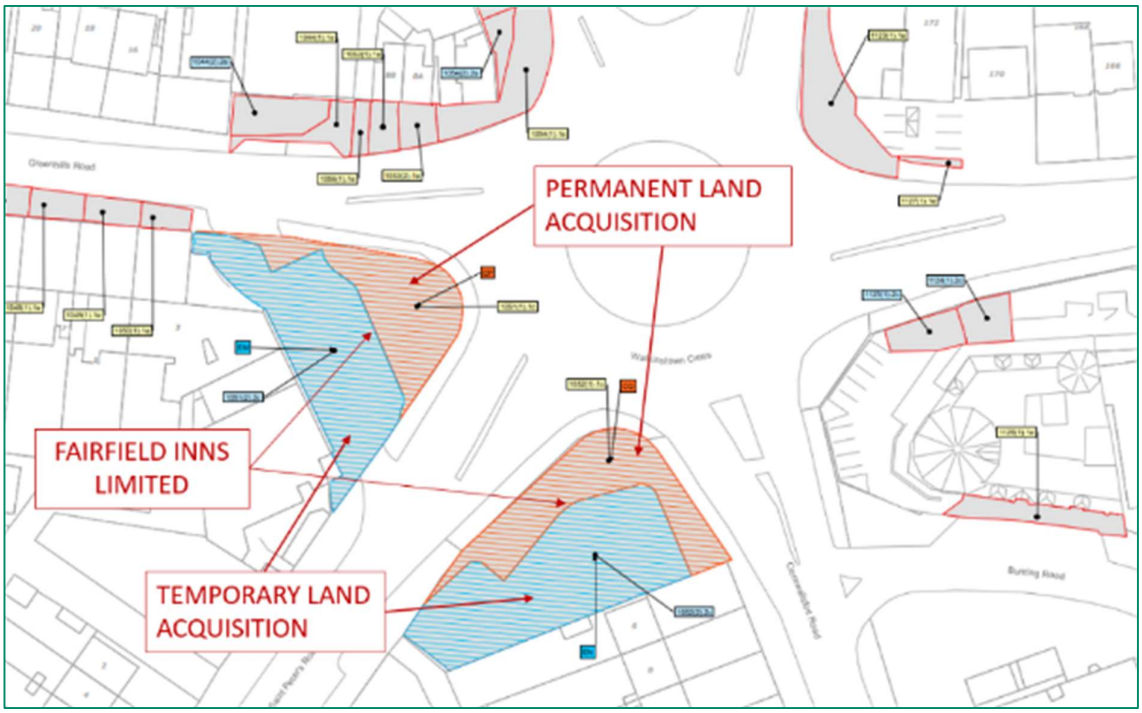


Figure 2.7.2.2: Extract from CPO Deposit Maps at Fairfield Inns Limited

The permanent land acquisition is required from the two car parking areas to provide the two-way segregated cycle track that has been proposed around the junction to allow cyclists to adopt the most direct route around the roundabout (i.e., both directions) and to reduce interactions with motor vehicles.

Parallel pedestrian / cyclist raised table crossings have been implemented on all arms to improve pedestrian and cyclist safety. The temporary land acquisition is required to re-arrange the parts of the existing parking areas that are outside the permanent acquisition, as shown in Figure 2.7.2.1. The proposed permanent and temporary land acquisition lines overlain on aerial photography are shown in Figure 2.7.2.3.

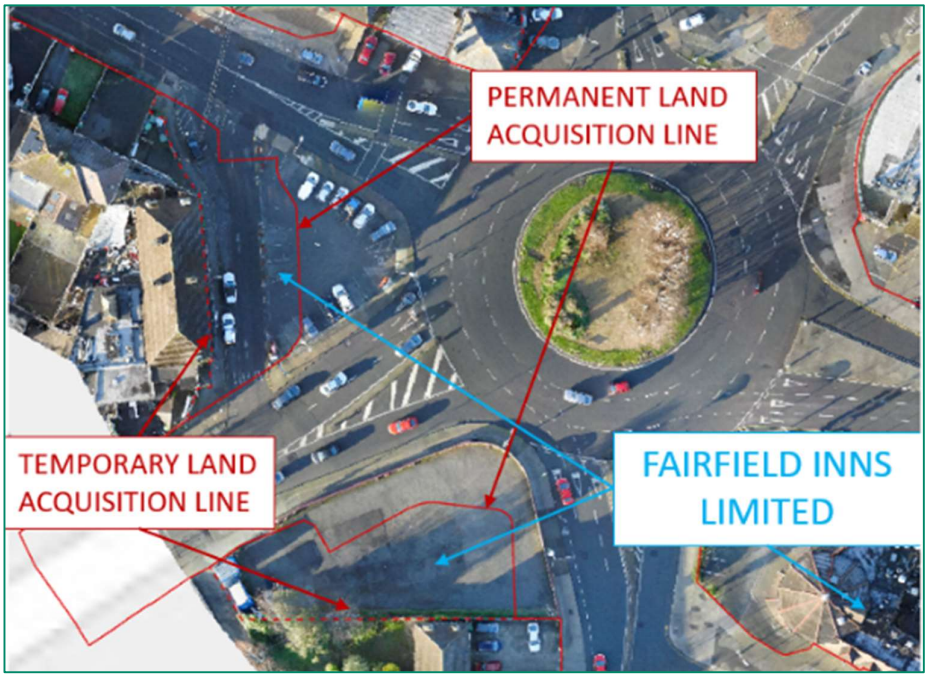


Figure 2.7.2.3: Proposed Land Acquisition lines at Fairfield Inns Limited

Figure 17.2 of Volume 3 of the EIAR, Figures: Part 3 of 3, Chapter 17 Landscape and Visual provides photo-montages of this location, with views V9 (from Greenhills Road) and V10 (from St Peter's Road) showing the areas of proposed land acquisition from Fairfield Inns Limited, see Figure 2.7.2.4. The as existing and as proposed views from V9 and V10 are shown in Figures 2.7.2.5 to 2.7.2.8.

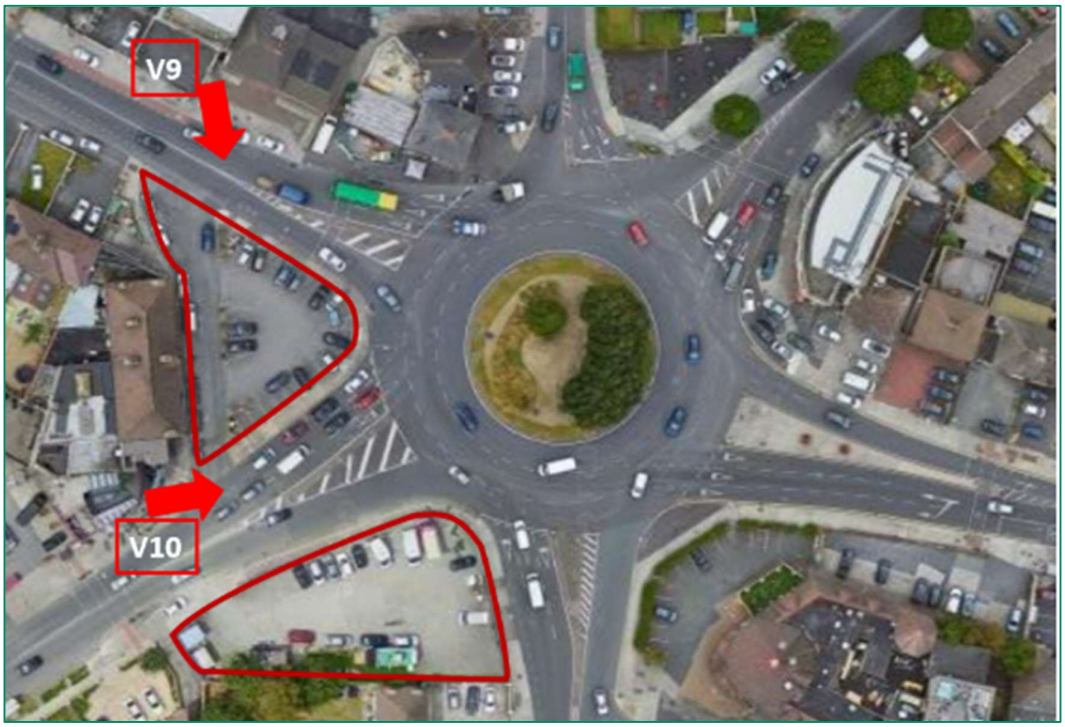


Figure 2.7.2.4: Locations of Photo-montage views V9 and V10 (Image source: Google)



Figure 2.7.2.5: Extract form EIAR Figure 17.2: View 9 – Greenhills Road – as existing



Figure 2.7.2.6: Extract form EIAR Figure 17.2: View 9 – Greenhills Road – as proposed



Figure 2.7.2.7: Extract form EIAR Figure 17.2: View V10 - St Peter's Road – as existing



Figure 2.7.2.8: Extract form EIAR Figure 17.2: View V10 - St Peter's Road – as proposed

2.7.2.2 Summary of Issues Raised by Fairfield Inns Limited

This submission cited the following areas of concern:

i. The proposed acquisition is surplus to scheme requirements
ii. Potential drainage implications for retained property
iii. Inadequate information re noise mitigation to control increased noise pollution from the Proposed Scheme when operational
iv. The extent of temporary acquisition is unnecessary, asserting that the Cherry Tree public house will need to close during construction
v. A lack of detail of traffic management during construction
vi. A lack of clarity about the boundary treatments in the permanent and temporary scenarios
vii. A lack of clarity of the total environment impact, upfront carbon footprint and concern about the design and route chosen
viii. A lack of clarity on impact on footpaths and cycle paths

The submission as noted that other matters may be raised and requested that an Oral hearing be held.

2.7.2.3 Responses to Issues Raised

i. The proposed acquisition is surplus to scheme requirements

As shown in Figure 2.7.2.1, the permanent land acquisition is required from the two car parking areas to provide the two-way segregated cycle track that has been proposed around the junction to allow cyclists to adopt the most direct route around the roundabout (i.e., both directions) and to reduce interactions with motor vehicles. The route of the cycle tracks past the two car park areas has been aligned to allow a revised car parking arrangement to be designed within the remaining space while providing a cyclist route that is as safe and direct as practicable, in order to enhance the potential for cycling in line with the objectives of the Proposed Scheme.

ii. Potential drainage implications for retained property

The submission does not provided details of their concerns in respect of drainage. However, the existing levels of the retained property will be maintained and the retained areas will continue to drain towards the public road. The design of the revised parking arrangements on the land included in the temporary land acquisition will include a surface water drainage collection system that will discharge to the existing outfall that the areas currently discharge to. Existing road gullies will be replaced with narrow profile gullies and relocated beside the new kerb line and road surface where necessary. The proposed cycle tracks will drain to the existing public road drainage network which is to be retained, as shown on the Proposed Surface Water Drainage Works drawings included in EIAR Volume 3 Part 2 of 3.

iii. Inadequate information re noise mitigation to control increased noise pollution from the Proposed Scheme when operational

Section 9.4.4.1 of EIAR Volume 2 Chapter 9 Noise and Vibration provides details of the assessment undertaken for the Operational Phase of the Proposed Scheme in respect of the potential noise and vibration impacts associated with altered traffic flows, realigned traffic lanes and displaced traffic flows.

Section 9.4.4.1.1.5 states that "*Along the majority of roads of the Proposed Scheme within the 1km study area, impacts as a result of traffic redistribution are determined to be Indirect, Positive, Imperceptible to Slight to Moderate, and Short to Medium Term to Negative, Moderate, and Short to Medium term once the Proposed Scheme becomes operational."* It goes on to state that "*There are a small number of roads in the overall study area where there are potential initial significant impacts. These are defined as roads with a traffic noise level above a daytime noise level of 55 dB LAeq,16hr an increase in noise level greater than 3 dB."* Table 9.51 lists these roads and none of the roads at Walkinstown Roundabout are included in Table 9.51. The Fairfield Inns Limited property will therefore not be subject to any perceptible increased noise levels during the operational stage of the scheme.

Section 9.5.2.1 summarises the change in road traffic noise in the operation phase as follows: *"The impact assessment has determined that traffic noise impacts across the study area for the Proposed Scheme results in a positive to neutral imperceptible to slight short and long-term direct impacts along the core bus corridor and negative, imperceptible to moderate, short and long term, indirect impacts along the surrounding road network. The range of noise level changes and overall noise levels calculated do not require any specific noise mitigation measures to be incorporated into the Proposed Scheme. Along the new sections of road at Calmount Avenue, and Calmount Road, noise impacts are determined to be slight and long-term. Along the new sustainable transport link road between Mayberry Road and Tymon Lane, the calculated noise impact is determined to be direct, negative not significant to slight and short to long-term."* The Fairfield Inns Limited property will therefore not require any proposed noise mitigation measures.

As discussed in Section 9.4.4.1.1.4 of Chapter 9, during the proposed Opening Year (2028), the NTA forecast is for 94% of the city bus fleet to be EVs or HEVs. For the Design Year (2043), the city bus fleet is forecast to be 100% electric. The operation of electric and hybrid buses will eliminate ICE noise from buses accelerating, decelerating and idling at bus stops which is the dominant noise source.

In addition, the characteristic of noise from EVs is subjectively less intrusive compared to those with ICE's and is masked to a much greater extent by surrounding road traffic. It is noted the bus stops along the Proposed Scheme will be used by other bus operators which may not transition to EV and HEVs over the same period as the city bus fleet. The airborne noise from these buses along the Proposed Scheme will, however, be significantly less than the city bus fleet and hence, noise levels associated with these areas will not generate significant noise levels over the prevailing noise environment.

In summary, the Fairfield Inns Limited property will not be subject to any perceptible increased noise levels during the operational stage of the Proposed Scheme and the property will therefore not require any proposed noise mitigation measures.

iv. The extent of temporary acquisition is unnecessary, asserting that the Cherry Tree public house will need to close during construction

As shown in Figure 2.7.2.9, the permanent land acquisition is required from the two car parking areas to provide the two-way segregated cycle track that has been proposed around the junction. The route of the cycle tracks past the two car park areas has been aligned to allow a revised car parking arrangement to be designed within the remaining space.

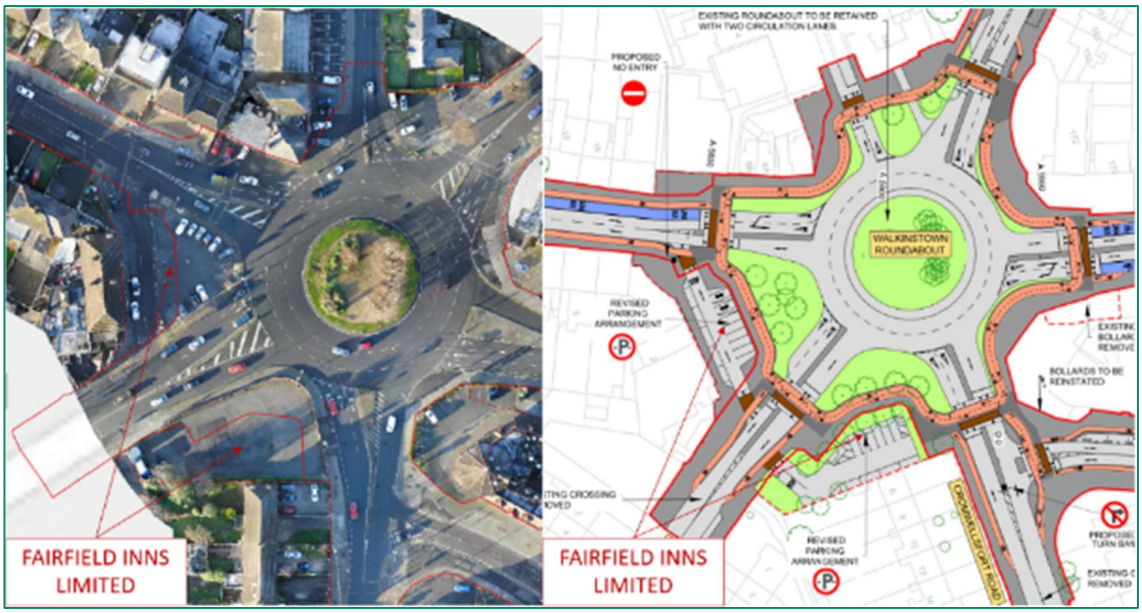


Figure 2.7.2.9: Existing and Proposed Layout at Fairfield Inns Limited property

Section 5.3.2.7 of EIAR Chapter 5 Construction describes that the construction activities at Walkinstown Roundabout will comprise pavement reconstruction and resurfacing of the roads, footways, and cycle tracks, and new kerbs. Construction activities will also consist of the installation of additional signage, new road markings, new and amended traffic signal infrastructure, new road lighting, new street furniture and landscaping works. Various utility diversions and / or protections will be required; including electricity overhead lines and telecommunications infrastructure. The expected construction duration will be approximately three months.

The temporary land acquisition is required to allow construction of the revised parking arrangements on the land to be retained by Fairfield Inns Limited.

Within EIAR Volume 2 Chapter 5 Construction, Section 5.5.3 sets out that the Proposed Scheme "will be constructed in a manner which will minimise, as much as practicable, any disturbance to residents, businesses, and road users."

In respect of the construction impact on parking and access, Section 5.5.3.2 sets out that "When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with residents and business owners prior to construction starting in the area. The duration of the works will vary from property to property, but access and egress will be maintained at all times."

Section 5.5.3.2 goes on to state that "Access will be maintained for emergency vehicles along the Proposed Scheme, throughout the Construction Phase."

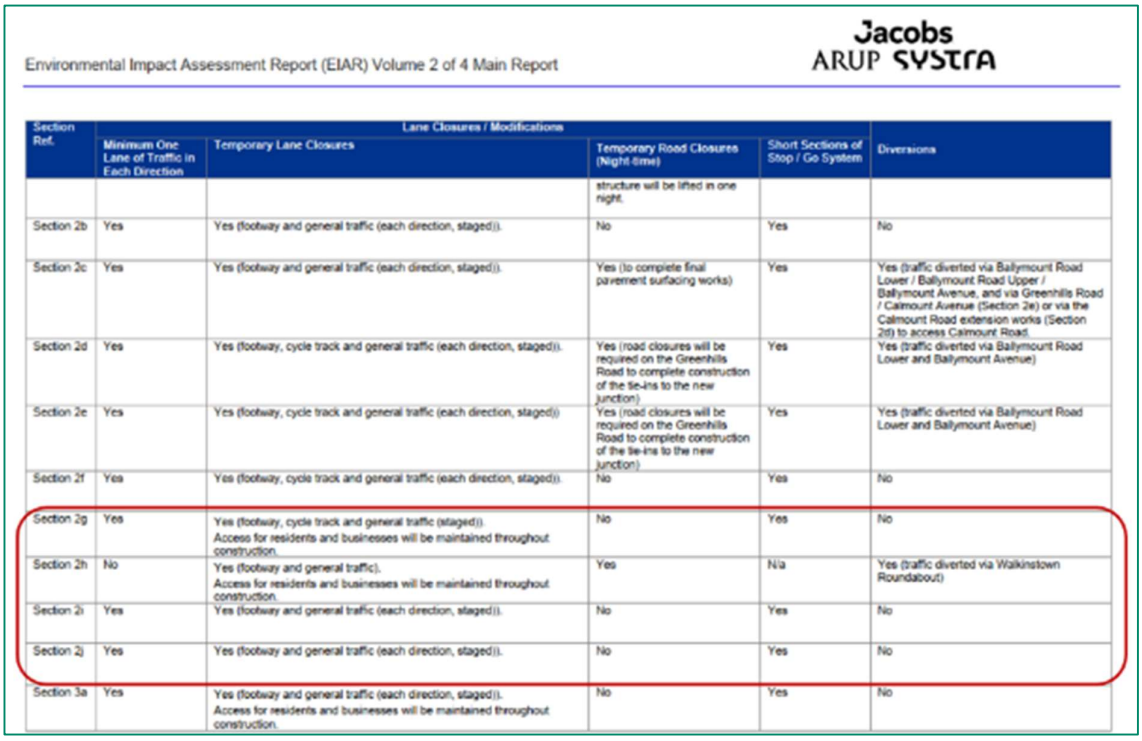
In summary the extent of the temporary land is necessary to complete the construction works at this location and it is considered that there will not be a need for the Cherry Tree public house to close during the construction.

v. A lack of detail of traffic management during construction

Sections 5.3.2.7 to 5.3.2.10 of EIAR Chapter 5 Construction describe the proposed construction works for the various elements of the Proposed Scheme at Walkinstown Roundabout;

- Section 2g Walkinstown Roundabout (including tie-ins at Ballymount Road Lower and St. Peter's Road), expected construction duration will be approximately three months.
- Section 2h St. Peter's Road to Greenhills Road, expected construction duration will be approximately two weeks.
- Section 2i Cromwellsfort Road, expected construction duration will be approximately two weeks.
- Section 2j Walkinstown Avenue, expected construction duration will be approximately two weeks.

Construction Traffic Management for pedestrians and cyclists, public transport, and general traffic is described in Section 5.8 of EIAR Chapter 5. Table 5.8 details the anticipated lane closures / modifications, road closures and diversions for each sub-section of the Proposed Scheme, as shown in Figure 2.7.2.10.


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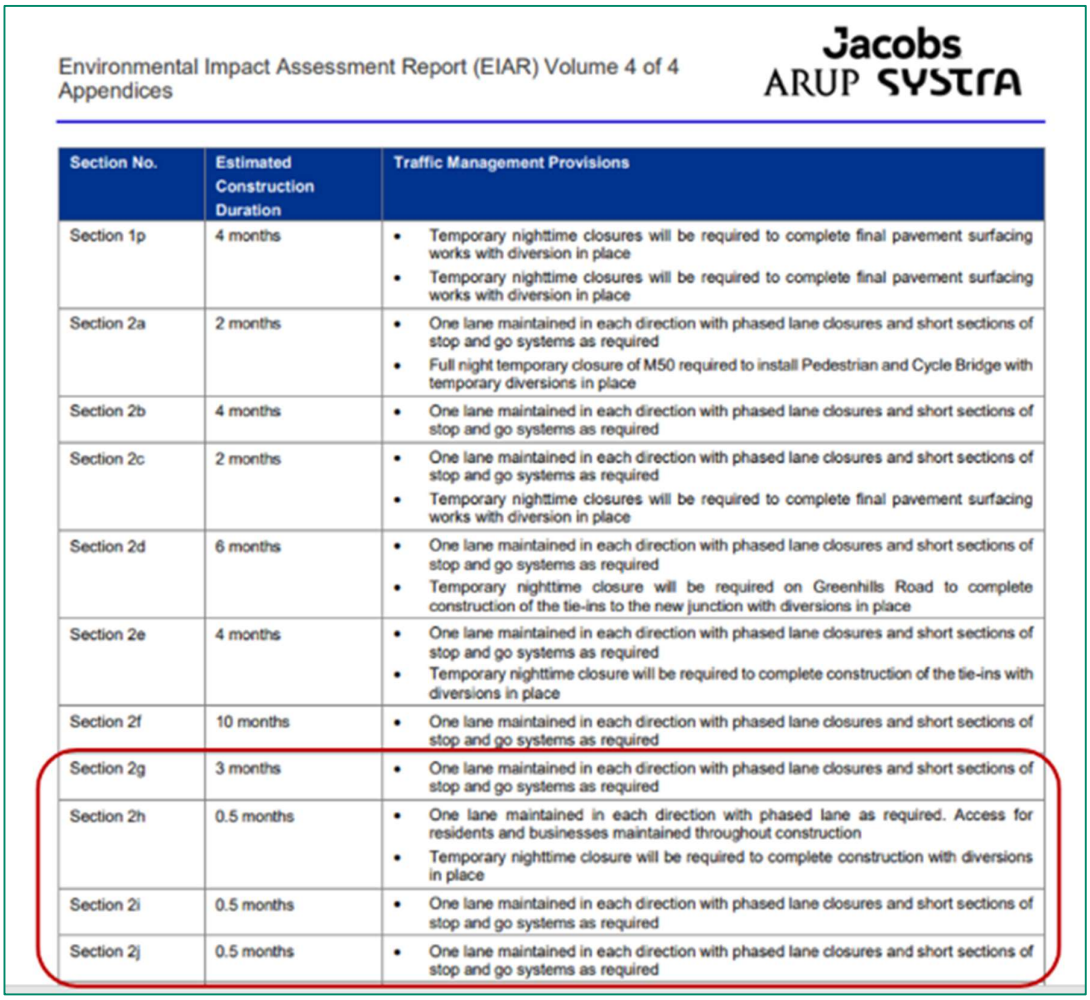
Section Ref.	Lane Closures / Modifications				
	Minimum One Lane of Traffic in Each Direction	Temporary Lane Closures	Temporary Road Closures (Night-time)	Short Sections of Stop / Go System	Diversions
			structure will be lifted in one night.		
Section 2b	Yes	Yes (footway and general traffic (each direction, staged)).	No	Yes	No
Section 2c	Yes	Yes (footway and general traffic (each direction, staged)).	Yes (to complete final pavement surfacing works)	Yes	Yes (traffic diverted via Ballymount Road Lower / Ballymount Road Upper / Ballymount Avenue, and via Greenhills Road / Calmount Avenue (Section 2e) or via the Calmount Road extension works (Section 2d) to access Calmount Road.
Section 2d	Yes	Yes (footway, cycle track and general traffic (each direction, staged)).	Yes (road closures will be required on the Greenhills Road to complete construction of the tie-ins to the new junction)	Yes	Yes (traffic diverted via Ballymount Road Lower and Ballymount Avenue)
Section 2e	Yes	Yes (footway, cycle track and general traffic (each direction, staged))	Yes (road closures will be required on the Greenhills Road to complete construction of the tie-ins to the new junction)	Yes	Yes (traffic diverted via Ballymount Road Lower and Ballymount Avenue)
Section 2f	Yes	Yes (footway, cycle track and general traffic (each direction, staged)).	No	Yes	No
Section 2g	Yes	Yes (footway, cycle track and general traffic (staged)). Access for residents and businesses will be maintained throughout construction.	No	Yes	No
Section 2h	No	Yes (footway and general traffic). Access for residents and businesses will be maintained throughout construction.	Yes	N/a	Yes (traffic diverted via Walkinstown Roundabout)
Section 2i	Yes	Yes (footway and general traffic (each direction, staged)).	No	Yes	No
Section 2j	Yes	Yes (footway and general traffic (each direction, staged)).	No	Yes	No
Section 3a	Yes	Yes (footway and general traffic (each direction, staged)). Access for residents and businesses will be maintained throughout construction.	No	Yes	No

Figure 2.7.2.10: Extract from EIAR Table 5.8 Lane Closures / Modifications, Road Closures and Diversions

In addition, the Construction Environmental Management Plan for the Proposed Scheme is included as Appendix A5.1 of EIAR Volume 4 Appendices Part 1 of 4. Section 5.2 of Appendix A5.1 is the Construction Traffic Management Plan and demonstrates the manner in which the interface between the public and construction-related traffic will be managed and how vehicular movement will be controlled.

Section 5.2.2.3 of Appendix A5.1 describes the temporary traffic management designs and notes that if *"An Bord Pleanála decides to grant approval for the Proposed Scheme, Temporary Traffic Management designs (drawings and method statements) will be prepared by the appointed contractor in compliance with the former Department of Transport, Tourism and Sport (DTTAS) (now the Department of Transport) Traffic Signs Manual, Chapter 8, Temporary Traffic Measures and Signs for Roadworks (hereafter referred to as the Traffic Signs Manual) (DTTAS 2019), to facilitate the safe and efficient construction of the Proposed Scheme."*

Table 5.4 of Appendix A5.1 provides details of the anticipated traffic management provisions, as shown in Figure 2.7.2.11.



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Section No.	Estimated Construction Duration	Traffic Management Provisions
Section 1p	4 months	• Temporary nighttime closures will be required to complete final pavement surfacing works with diversion in place • Temporary nighttime closures will be required to complete final pavement surfacing works with diversion in place
Section 2a	2 months	• One lane maintained in each direction with phased lane closures and short sections of stop and go systems as required • Full night temporary closure of M50 required to install Pedestrian and Cycle Bridge with temporary diversions in place
Section 2b	4 months	• One lane maintained in each direction with phased lane closures and short sections of stop and go systems as required
Section 2c	2 months	• One lane maintained in each direction with phased lane closures and short sections of stop and go systems as required • Temporary nighttime closures will be required to complete final pavement surfacing works with diversion in place
Section 2d	6 months	• One lane maintained in each direction with phased lane closures and short sections of stop and go systems as required • Temporary nighttime closure will be required on Greenhills Road to complete construction of the tie-ins to the new junction with diversions in place
Section 2e	4 months	• One lane maintained in each direction with phased lane closures and short sections of stop and go systems as required • Temporary nighttime closure will be required to complete construction of the tie-ins with diversions in place
Section 2f	10 months	• One lane maintained in each direction with phased lane closures and short sections of stop and go systems as required
Section 2g	3 months	• One lane maintained in each direction with phased lane closures and short sections of stop and go systems as required
Section 2h	0.5 months	• One lane maintained in each direction with phased lane as required. Access for residents and businesses maintained throughout construction • Temporary nighttime closure will be required to complete construction with diversions in place
Section 2i	0.5 months	• One lane maintained in each direction with phased lane closures and short sections of stop and go systems as required
Section 2j	0.5 months	• One lane maintained in each direction with phased lane closures and short sections of stop and go systems as required

Figure 2.7.2.11: Extract from EIAR Appendix A5.1 Table 5.4 Anticipated Traffic Management Provisions

In respect of how the property and all businesses in the area will continue to function during construction, Section 5.2.3.1 of Appendix A5.1 states that "*When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with homes and businesses prior to construction starting in the area.*"

Section 5.2.2.4 of Appendix A5.1 describes the envisaged construction traffic generation and estimates the peak daily number of lorry movements for each sub-section of the Proposed Scheme. This information has then been used in the assessment of the temporary traffic impacts that construction will have, which is set out in Section 6.4.5 of EIAR Volume 2 Chapter 6 Traffic and Transport.

Section 6.4.5.3 sets out that *"Access to and egress from the construction compounds is permitted via dedicated construction vehicles routes. The haulage of material on site is anticipated to be minimal. There will however be the removal of excavated material and the delivery of construction materials to site. It is anticipated that the exporting and delivery of materials will be executed as efficiently as possible using dedicated Construction Access Routes. Construction vehicles will be directed to*

access work sections via the Proposed Scheme and dedicated routes on the National and Regional Road Network where practicable, to minimise use of the local road network."

Section 6.4.5.4 provides details of the predicted construction impact on pedestrians, cyclists, public transport, parking and loading, and general traffic. It states that for "*construction activities on or adjacent public roads, all works will be undertaken in accordance with Department of Transport's 'Traffic Signs Manual, Chapter 8 Temporary Traffic Measures and Signs for Roadworks' and associated guidance. Chapter 5 (Construction) contains temporary traffic management proposals for the Proposed Scheme. These proposals maintain safe distance between road users and road workers, depending on the type of construction activities taking place and existing site constraints. Temporary diversions, and in some instances temporary road closures, may be required where a safe distance cannot be maintained to undertake works necessary to complete the Proposed Scheme. All road closures and diversions will be determined by the NTA, who may liaise with the local authority and An Garda Siochana, as necessary. The need for temporary access restrictions will be confirmed with residents and businesses prior to their implementation."*

Section 6.4.5.4.6.2 provides details of the construction traffic generation and notes that the impacts *"are minimal and comfortably below the thresholds set out in TII's Guidelines for Transport Assessments, it is considered appropriate to define the general traffic impacts of the Construction Phase to have a Negative, Slight and Short-term effect. Therefore, no further analysis is required for the purpose of this assessment."*

In summary, the EIAR provides extensive details of traffic management during construction and how the access / egress to businesses will be maintained at all times.

vi. A lack of clarity about the boundary treatments in the permanent and temporary scenarios

The EIAR provides extensive information in respect of the permanent boundary treatment at this location.

Section 4.5.2.1 of EIAR Chapter 4 Proposed Scheme Description notes that landscaping proposals and revised parking arrangements are proposed at Walkinstown Roundabout to enhance the area. This is reiterated in Section 4.5.2.9 which states that "*Walkinstown Roundabout will be enhanced with new planting, and a redefined public realm with cycle facilities*" and in Section 4.5.3.9 which states that "*Replacement planting will be provided in the local area at Walkinstown Roundabout*."

Section 4.6.18.1 of EIAR Chapter 4 provides a summary of the accommodation works and boundary treatment for the entirety of the Proposed Scheme and notes that there are a number of areas along the extents of the route where the Proposed Scheme will result in the requirement for accommodation works and boundary treatments, with specific accommodation works are considered on a case-by-case basis. Section 4.6.18.1 goes on to state that *"To maintain the character and setting of the Proposed Scheme, the approach to undertaking the new boundary treatment works along the corridor is replacement on a 'like for like' basis in terms of material selection and general aesthetics, unless a section of street can benefit from urban improvement appropriate to the area."*

Section 17.4.1.4.2 of EIAR Volume 2 Chapter 17 Landscape (Townscape) and Visual notes that the Walkinstown Roundabout is one of the key locations for an improved urban realm with provision of new landscape areas including tree planting and wildflower meadow, reduced dominance of parking and hard surfacing, and a new consistent paving scheme throughout, including to areas of land acquisition from commercial frontages (Ch. A5830 to Ch. A5960).

Section 17.4.4.1.2 notes that there *"High sensitivity sections of the Proposed Scheme at Walkinstown Roundabout will experience substantial improvement with the provision of new landscape areas and an attractive public realm scheme."*

The relevant extract from the Landscape General Arrangement Drawings in the EIAR, Volume 3, Figures Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.7.2.12.

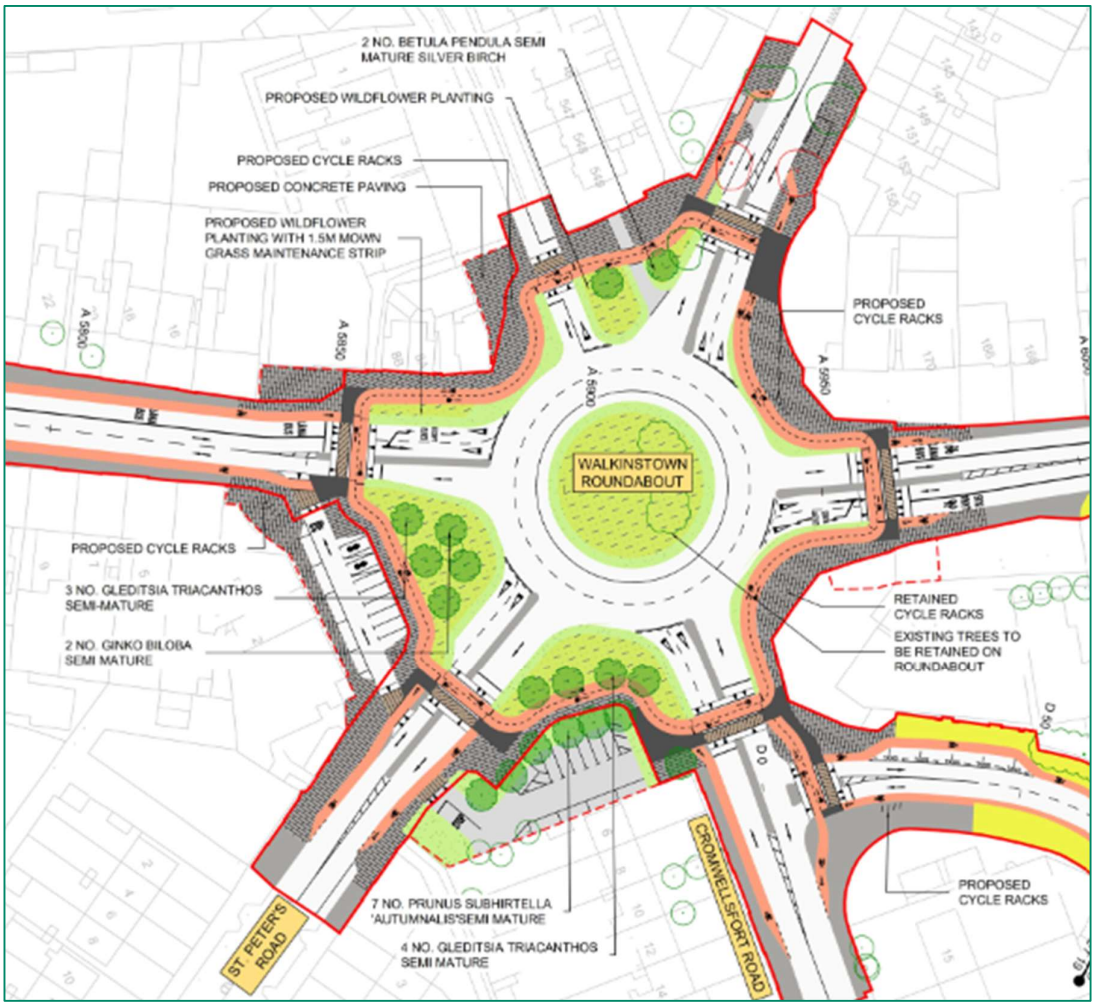


Figure 2.7.2.12: Extract from Landscape General Arrangement Drawings at Walkinstown Roundabout (Sheet 19)

Section 17.5.2.1.10 of EIAR Volume 2 Chapter 17 provides the following description of photomontage views 9 and 10 located at Walkinstown Roundabout.

View 9 Greenhills Road, looking towards the Cherry Tree public house: *"Figure 17.2.9.2 shows the proposed view proposed view looking north-east across Walkinstown Roundabout. The primary change is the reduction in size of the car parking area, with a change to areas of planted landscape including new street trees. A raised pedestrian and cycle crossing now passes across the road and new expanded pedestrian areas are provided to the commercial frontages. There is an uplift in the quality of the streetscape with the use of concrete paving blocks to pedestrian areas. There is a notable positive change to the visual amenity of the view."*

View 10 St Peter's Road, looking towards the car park for the Cherry Tree public house: *"Figure 17.2.10.2 shows the proposed view from St. Peter's Road, looking north-west towards Walkinstown Roundabout. The primary change to the view is the reduction in size of the car park and reallocation of some parts to soft and hard landscape areas accommodating new tree planting, meadow planting, footpaths, pedestrian areas and cycle tracks. A raised crossing point for pedestrians and cyclists has been introduced across the road. There is a notable positive change in the visual amenity of the view."*

Extracts from Figure 17.2 of Volume 3 of the EIAR, Figures: Part 3 of 3, Chapter 17 Landscape and are shown in Figures 2.3.13 and 2.3.14.



Figure 2.7.2.13: Extract form EIAR Figure 17.2: View 9 – Greenhills Road – as proposed – looking towards Cherry Tree public house



Figure 2.7.2.14: Extract form EIAR Figure 17.2: View 10 - St Peter's Road – as proposed – looking towards the car park of the Cherry Tree public house

As regards temporary boundary treatment during construction, Section 5.5.2.1 of EIAR Chapter 5 Construction states the following: *"Condition surveys of properties adjacent to the Proposed Scheme that the works have the potential to affect will be undertaken prior to works commencing. Liaison with impacted landowners will be carried out in advance of commencement of boundary works to properties.*

Boundary works will be commenced where both permanent and temporary land acquisition is required to ensure that sufficient space is available to construct the Proposed Scheme. Boundary treatments will be carried out on a section-by-section basis (with sections / sub-sections defined in Section 5.2), and in line with the traffic management stages set out in Section 5.8.3.

This will be a mixture of boundary walls / fencing along industrial / commercial land, railings along parks and temporary boundaries, as required. Any land temporarily acquired from a landowner will only be utilised for the purposes of undertaking boundary works or accommodation works related to the land in question.

Any lands acquired temporarily to facilitate construction work will be returned to landowners on completion of the works. Existing boundary walls or fencing being relocated will be constructed to match the existing conditions, unless otherwise agreed. The removal of trees, vegetation, lawns, paving etc. will be minimised in so far as practicable."

Section 5.10.5 of EIAR Chapter 5 states the following: *"The requirements of Number 10 of 2005 - Safety, Health and Welfare at Work Act 2005, S.I. No. 291/2013 -Safety, Health and Welfare at Work (Construction) Regulations 2013 (hereafter referred to as the Regulations) and other relevant Irish and European Union safety legislation will be complied with at all times. As required by the Regulations, a Health and Safety Plan will be formulated which will address health and safety issues from the design stages through to the completion of the Construction Phase. This plan will be reviewed as the Proposed Scheme progresses. The contents of the Health and Safety Plan will follow the requirements of the Regulations."*

Section 17.5.1 of EIAR Chapter 17 describes the construction phase mitigation and management measures which are proposed to avoid, reduce or remediate, wherever practicable significant negative landscape (townscape) and visual effects of the Construction Phase of the Proposed Scheme. It is noted that appropriate measures will be put in place by the appointed contractor for continued access during construction and for adequate security and screening of construction works.

In respect of the construction impact on parking and access, Section 5.5.3.2 of EIAR Chapter 5 sets out that "When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with residents and business owners prior to construction starting in the area. The duration of the works will vary from property to property, but access and egress will be maintained at all times."

Section 5.2.3 of Appendix A5.1 Construction Environmental Management Plan of EIAR Volume 4 Part 1 of 5 expands on this; Section 5.2.3.4 explains that for pedestrians / cyclist "*where footways or cycle tracks are affected by construction, a safe route will be provided past the work area, and where practicable, provisions for matching existing facilities for pedestrians and cyclists will be made*", and Section 5.2.3.6 sets out that "*temporary access provisions will be discussed with homes and businesses prior to construction starting in the area. The duration of the works will vary from property to property, but access and egress will be maintained at all times*".

vii. A lack of clarity of the total environment impact, upfront carbon footprint and concern about the design and route chosen

Total environment impact

A comprehensive EIAR has been prepared to provide an assessment of the potential construction and operational impacts of the Proposed Scheme.

The basis for content of the EIAR is set out in Section 1.5.6 of Chapter 1 in Volume 2 of the EIAR and the EIAR structure is defined in section 1.5.7 of Chapter 1. Table 1.3 sets out the environmental topics that have been assessed:

- Traffic & Transport;

- Air Quality;
- Climate;
- Noise & Vibration;
- Population; • Human Health;
- Biodiversity;
- Water;
- Land Soils Geology & Hydrogeology;
- Archaeological & Cultural Heritage;
- Architectural Heritage;
- Landscape (Townscape) & Visual;
- Waste and Resources;
- Material Assets;
- Risk of Major Accidents and / or Disasters; and
- Cumulative Impacts and Environmental Interactions.

Each of these chapters provides an assessment of the potential impacts from the Construction and Operation of the Proposed Scheme and includes for mitigation strategies to mitigate effects and finally states the predicted residual impacts.

The potential for cumulative impacts of the Proposed Scheme in combination with other projects has been assessed in Chapter 21 in Volume 2 of the EIAR.

The significant residual impacts from all topics are then summarised in Chapter 23 in Volume 2 of the EIAR.

Upfront carbon footprint

In respect of the upfront carbon footprint, Section 8.5.1.1 of EIAR Chapter 8 describes the construction phase carbon calculations and quantifies the construction phase embedded carbon using the TII Carbon Tool (TII 2020), which has the ability to quantify carbon in infrastructure projects using Ireland-specific emission factors and data.

Section 8.5.1.1 states: *"Detailed project information including tonnage of materials was used in the assessment of embodied carbon (refer to Appendix A8.1 Construction Phase Embodied Carbon in Volume 4 of this EIAR for inputs into the TII Carbon Tool). The Proposed Scheme is expected to have a Construction Phase of 36 months approximately. The predicted embodied carbon is averaged over the full Construction Phase to give the predicted annual emissions to allow for a direct comparison with annual emissions and targets. Construction Phase emissions have been compared against the total national GHG emissions in Ireland for 2020 (58,698 kt CO2eq) (EPA 2022b) and against Ireland's non-ETS 2020 target of 37,942.7 kt CO_2eq (as set out in Commission Decision 2017/1471 of 10 August 2017 and amending decision 2013/162/EU to revise Member States' annual emissions allocations for the period from 2017 to 2020) and the 2030 Transport Emission Ceiling.*

Construction Phase emissions have been compared against Ireland's non-ETS 2030 target of 33,381.3 kt CO2eq (as set out in Commission Implementing Decision (EU) 2020/2126 of 16 December 2020 on setting out the annual emission allocations of the Member States for the period from 2021 to 2030 pursuant to Regulation (EU) 2018/842 of the European Parliament and of the Council).

Based on the TII Carbon Tool, the breakdown of the activities between the different phases of the Proposed Scheme have been assessed. As shown in Table 8.11, the assessment indicates that the key phases of the GHG generation are the embodied carbon of the construction materials and the construction activities, which when combined, account for 87% of all carbon emissions. Pre-construction together with construction waste is expected to account for 13% of all emissions.

The Proposed Scheme is estimated to result in total Construction Phase CO_2e emissions of 27,763 tonnes embodied CO_2eq for materials over a 36-month period. The IEMA Guidance (IEMA 2022)

states that "Carbon budgets allow for continuing economic activity, including projects in the built environment, in a controlled manner". Thus, projects which have a carbon footprint are not necessarily significant provided that the projects are compatible with net zero by 2050, and the full range of mitigation measures are employed to minimize the carbon footprint. Given that the construction of the Proposed Schemes itself will lead to operational GHG emission reductions overall then the construction phase should be viewed as compatible with net zero emission targets. Thus, the assessment of significance for the construction phase of the Proposed Scheme is deemed to have a minor adverse impact given that the construction phase emissions are equivalent to an annualised total of 0.024% of Ireland's non-ETS 2020 target and 0.154% of the 2030 Transport Emission Ceiling. The potential impact to climate due to embodied carbon emissions during the Construction Phase, prior to mitigation, will be Negative, Minor Adverse and Short-Term.

In order to place the emissions due to the total Construction Phase in context, the CO_2e emissions are equivalent to the construction of approximately 555 three-bedroom houses using traditional construction methods (Monahan 2011)."

Section 8.8.1 of EIAR Chapter 8 describes the residual impacts of the construction phase and states that *"the Proposed Scheme is estimated to result in total Construction Phase GHG emissions of 27,763 tonnes embodied CO_2eq for materials over a 36-month period, equivalent to an annualised total of 0.024% of Ireland's non-ETS 2020 target and 0.154% of the 2030 Transport Emission Ceiling. The embodied carbon emissions associated with the Construction Phase of the Proposed Scheme will be short-term and temporary in nature Nevertheless, the impact on CO_2e emissions, after mitigation, as outlined in Table 8.23, due to the embodied carbon associated with the Construction Phase of the Proposed Scheme will be Negative, Minor and Short-Term. Although the impact rating post-mitigation is the same as pre-mitigation, the mitigation measures proposed will have the effect of reducing carbon emissions during the Construction Phase. A comparison between the Do Something and Do Minimum CO_2e traffic emissions in the Construction Year (2024) indicates that there is predicted to be an overall increase of 6.3kt in CO_2eq due to the Construction Phase of the Proposed Scheme. This is equivalent to a 0.40% increase in CO_2eq relative to the Construction Year (2024) Do Minimum estimates."*

Section 8.8.2 of Chapter 8 Climate of volume 2 of the EIAR states: *"The maintenance CO_{2e} emissions associated with the Operational Phase of the Proposed Scheme, after mitigation, is predicted to be Negligible and Permanent. The operational traffic CO2e emissions associated with the Operational Phase of the Proposed Scheme is predicted to be Negligible and Permanent. Overall, when the carbon emissions associated with the maintenance phase and the Operational Phase are combined, the net GHG emissions will be Negligible and Permanent. Thus, the residual impact from Operational Phase traffic as a result of the Proposed Scheme will be Negligible and Permanent.*

The Proposed Scheme will also support the delivery of government strategies outlined in the 2023 CAP (DCCAE 2022) and the 2021 Climate Act by enabling sustainable mobility and delivering a sustainable transport system. The Proposed Scheme will provide connectivity and integration with other public transport services leading to more people availing of public transport, helping to further reduce GHG emissions.

Based on the analysis outlined above, it is concluded that the Proposed Scheme achieves the project objectives in supporting the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets. The Proposed Scheme has the potential to reduce CO_{2e} emissions equivalent to the removal of approximately 18,420 and 44,230 car trips per weekday from the road network in 2028 and 2043 respectively. This represents a significant contribution towards the increased use of lower-carbon modes and reduction in the percentage of total journeys that are made by private car (modal share) from over 70% (today) to just over 50% in 2030 as outlined in the 2023 CAP (DCCAE 2022).

It is concluded that, the Proposed Scheme will make a significant contribution to reduction in carbon emissions."

The design and route chosen

The submission does not provide any details about the concern the owners have in relation to the design of the scheme, beyond the points discussed in paragraphs i) to vi) above. As regards the route chosen, Section 3.3 of EIAR Chapter 3 Consideration of Reasonable Alternatives sets out the route

alternatives which were considered as part of the process to establish the Proposed Scheme and how alternative route options have been considered in a number of areas during the iterative design of the Proposed Scheme.

Section 3.3.1 of EIAR Chapter 3 provides details of the initial high level route alternatives that were assessed and included an examination of the feasible route options north of the M50 to the intersection of the R819 Walkinstown Road with the R110 Crumlin Road. Section 3.3.2 then sets out the qualitative and quantitative assessment using criteria established to compare the reasonable alternative route options, and Section 3.3.2.1.6 describes a number of viable route options at Walkinstown Roundabout that led to the identification of the Emerging Preferred Route Option.

Section 3.4.1.1.1 describes the main alternatives considered during the development of the draft Preferred Route Option and Section 3.4.1.1.2 describes that the draft Preferred Route Option proposed that Walkinstown Roundabout be altered to include a segregated two-way cycle track around the junction to reduce conflicts with pedestrians and allow the cyclists to take the shortest route around the junction, with parallel signal-controlled pedestrian / cycle crossings on all arms of the roundabout also provided.

viii. A lack of clarity on impact on footpaths and cycle paths

Section 6.4.6 of EIAR Chapter 6 Traffic and Transport outlines the impact assessment for the Operational Phase in terms of a qualitative (walking, cycling, bus infrastructure and parking / loading) and quantitative (bus journey times / reliability, general traffic and people movement) impact analysis.

Section 6.4.6.1.3.1 provides details of the assessment of impacts on the pedestrian infrastructure for the section of the Proposed Scheme between Ballymount and Crumlin and these are summarised in Table 6.30, as shown in Figure 2.7.2.14 the significance of the effects for pedestrians at Walkinstown Roundabout are assessed as having a positive profound effect.

Table 6.30: Section 2: Significance of Effects for Pedestrian Impact during Operational Phase

Junctions	Chainage	Do Minimum LoS	Do Something LoS	Impact	Sensitivity	Significance of Effect
R819 Greenhills Road / Ballymount Road Upper priority junction	A3950	D	A	Medium	Medium	Positive Significant
New junction: Ballymount Avenue / R819 Greenhills Road priority junction	A4200	-	B	-	Low	-
New junction: Ballymount Avenue / Ballymount Avenue priority junction	A4400	-	B	-	Medium	-
Ballymount Avenue / Calmount Road signalised junction	A4650	C	A	Medium	Low	Positive Moderate
New junction: Calmount Avenue / R819 Greenhills Road roundabout	C425	-	A	-	Low	-
Calmount Road / Calmount Avenue priority junction	A4950	D	A	Medium	Medium	Positive Significant
R819 Greenhills Road / B&G Ltd priority junction	A5650	F	B	High	Medium	Positive Very Significant
Walkinstown Roundabout	A5900	E	A	High	High	Positive Profound
Section Summary		**E**	**A**	**High**	**Medium**	**Positive Very Significant**

Figure 2.7.2.14: Table 6.30 of EIAR Chapter 6

Section 6.4.6.1.3.1 concludes that, overall, it is anticipated that there will be a Positive, Very Significant and Long-term effect to the quality of the pedestrian infrastructure along Section 2 of the Proposed Scheme.

Section 6.4.6.1.3.2 of EIAR Chapter 6 provides details of the assessment of impacts on the cycling infrastructure for the section of the Proposed Scheme between Ballymount and Crumlin and these are

summarised in Table 6.31, as shown in Figure 2.7.2.15 the significance of the effects of pedestrians at Walkinstown Roundabout are assessed as having a positive profound effect.

Table 6.31: Section 2 Cycling Impact during Operational Phase

Locations	Chainage (m)	Do Minimum LoS	Do Something LoS	Impact	Sensitivity of Environment	Significance of Effect
M50 Overbridge to Calmount Road / Ballymount Avenue roundabout	A4150 - A4700	C	A	Medium	High	Positive Very Significant
Calmount Road to Walkinstown Roundabout	A4700- A5900	B	A	Low	Medium	Positive Moderate
Greenhills Road / Ballymount Avenue to Greenhills Road / Greenhills Road green space	C50 - A5500	C	A	Medium	Medium	Positive Significant
Calmount Road/ Calmount Avenue to Calmount Avenue / Greenhills Road proposed roundabou	A4950- C425	D	A	Medium	Medium	Positive Significant
Section Summary		**C**	**A**	**Medium**	**Medium**	**Positive Significant**

Figure 2.7.2.15: Table 6.30 of EIAR Chapter 6

The contents of Table 6.31 demonstrate that the scheme will have a positive moderate long-term impact on the cycling environment between the R819 Greenhills Road and Walkinstown Roundabout.

2.7.3 4 - Jacinta Kenny and Martin Gregory – 29 Walkinstown Road

2.7.3.1 Description of Proposed Scheme at this location

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.3.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description, on Walkinstown Road (R819) between Walkinstown Roundabout and the Long Mile Road (R110), it is proposed to provide one bus lane and one general traffic lane in each direction with minimum land take impacting properties on Walkinstown Road (R819) maintaining sufficient front driveway boundary setback lengths for a car to be parked. To accommodate this cross section, land acquisition will be required along the Walkinstown Road (R819).

Land acquisition is proposed on the western side of the Walkinstown Road (R819) between Walkinstown Roundabout and Kilnamanagh Road. Between Kilnamanagh Road and Long Mile Road (R110), land acquisition is proposed on the eastern side of Walkinstown Road (R819). It is proposed to introduce a southbound right turn ban for general traffic from Walkinstown Road (R819) to Kilnamanagh Road to improve the efficiency of the junction and minimise bus delays. Kilnamanagh Road will remain accessible from the Walkinstown Road (R819) via Walkinstown Drive. It is also proposed to introduce a right turn ban for northbound right turning traffic from the Walkinstown Road (R819) to the southern entrance of the SuperValu supermarket (Walkinstown Shopping centre) during peak hours to improve the operation of the junction and reduce bus delays. Entry to the shopping centre will be possible via the alternative car park entrance.

City-bound cyclists will have an alternative segregated cycle route along Bunting Road (GDA Cycle Route 8A) and St. Mary's Road providing a more direct route linking Walkinstown Roundabout with Kildare Road.

Section 4.5.3.1 also notes that city-bound cyclists will have an alternative segregated cycle route along Bunting Road (GDA Cycle Route 8A) and St. Mary's Road providing a more direct route linking Walkinstown Roundabout with Kildare Road. Thus segregated cycle facilities are not proposed along Walkinstown Road resulting in a reduced cross-section such that the land acquisition is minimised.

The relevant extract from the General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.7.3.1.

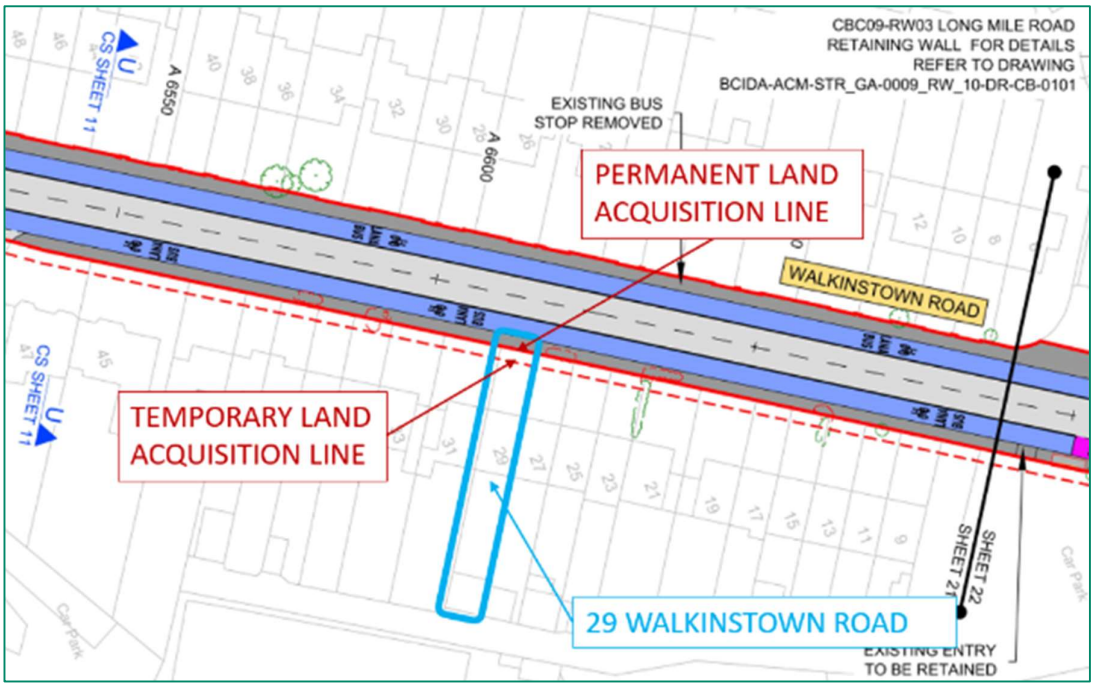


Figure 2.7.3.1: General Arrangement of Proposed Scheme adjacent to 29 Walkinstown Road (Sheet 21)

The relevant extract from the typical cross-section in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.7.3.2.

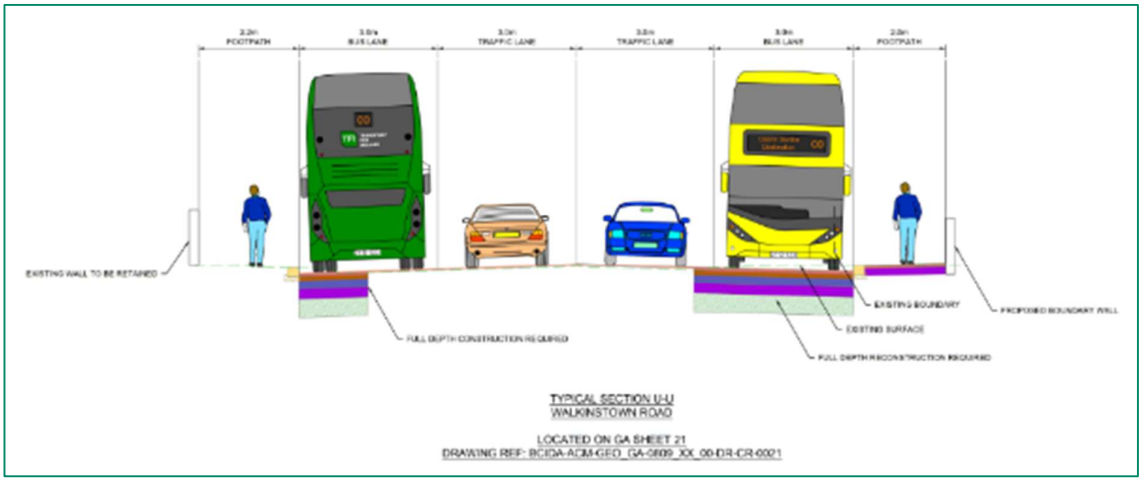


Figure 2.7.3.2: Typical Cross-section Adjacent to 29 Walkinstown Road

The relevant extract from the CPO Deposit Maps showing the proposed permanent and temporary land acquisition areas at 29 Walkinstown Road is shown in Figure 2.7.3.3.

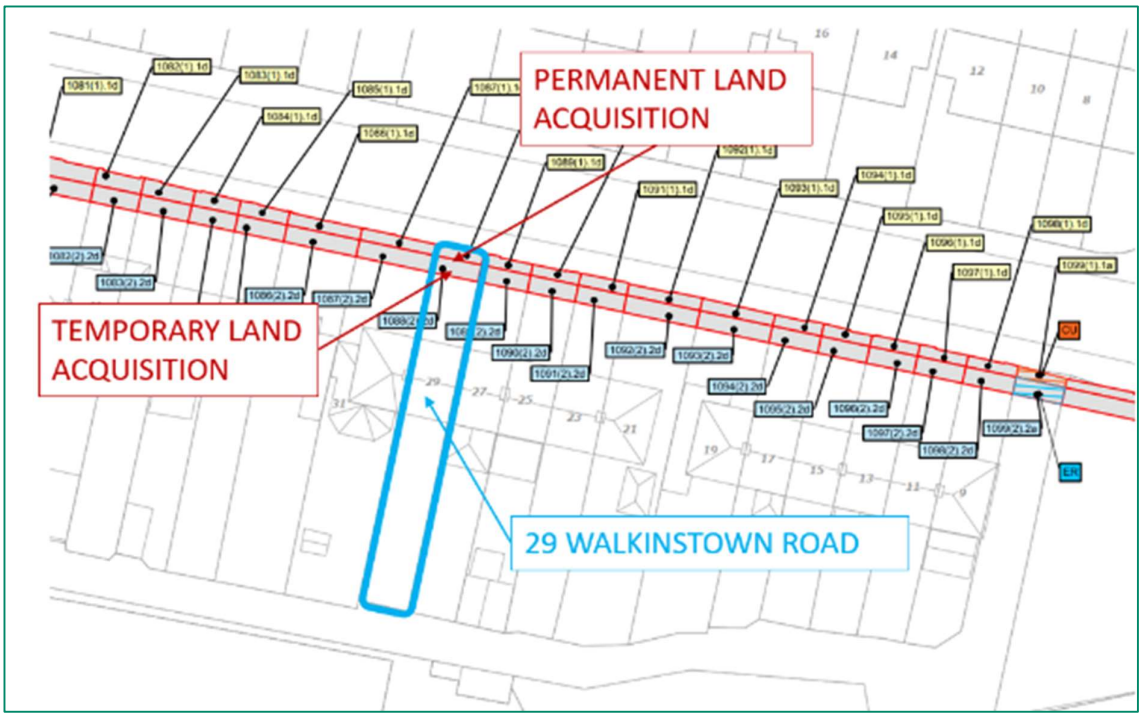


Figure 2.7.3.3: Extract from CPO Deposit Maps at 29 Walkinstown Road

The proposed permanent and temporary land acquisition lines overlain on aerial photography are shown in Figure 2.7.3.4.



Figure 2.7.3.4: Proposed Land Acquisition lines adjacent to 29 Walkinstown Road



Figure 2.7.3.5: Existing frontage of 29 Walkinstown Road (Image source: Google)

2.7.3.2 Summary of Issues Raised

This submission made the following points:

i) Existing boundary gates

ii) Safety of egress/access during construction

iii) Loss of property value and quality of life during construction

iv) Proximity of traffic

v) Working hours for construction

vi) Overhead cables to be under-grounded

vii) New trees requested where possible

viii) Access to lane way

2.7.3.3 Responses to Issues raised

i) Existing boundary gates

The submission requested that their existing electric gates should be replaced to an acceptable standard and aesthetic as the existing gates.

The permanent acquisition will result in the loss of between 1.3m and 1.4m with an additional 2.0m temporally required to allow for the construction of boundary treatment and tying into the existing garden/driveway.

Section 4.6.18.1 of EIAR Volume 2 Chapter 4 provides a summary of the accommodation works and boundary treatment for the entirety of the Proposed Scheme and notes that there are a number of areas along the extents of the route where the Proposed Scheme will result in the requirement for accommodation works and boundary treatments, with specific accommodation works are considered on a case-by-case basis. Section 4.6.18.1 goes on to state that *"To maintain the character and setting of the Proposed Scheme, the approach to undertaking the new boundary treatment works along the corridor is replacement on a 'like for like' basis in terms of material selection and general aesthetics, unless a section of street can benefit from urban improvement appropriate to the area."*

Reinstatement of property frontage at this location will be on a like for like basis and detailed accommodation works plans will be prepared in consultation with the landowner in line with any formal agreements and in accordance with any mitigations identified in the EIAR or conditions / modifications from An Bord Pleanála in relation to the Proposed Scheme application.

ii) Safety of egress/access during construction

The submission raises a concern about the safety while entering / exiting the property during construction. Within EIAR Chapter 5 Construction, Section 5.5.3 sets out that the Proposed Scheme *"will be constructed in a manner which will minimise, as much as practicable, any disturbance to residents, businesses, and road users."*

In respect of the construction impact on parking and access, Section 5.5.3.2 sets out that "*When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with residents and business owners prior to construction starting in the area. The duration of the works will vary from property to property, but access and egress will be maintained at all times."*

iii) Loss of property value and quality of life during construction

The submission asserts that the loss of some of their driveway will decrease the value of the property and that their quality of life will be affected during construction, for which they should be compensated.

The aim of the Proposed Scheme is to provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor. The Proposed Scheme will greatly

improve transport services for all that live along the route of the Proposed Scheme, including on Walkinstown Road, by providing significantly improved sustainable transport options.

Furthermore, it is an objective of the Proposed Scheme to ensure that the public realm is carefully considered in the design and development of the transport infrastructure and seek to enhance key urban focal points where appropriate and feasible.

EIAR Chapter 10 'Population' includes Appendix A10.2 'Economic Impact of the Core Bus Corridors'. Section 3 on page 14 of the appendix discusses the envisaged impact of the Proposed Scheme on property prices along the route. The conclusion reached is that in overall terms the public realm improvements planned by the NTA may in fact lead to an increase in value of both residential and retail property prices, especially in the community centres along the corridors.

The report notes: "*Evidence shows that investing in public realm creates nicer places that are more desirable for people and business to locate in, thereby increasing the value of properties in the area."* and *"Residents along the corridors will also see a measurable increase in their quality of life, with evidence showing that residents are willing to pay more for an improved public realm."*

Based on the above text, it is believed that a combination of improved connectivity as a result of the dedicated public transport infrastructure being rolled out by the Proposed Scheme as well as public realm improvements, will not have a negative impact on values of residential properties on Walkinstown Road.

In regard to compensation, if the CPO is confirmed by An Bord Pleanála, a Notice to Treat will be served on the landowner whose land is being acquired. Following service of the Notice to Treat, the landowner will be required to submit a claim for compensation and as part of this process, the NTA will pay the reasonable costs (as part of the claim) for the landowner to engage its agent / valuer in preparing, negotiating and advising on compensation.

iv) Proximity of traffic

The submission raises a concern about the proximity of traffic resulting in an increase in noise, leading to need for new windows. It also suggests the use of low noise surfacing and electric buses.

Section 9.4.4.1 of EIAR Volume 2 Chapter 9 Noise and Vibration provides details of the assessment undertaken for the Operational Phase of the Proposed Scheme in respect of the potential noise and vibration impacts associated with altered traffic flows, realigned traffic lanes and displaced traffic flows.

Section 9.4.4.1.1.5 states that "*Along the majority of roads of the Proposed Scheme within the 1km study area, impacts as a result of traffic redistribution are determined to be Indirect, Positive, Imperceptible to Slight to Moderate, and Short to Medium Term to Negative, Moderate, and Short to Medium term once the Proposed Scheme becomes operational."* It goes on to state that "*There are a small number of roads in the overall study area where there are potential initial significant impacts. These are defined as roads with a traffic noise level above a daytime noise level of 55 dB LAeq,16hr an increase in noise level greater than 3 dB."* Table 9.51 lists these roads and Walkinstown Road is not included in Table 9.51.

Section 9.5.2.1 summarises the change in road traffic noise in the operation phase as follows: *"The impact assessment has determined that traffic noise impacts across the study area for the Proposed Scheme results in a positive to neutral imperceptible to slight short and long-term direct impacts along the core bus corridor and negative, imperceptible to moderate, short and long term, indirect impacts along the surrounding road network. The range of noise level changes and overall noise levels calculated do not require any specific noise mitigation measures to be incorporated into the Proposed Scheme."*

While specific noise mitigation measures are not required, as discussed in Section 7.1.4 of the Preliminary Design Report (provided as part of the Supplementary Information), during future design

stages, the selection of appropriate pavement materials will take a number of factors in to account including consideration of the most appropriate materials for noise, permeability, colour, texture, and best value for money in terms of environmental impact, durability, maintainability, repairability, recyclability and cost.

In respect of electric buses, as discussed in Section 9.4.4.1.1.4 of Chapter 9, during the proposed Opening Year (2028), the NTA forecast is for 94% of the city bus fleet to be EVs or HEVs. For the Design Year (2043), the city bus fleet is forecast to be 100% electric. The operation of electric and hybrid buses will eliminate ICE noise from buses accelerating, decelerating and idling at bus stops which is the dominant noise source.

In addition, the characteristic of noise from EVs is subjectively less intrusive compared to those with ICE's and is masked to a much greater extent by surrounding road traffic. It is noted the bus stops along the Proposed Scheme will be used by other bus operators which may not transition to EV and HEVs over the same period as the city bus fleet. The airborne noise of these buses along the Proposed Scheme will, however, be significantly less than the city bus fleet and hence, noise levels associated with these areas will not generate significant noise levels over the prevailing noise environment. It is also noted that the general traffic on Walkinstown Road will not be any closer to the property as a result of the Proposed Scheme.

v) Working hours for construction

The submission raises concerns about the working hours for construction which may affect their sleep, citing a recent example nearby.

The EIAR contains a comprehensive set of mitigation measures to minimise construction phase impacts, including noise impacts. Construction noise mitigation measures are set out in Chapter 9 in Volume 2 of the EIAR (and are also summarised in Appendix 5.1 (Construction Environmental Management Plan) in Volume 4 of the EIAR).

Section 9.5.1.1 of EIAR Volume 2 Chapter 9 states that: *"The appointed contractor will be required to take specific noise abatement measures to the extent required and comply with the recommendations of BS 5228–1 (BSI 2014a) and S.I. No. 241/2006 - European Communities (Noise Emissions by Equipment for Use Outdoors) (Amendment) Regulations 2006."* It also states that "*During the Construction Phase, the appointed contractor will be required to manage the works to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228–1 (BSI 2014a)*"

Section 9.5.1.1 also states that *"BS 5228–1 includes guidance on several aspects of construction site practices, which include, but are not limited to:*

- *Selection of quiet plant;*
- *Control of noise sources;*
- *Screening;*
- *Hours of work;*
- *Liaison with the public; and*
- *Monitoring."*

Specifically, Section 9.5.1.1. states that "The appointed contractor will put in place the most appropriate noise control measures depending on the level of noise reduction required at individual working areas (i.e. based on the construction threshold values for noise and vibration set out in Table 9.8: and Table 9.11)." [Note - Table 9.8 of Section 9.2.4.1 of EIAR Chapter 9 sets out the Construction Noise Threshold (CNT) Levels for the Proposed Scheme].

Section 9.5.1.1.4 of Chapter 9 sets out the proposed working hours and states: "It is envisaged that generally construction working hours will be between 07:00hrs and 23:00hrs on weekdays, and between 08:00hrs and 16.30hrs on Saturdays. Night-time and Sunday working will be required during certain periods to facilitate street works that cannot be undertaken under daytime / evening time conditions."

However, the contractor will also have to take account of sensitive receptors (in particular any nearby residential areas). Section 9.5.1.1.4 goes on to state: “The planning of such works will take consideration of sensitive receptors, in particular any nearby residential areas. Construction activities will be scheduled in a manner that reflects the location of the site and the nature of neighbouring properties. Construction activities / plant items will be considered with respect to their potential to exceed construction noise thresholds at NSLs and will be scheduled according to their noise level, proximity to sensitive locations and possible options for noise control. In situations where an activity with potential for exceedance of construction noise thresholds is scheduled (e.g. road widening and utility diversions or activities with similar noise levels identified in Table 9.42), other construction activities will be scheduled to not result in significant cumulative noise levels”.

In summary the NTA is satisfied that the noise abatement measures set out in the EIAR that the appointed contractor will be required to put in place to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228–1 will result in appropriate and adequate mitigation measures in respect of construction noise impact at this location during construction.

vi) Request for all overhead cables to be placed underground

The submission requested that all existing overhead cables should be placed underground as part of the Proposed Scheme.

As discussed in Section 4.6.12 of EIAR Chapter 4 Proposed Scheme Description, in locations where road widening and / or additional space in the road margin is required, it is proposed that the public lighting columns be replaced and relocated to the rear of the footpath, and the existing lighting columns

removed once the new facility is operational. All new cabling associated with replacement lighting columns will be placed underground wherever practicable.

As noted in Section 19.5.1 of EIAR Chapter 19 Material Assets, the Proposed Scheme has been designed to minimise the impact on utility infrastructure. This includes the avoidance of interactions with major utility infrastructure as far as practicable. Where there are interfaces with existing utility infrastructure, the appointed contractor will ensure that protection in place or diversion as necessary will be carried out to prevent long-term interruption to the provision of the affected services. Where diversions are required the replacement utilities will be placed underground wherever practicable.

vii) New trees requested where possible

The submission requests that trees should be planted where possible to make the neighbourhood more aesthetic.

Section 4.6.11.3.1 of EIAR Chapter 4 Proposed Scheme Description sets out the planting strategy for the Proposed Scheme has been developed in response to the objectives set out in both the South Dublin County Development Plan 2022 – 2028 (SDCC 2021) and the Dublin City Development Plan 2022 – 2028 (DCC 2021). The planting strategy is also in response to landscape and urban realm opportunities arising from the Proposed Scheme to integrate new infrastructure within the existing local context and to enhance the visual and amenity value of streets and spaces.

The planting strategy includes replacement of street trees and groups of trees that may be impacted by the Proposed Scheme, but also the introduction of new tree planting and street trees within other spaces and along streets. Reinforcement of green infrastructure along the route will improve the overall amenity, character and appeal of the route corridor and localities along it, as well as enhancing biodiversity.

In addition to trees and street trees, other vegetation is also proposed along the route including hedgerows, ornamental planting and amenity grassland, shrub and meadow grass areas. These will be utilised to reinstate property boundaries altered by the Proposed Scheme.

viii) Access to lane way

The submission stresses the importance of access to the laneway adjacent to no. 9 Walkinstown Road which provides access to the rear of the property for parking.

Access/egress to the laneway will be maintained as part of the Proposed Scheme, both when in operation and during construction. Section 5.5.3.2 sets out that "*When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with residents and business owners prior to construction starting in the area. The duration of the works will vary from property to property, but access and egress will be maintained at all times.*"

2.7.4 11 - Killeen Motor Group, New Nangor Road

2.7.4.1 Description of Proposed Scheme at this location

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.5.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description, between the New Nangor Road (R134) / Riverview Business Park junction and New Nangor Road (R134) / Killeen Road junction it is proposed to widen the existing R134 carriageway to accommodate enhanced bus, cycle and pedestrian facilities along the corridor. This will require localised land acquisition on both the southern and northern boundaries to the existing carriageway. The existing roundabouts and junctions along this portion of the New Nangor Road (R134) will be upgraded to cycle protected signalised junctions with the provision of large segregation islands proposed where practicable in consideration of the heavy goods vehicle movements in the area. Removal of left turn slip lanes and improved pedestrian crossing facilities are also proposed.

The boundary of the Toyota Motor Group lands contains a gate located centrally along the boundary. In order to achieve the desired design for the Proposed Scheme, permanent and temporary land acquisition is proposed to the west of the central gate over a length of approximately 110m, with a maximum width of land to be permanently acquired of approximately 1.1m. This will result in the removal of the existing hedge and stub wall / railings along this section of the boundary. A proposed 2.4m high rendered block wall with security measures is proposed for the new boundary, as well as some replacement planting consisting of 8 semi mature trees. At the central gate, while the gate itself is to remain, temporary land acquisition is proposed to allow the access surfacing to be relaid to tie-in to the proposed levels of the footpath. East of the central gate, no land acquisition is required.

The relevant extract from the General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.7.4.1.

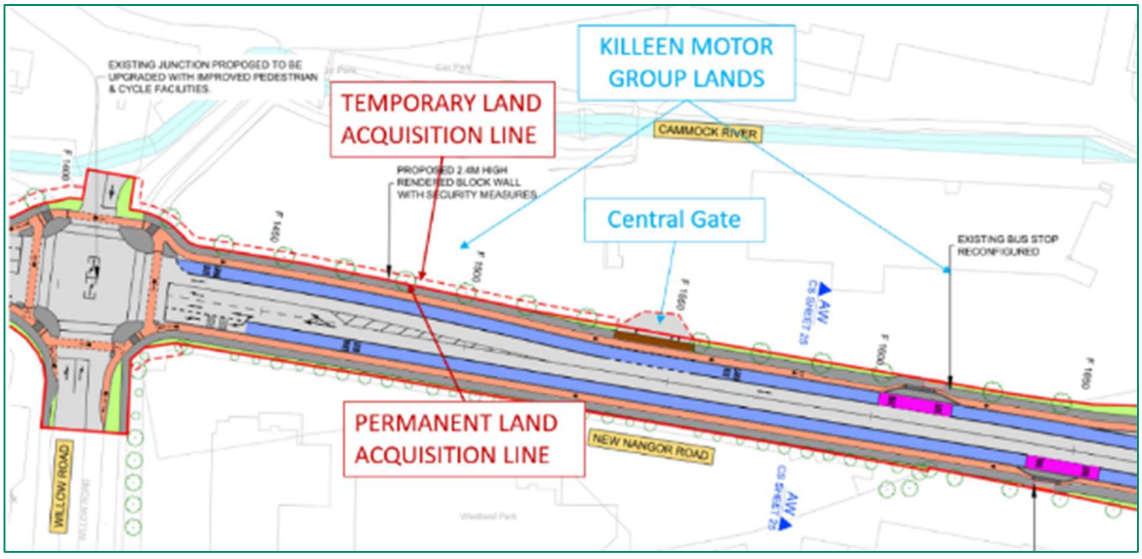


Figure 2.7.4.1: General Arrangement of Proposed Scheme adjacent to Killeen Motor Group (Sheet 48)

The relevant extract from the typical cross-section in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.7.4.2.

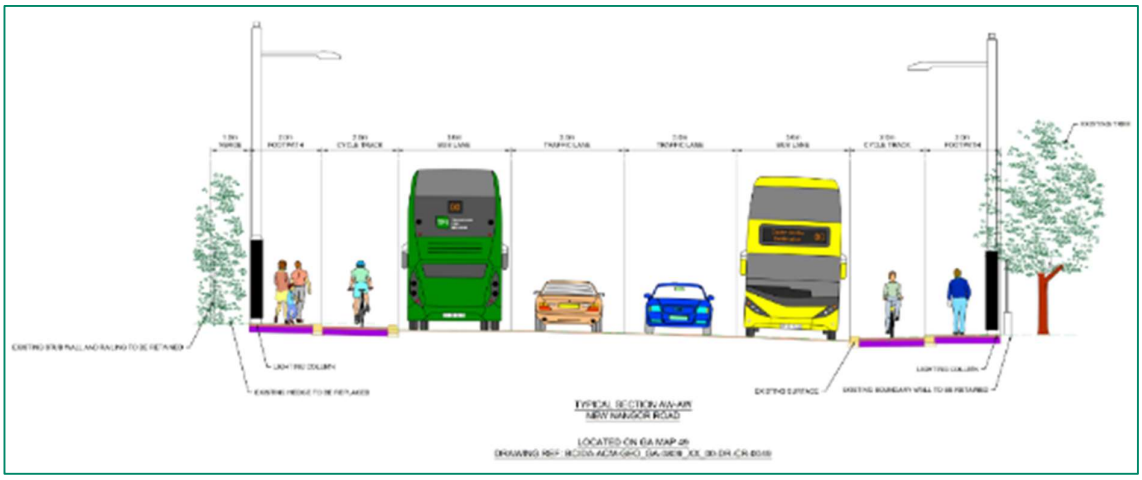


Figure 2.7.4.2: Typical Cross-section Adjacent to Toyota Motor Group

The relevant extract from the CPO Deposit Maps showing the proposed permanent and temporary land acquisition areas at Toyota Motor Group is shown in Figure 2.7.4.3.

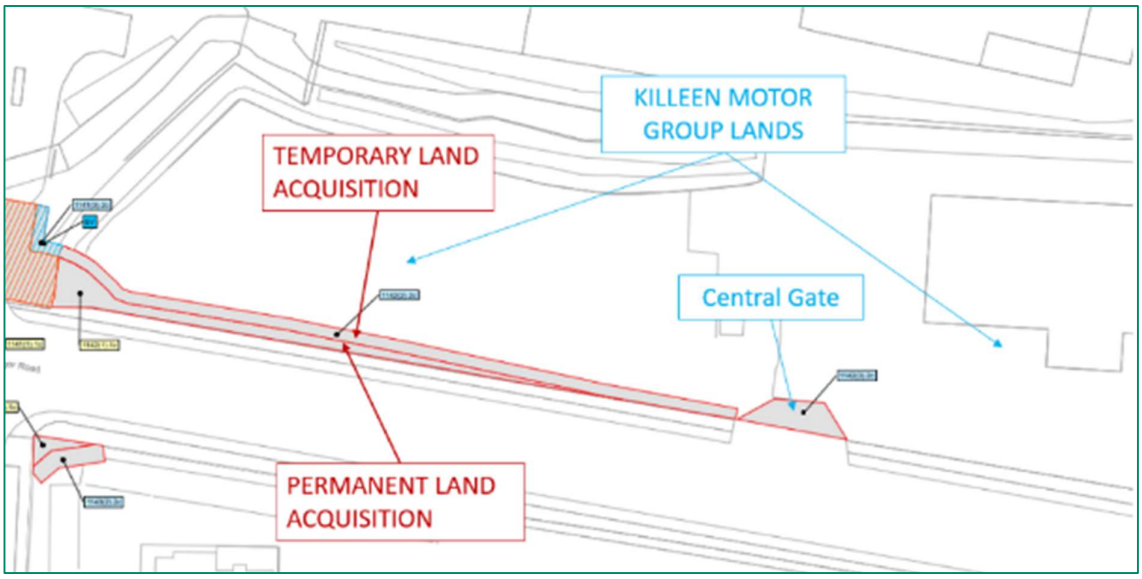


Figure 2.7.4.3: Extract from CPO Deposit Maps at Toyota Motor Group

The proposed permanent and temporary land acquisition lines overlain on aerial photography are shown in Figure 2.7.4.4.



Figure 2.7.4.4: Proposed Land Acquisition lines adjacent to Toyota Motor Group

2.7.4.2 Summary of Issues Raised

This submission made the following observations.

i) Proposals welcomed

ii) Lands to be secure and accessible at all times during construction

iii) Request for omission of new trees and query concerning the location of the proposed hedge

2.7.4.3 Responses to Issues Raised

i) Proposals welcomed

The submission notes that Killeen Motor Group broadly welcomes the Proposed Scheme and then makes a number of observations.

The NTA welcomes the support for the proposals.

ii) Lands to be secure and accessible at all times during construction

The submission states that the proposed permanent boundary treatment is welcomed and requests that their lands are to be secure at all times during construction via on-site security and concrete barriers. In addition, the submission notes that the central gate on New Nangor Road is operation al and required access at all times.

Section 5.5.3.2 of EIAR Chapter 5 Construction states that: *"When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with residents and business owners prior to construction starting in the area. The duration of the works will vary from property to property, but access and egress will be maintained at all times."*

In respect of Land Acquisition and Boundary Treatment, Section 5.5.2.1 of Chapter 5 Construction of Volume 2 of the EIAR states the following: *"Liaison with impacted landowners will be carried out in advance of commencement of boundary works to properties.*

Boundary works will be commenced where both permanent and temporary land acquisition is required to ensure that sufficient space is available to construct the Proposed Scheme. Boundary treatments will be carried out on a section-by-section basis (with sections / sub-sections defined in Section 5.2), and in line with the traffic management stages set out in Section 5.8.3."

In terms access the Construction Traffic Management Plan Contents (CTMP) of Construction and Environment Management Plan (CEMP) in Appendix A5.1 in Volume 4 of the EIAR, Section 5.2.3.1 Access and Egress states: *"The appointed contractor shall provide advanced warning signs, in accordance with the Traffic Signs Manual (DTTAS 2019), on approach to the proposed access locations, and entry and exit points throughout the live working area.*

When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with homes and businesses prior to construction starting in the area."

Table 5.2 of Appendix A5.1 Construction Environmental Management Plan summaries the Construction Phase mitigation outlined in the relevant EIAR assessment chapter. Mitigation number LV5 states: *"Where properties are subject to permanent and / or temporary acquisition, appropriate measures will be put in place by the appointed contractor to provide for protection of features, trees and vegetation to be retained, for continued access during construction and for adequate security and*

screening of construction works. All temporary acquisition areas will be fully decommissioned and reinstated at the end of the Construction Phase, or at the earliest time after the reinstatement works are completed to the satisfaction of the NTA."

In summary, arrangements will be made on a case-by-case basis to maintain continued access to businesses affected by the works, at all times, where practicable. In addition, measures will be put in place by the appointed contractor to provide for adequate security of construction works.

iii) Request for omission of new trees and query concerning location of the proposed hedge

Proposed new trees

The submission requests the omission of the 8 new trees proposed behind the new boundary wall at this location, expressing concern that they will attract birds and cause sap / bird droppings to fall on the new cars parked on the site, which the submission asserts will sterilise a portion of the site and render it unsuitable as new vehicle storage.

As noted in Section 4.5.5.1 of EIAR Chapter 4 Proposed Scheme Description, it is proposed to widen the existing R134 carriageway to accommodate enhanced bus, cycle and pedestrian facilities along the corridor at this location. As described in section 2.22.1 of this report, the boundary of the Toyota Motor Group lands contains a gate located centrally along the boundary. In order to achieve the desired design for the Proposed Scheme, permanent and temporary land acquisition is proposed to the west of the central gate over a length of approximately 110m, with a maximum width of land to be permanently acquired of approximately 1.1m. This will result in the removal of the existing hedge and stub wall / railings along this section of the boundary. A proposed 2.4m high rendered block wall with security measures is proposed for the new boundary, as well as some replacement planting consisting of 8 semi mature trees.

Section 4.6.11.3.1of EIAR Chapter 4 states that *"The planting strategy has been developed in response to the objectives set out in both the South Dublin County Development Plan 2022 – 2028 (SDCC 2021) and the Dublin City Development Plan 2022 – 2028 (DCC 2021). The planting strategy is also in response to landscape and urban realm opportunities arising from the Proposed Scheme to integrate new infrastructure within the existing local context and to enhance the visual and amenity value of streets and spaces.*

The planting strategy includes replacement of street trees and groups of trees that may be impacted by the Proposed Scheme, but also the introduction of new tree planting and street trees within other spaces and along streets. Reinforcement of green infrastructure along the route will improve the overall amenity, character and appeal of the route corridor and localities along it, as well as enhancing biodiversity.

In addition to trees and street trees, other vegetation is also proposed along the route including hedgerows, ornamental planting and amenity grassland, shrub and meadow grass areas. These will be utilised to reinstate property boundaries altered by the Proposed Scheme."

Section 17.4.1.4.6 of Chapter 17 of the EIAR states*: "The Proposed Scheme will provide for the planting of new semi-mature street trees to replace removed trees, where practicable, and for improvement of the streetscape environment. Species selected shall be appropriate to the urban street environment and to the characteristics of the specific location;"*

Section 17.4.1.4.5 of Chapter 17 notes the following proposals: *"Substantial replacement and additional tree planting to sections of New Nangor Road between Woodford Walk and Willow Road (Ch. F50 to Ch. F1400) and provision of replacement trees and beech hedge to tie in with existing boundary treatments at Toyota Ireland / Diageo and Killeen Road (Ch. F1400 to Ch. F1750)."*

Figure 2.7.4.1 and Figure 2.7.4.4 show the relevant extracts from the General Arrangement drawings and the Landscaping General Arrangement drawings provided within EIAR Volume 3 Part 1 of 3 These drawings show the additional planting described in the EIAR.

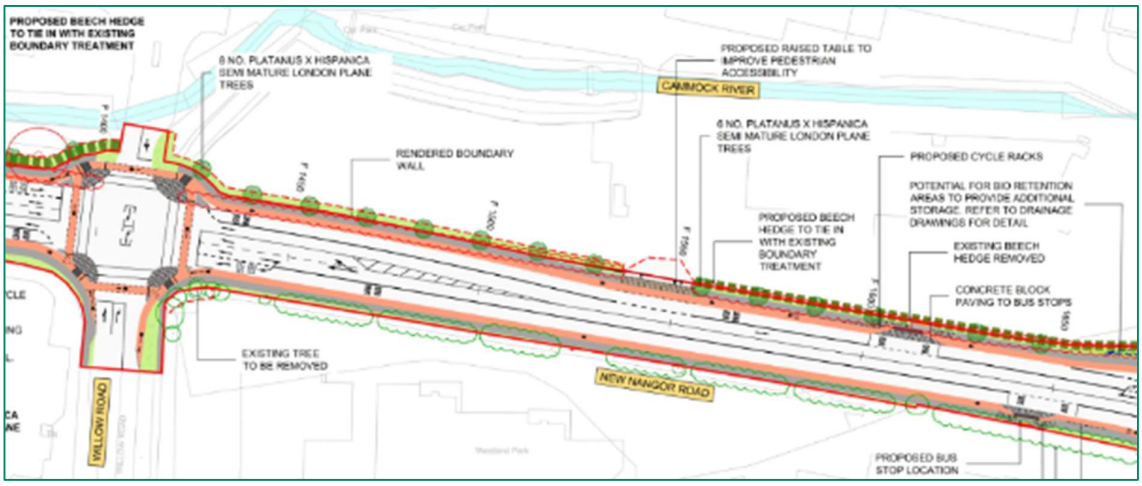


Figure 2.7.4.4: Extract from Landscaping General Arrangement drawings at Toyota site

The General Arrangement and Landscaping General Arrangement Drawings show the 8 no. proposed semi-mature trees as located in the temporary land acquisition behind the new boundary wall, whereas the design intent at this location is for the 8 no trees to be planted within the public road corridor between the proposed cycle track and footpath, as clarified in Figure 2.7.4.5.

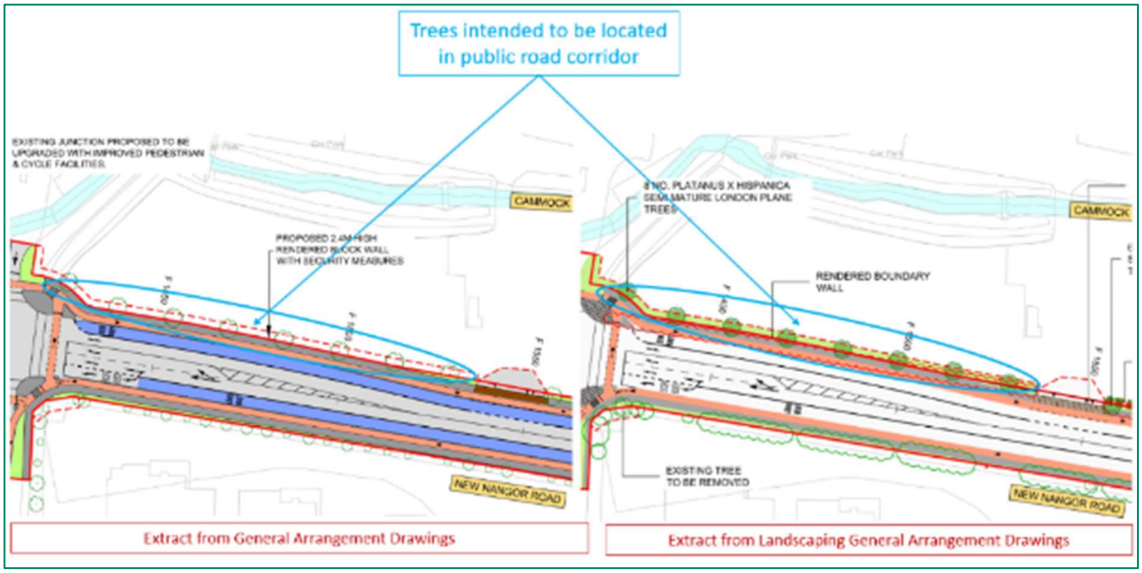


Figure 2.7.4.5: Extracts from General Arrangement and Landscaping General Arrangement Drawings

In summary, the 8 new trees at this location will be located within the public road corridor in accordance with the planting strategy for the Proposed Scheme.

Location of proposed new hedge

The submission notes that to the east of the central gate, where no land acquisition is proposed, a replacement beech hedge is proposed and appears to be located on the Toyota Motor Group lands.

The location of this proposed hedgerow is shown in Figure 2.7.4.4 and the existing boundary is shown in Figure 2.7.4.6.



Figure 2.7.4.6 Existing boundary to Toyota Motor Group east of the central gate (Image source: Google)

The relevant extract from the typical cross-section in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description shown in Figure 2.7.4.2 is located at this section of the boundary and an enlarged extract of this is shown in Figure 2.7.4.7.

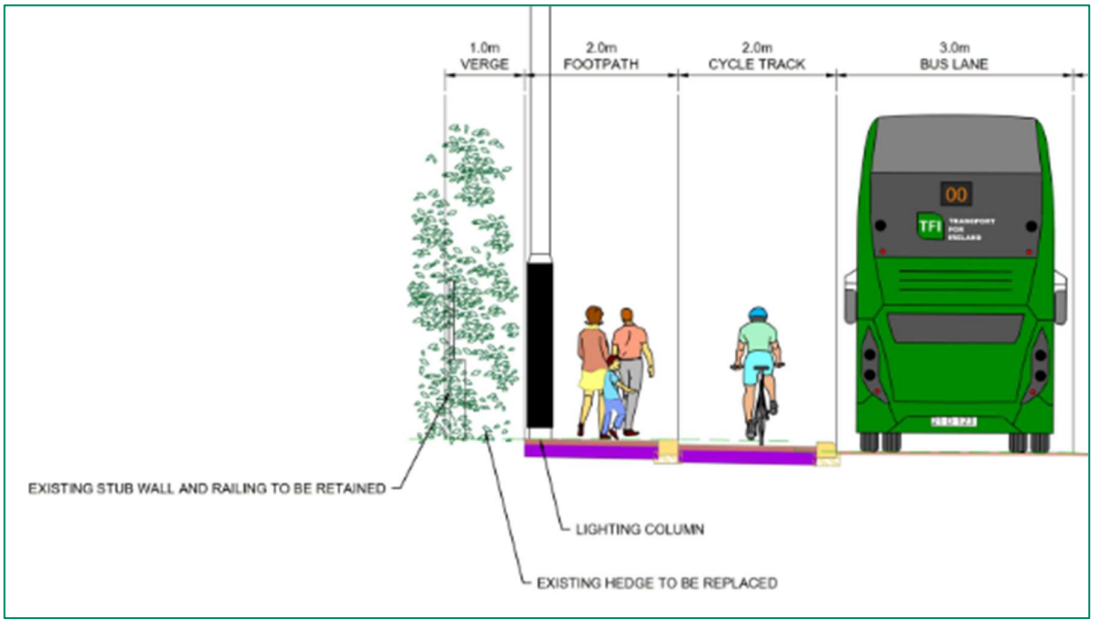


Figure 2.7.4.7: Extract from Typical Cross Section AW-AW at Toyota Motor Group lands

As shown in Figure 2.7.4.7, no road widening is proposed at this location. The proposed cycle track will replace the existing footpath and the proposed footpath will be located in the road corridor verge. It is anticipated that the construction of the proposed footpath will result in the need to replace the existing hedge, with the new hedge being planted between the proposed back of footway and the existing boundary wall / railings to the Killeen Motor Group lands which will be retained.

In summary, the proposed hedge is located within the existing road corridor.

2.7.5 27 - Tesco Ireland Limited, Dolphin's Barn

2.7.5.1 Description of Proposed Scheme

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.4.1 of Chapter 4 of Volume 1 of the EIAR, Proposed Scheme Description, between Dolphin Road and South Circular Road (R811), it is intended to provide one bus lane, one general traffic lane and one cycle track in each direction along the R110. The proposed South Circular Road junction design takes into account the Dolphins Barn Public Realm improvement plan that is being implemented by Dublin City Council (DCC).

Between South Circular Road (R110) and Ardee Street it is proposed to have one bus lane, one general traffic lane and one cycle track in each direction. It is also intended to upgrade the Ardee Street junction with improved pedestrian facilities. It is proposed to modify the Kevin Street / Dean Street junction to facilitate improved cycle facilities. Bus priority from St. Luke's Avenue will be maintained with through Signal Controlled Priority as there is insufficient road corridor width on Dean Street to provide continuous bus lanes.

Extract from General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR is included in Figure 2.7.5.1

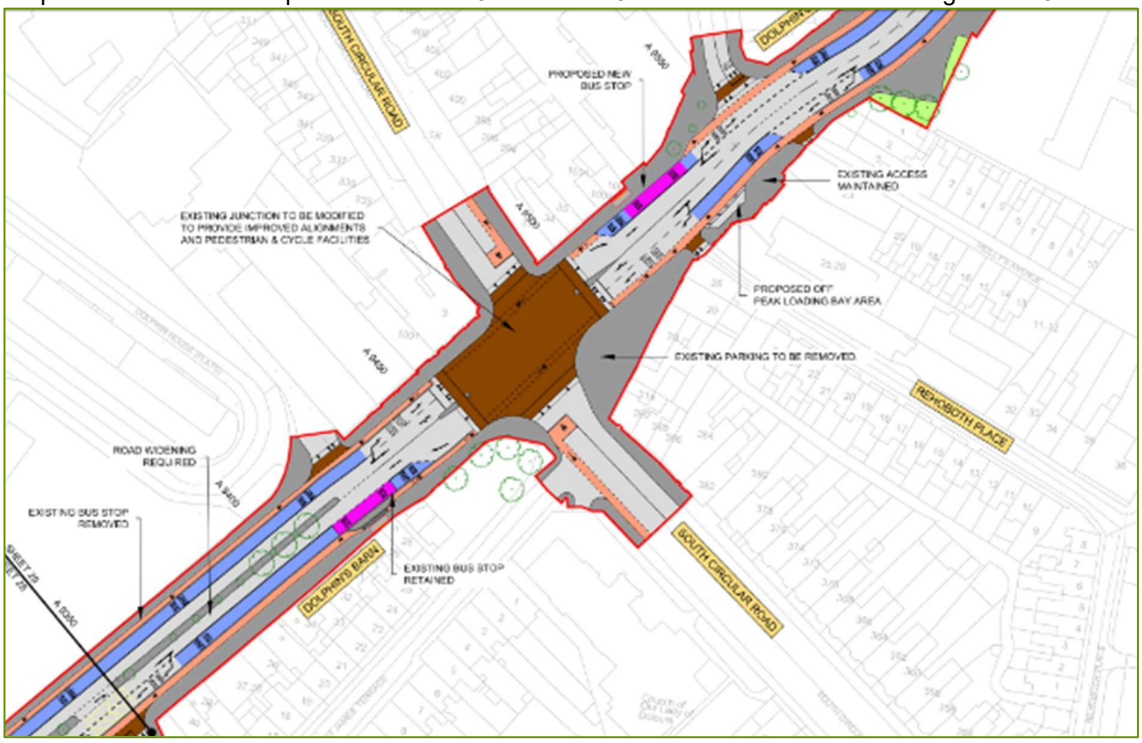


Figure 2.7.5.1: Extract from General Arrangement Drawing (Sheet 29)

2.7.5.2 Summary of Issues Raised

The submission raised the following issues:

Advocacy for the proposed scheme

In their submission Tesco Ireland Limited welcomes the proposed investment in public transport, active travel, and the urban environment of Dublin, adding, it is considered that the proposed BusConnects Scheme will greatly improve the way in which Dublin City functions from an economic, social, and environmental perspective.

Loading

Tesco currently operate a store at Dolphin's Barn which currently does not have any dedicated loading facilities. A private laneway located adjacent to the store where access is not permitted for Tesco deliveries. As a result, early morning deliveries takes place kerbside on Dolphin's Barn with loading taking place from the current advisory cycle lane. Tesco deliveries will no longer be able to take place in this manner as a result of mandatory cycle track proposed at this location under the Proposed

Scheme. In light of this Tesco request the inclusion of a loading bay at this location to serve the retail and commercial premises located along the street at Dolphins Barn.

2.7.5.3 Response to Issues Raised

Advocacy for the proposed scheme

The NTA welcomes the support expressed for proposed investment in public transport, active travel, and the urban environment of Dublin and the acknowledgement that the Proposed Scheme will greatly improve the way in which Dublin City functions from an economic, social, and environmental perspective.

Loading

The Proposed Scheme layout at Dolphin's Barn was arrived at in consultation with Dublin City Council considering Dublin City Councils' Public Realm Improvement Plan for Dolphins Barn. This Public Realm Improvement Plan does not allow for loading bays at this location.

The NTA notes the suggestions made regarding loading bay for commercial properties at this location. Such a proposal is not required to achieve the Proposed Scheme objectives. It is also noted that the Proposed Scheme would not preclude the future introduction of such a measure at a future date should the local authority wish to give consideration to this.

Figure 2.7.5.2 is an extract from the Dolphins Barn Public Realm Improvement Plan Part 8 Submission Report showing proposed layout on Dolphin's Barn.



Figure 2.7.5.2: Extract from Dolphins Barn Public Realm Improvement Plan Part 8 Submission (9. Overview of Proposed Works)

2.7.6 35 - Leila and Stephen Early, Rafter's Road

2.7.6.1 Description of Proposed Scheme

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.3.1 of Chapter 4 of Volume 1 of the EIAR, Proposed Scheme Description, on Drimnagh Road (R110) it is proposed to maintain one bus lane, one general traffic lane and one cycle track in each direction. The junction at Kildare Road, Saint Mary's Road and Drimnagh Road has been revised to provide improved cycle and pedestrian facilities. This will provide improved cycle connectivity between the Drimnagh Road (R110) and the proposed offline cycle route via Kildare Road.

On Crumlin Road (R110) bus priority will be maintained by incorporating Signal Controlled Priority and managing the flow of traffic in both directions along the Crumlin Road (R110). Widening of the road corridor here for dedicated bus and traffic lanes in both directions is not feasible due to the size of the front gardens and gradient constraints between the road level and front doors. The proposed arrangement requires the closure of Clonard Road and Bangor Drive for direct access onto Crumlin Road to facilitate traffic management within this portion of the Crumlin Road (R110) such that bus priority can be maintained, one-way access from the Crumlin Road (R110) onto Clonard Road and Bangor Drive will be possible. Egress and access for Bangor Drive and Clonard Road can be achieved via Windmill Road and Old County Road.

Due to width restrictions in the area of Crumlin Road (R110) there is insufficient space to provide dedicated cycle facilities. Therefore, it is proposed to provide an alternative cycle route along Kildare Road and Clogher Road.

Extract from General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR is included in Figure 2.7.5.1.

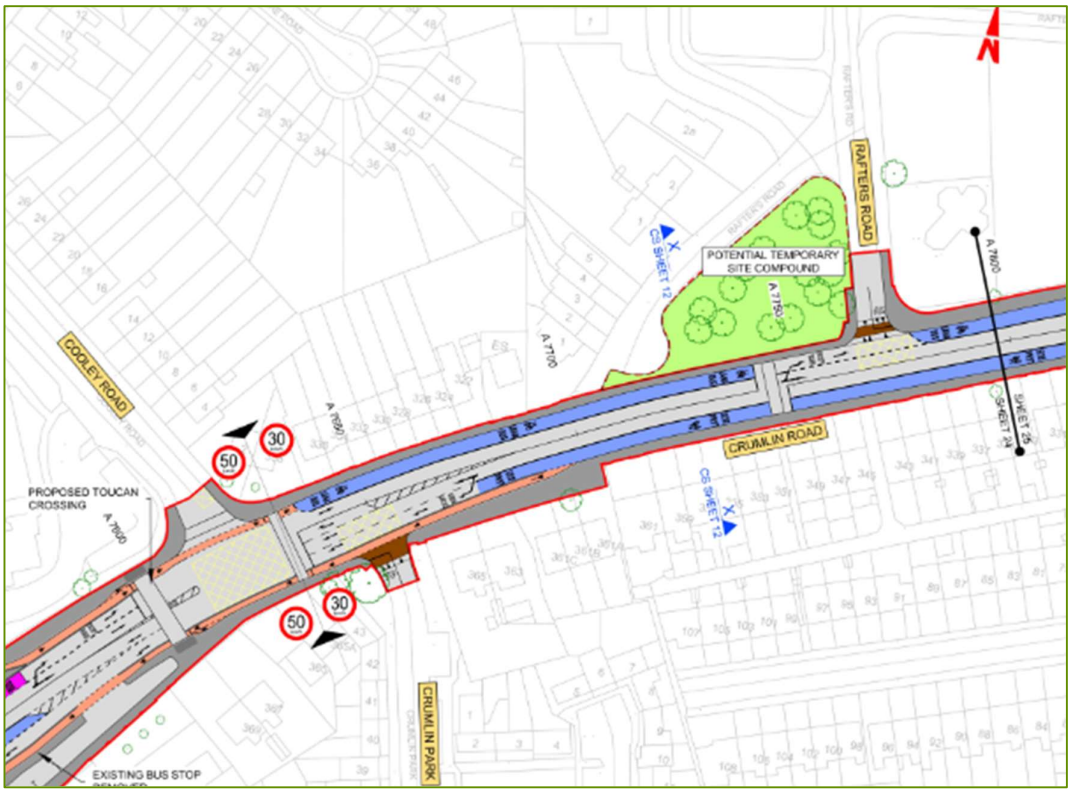


Figure 2.7.6.1: Extract from General Arrangement Drawing (Sheet 24)

2.7.6.2 Summary of Issues Raised

The submission raised the following issues:

1. Loss of green space negative impact on community

The loss of access to this recreational area will have a negative impact on the local community as it removes a local amenity. The mature trees and green space together provide a very pleasant space which will not be reinstated to their former appearance once the project is completed.

2. Property values

The loss of this green space and recreational area will negatively impact local property prices and coupled with the ongoing construction, any local residents who may wish to move will be hugely impacted by this loss of value.

3. Scheme will not bring positive change to Crumlin area

It is not obvious that BusConnects will bring any meaningful positive change to the Crumlin area as the proposed plan significantly widens the road but does not help to reduce traffic volume.

4. Suggest use of green area as bike depot

The Rafter's Road green area would be better utilised as a Dublin bike depot to promote the use of non-motor vehicles in the area.

5. Mature trees help offset traffic emissions.

The green area and mature trees help to offset traffic emissions. When the trees are removed, this will compound the already poor air quality level as a result of the vehicular traffic. This considerable issue must be considered given any trees that will be planted post-construction will not offset the vehicular emissions to the same degree as pre-construction.

2.7.6.3 Response to Issues Raised

1. Loss of green area

The land in question included in the temporary land acquisition is to provide the necessary carriageway and footpath cross section width at this location, as well as the provision of a contractor's temporary construction compound [TC9].

Section 5.3.3 of EIAR Chapter 5 Construction describes the construction works in the various sub-sections of Section 3 of the Proposed Scheme from Crumlin to Grand Canal. It is anticipated that Site Compound TC9 will be used in connection with sub-section 3e (approximately1650m along Crumlin Road between Cooley Road / Crumlin Road junction and the Grand Canal, with an expected construction duration of approximately five months), sub-section 3f (approximately 1350 along Kildare Road and Clogher Road between the Drimnagh Road / Crumlin Road / Kildare Road / St. Mary's Road junction and the Sundrive Road junction, with an expected construction duration of approximately four months), sub-section 3g (Sundrive Road junction on the Clogher Road, with an expected construction duration of approximately one month), sub-section 3h (approximately 1050m along Clogher Road between the Sundrive Road junction and the Grand Canal, with an expected construction duration of approximately three months) and sub-section 4a (approximately 1,550m along Dolphin's Barn Street, Cork Street, and St. Luke's Avenue with and expected construction duration of approximately five months).

The Construction Compound will have controlled access, lighting and will be fenced off during the construction phase (see section 5.5.2.8 in Chapter 5 of Volume 2 of the EIAR). Once the construction contract is complete it will be removed, and the area reinstated. The proposed reinstatement will restore the grassland and plant 14 no. Gleditsia Triacanthos (Honey Locust) semi mature trees, as shown in Figure 2.7., which is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR.

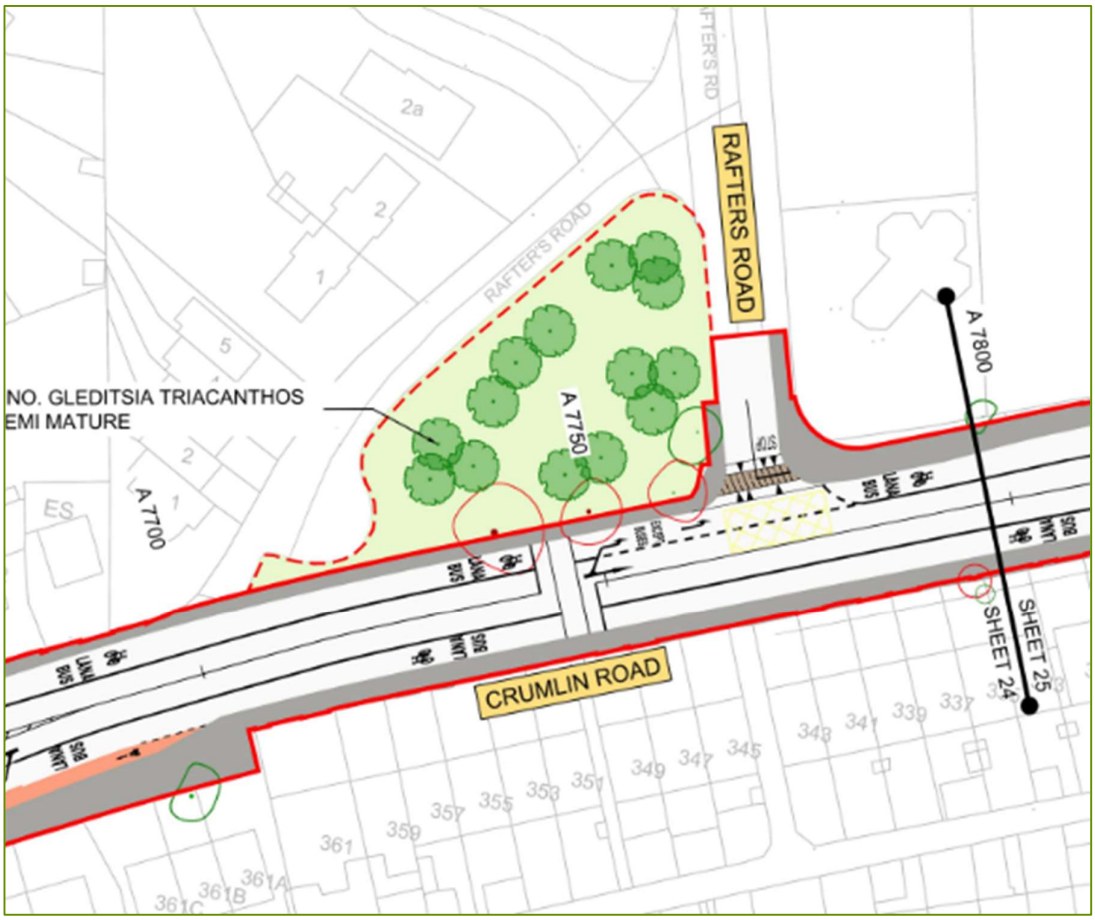


Figure 2.7.6.2: Extract from Landscaping General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR

2. Property values

As regards the view expressed that the combined impact of all the issues raised would have an adverse and negative impact on the value of properties in the Rafter's Road area, EIAR Chapter 10 Population includes Appendix A10.2 Economic Impact of the Core Bus Corridors. Section 3 on page 14 the appendix discusses the impact of the Proposed Scheme on property prices and notes in conclusion. *"The public realm improvements planned by the NTA may lead to an increase in value of both residential and retail property prices, especially in the community centres along the corridors. Evidence shows that investing in public realm creates nicer places that are more desirable for people and business to locate in, thereby increasing the value of properties in the area. The evidence suggests that all public realm improvements generate value, regardless of the size of the investment or the neighbourhood. Residents along the corridors will also see a measurable increase in their quality of life, with evidence showing that residents are willing to pay more for an improved public realm."*

3. Scheme will not bring positive change in the Crumlin area

Detailed response to traffic issue raised by this submission has been provided in Section 2.4.3.2 response to submission and community impacts are provided in Section 2.5.3.10 response to submission.

4. Suggest reuse of green area as bike depot

As noted in Section 4.6.3 of Chapter 4 of Volume 2 of the EIAR, cycle stands will generally be provided, where practicable, at island Bus Stops and key additional locations as noted in the Landscaping General Arrangement drawings (BCIDC-ACM-UBR_ZZ-0809_XX_00-DR-LL-9001) in Volume 3 of the EIAR and in accordance with the cycle parking provision shown in the bus stop

arrangements shown in Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors of Volume 4 Part 1 of 4 of the EIAR.

The provision of additional bike storage facilities is outside the scope of the Proposed Scheme.

5. Mature trees help offset traffic emissions

As shown in Figure 2.7.6.2, 3 existing trees will be removed in order to provide the necessary carriageway and footpath cross section width at this location, although these will be replaced by 14 new semi-mature trees within the green area.

Chapter 7 Air Quality of the EIAR sets out the methodology adopted to assess the impact on air quality of the Proposed Scheme. Table 7.1 identifies the air quality receptors within the study area between Crumlin and the Grand Canal.

Section 7.4.3.3 of Chapter 7 identifies the significance of the changes in the concentration of each of the ambient receptors in the context of the TII significance criteria (TII 2011). Table 7.33 of Chapter 7 provides a list of the most impacted receptor locations, which includes locations AQ274 and AQ275 on Crumlin Road in the vicinity of Rafters Road. These are all assessed as experiencing a negligible impact (slight beneficial) due to the Proposed Scheme in terms of the annual mean NO_2 concentration. All other receptors, including others on Crumlin Road in the vicinity of Rafters Road (AQ276, AQ278) and on Rafters Road (AQ277), are impacted less.

As shown in Table 7.33 and Figure 7.4 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of annual mean PM_{10} concentrations, with all receptors experiencing a negligible impact.

As shown in Table 7.33 and Figure 7.5 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of the annual mean $PM_{2.5}$ concentration with all receptors experiencing a negligible impact.

In accordance with the EPA Guidelines (EPA 2022), the impacts associated with the Operational Phase traffic emissions pre-mitigation are overall neutral and long-term.

Section 7.4.3.3 goes on to note that the predictions reported are based on conservative assumptions regarding background pollutant concentrations and the improvement in vehicle emission rates. 2019 background pollutant concentrations have been used to represent 2028 and are likely be lower by the opening year than in 2019. Older fleet projections were used in the absence of a fleet that incorporates the effects of 2023 Climate Action Plan measures – a larger proportion of electric vehicles is planned by the opening year than has been modelled. In reality, total concentrations (and magnitude of change) are likely to be lower than those reported in the EIAR.

Section 7.6.2 describes the residual impacts for the Operational Phase: *"The air dispersion modelling assessment has found that the Proposed Scheme will be neutral overall in the study area. The number of receptors where an exceedance of the NO2 limit value is predicted reduces from 24 in the Do Minimum scenario to 12 as a result of the Proposed Scheme. In 2043, all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the Do Something (and Do Minimum) scenario. There are no substantial or moderate adverse effects expected as a result of the Operational Phase of the Proposed Scheme. Therefore, overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are Neutral and Long-term. No significant residual impacts have been identified during the Operational Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."*

In summary, the EIAR demonstrates that there will be no significant impact on air quality as a result of the operation of the Proposed Scheme.

2.7.7 37 - Blackwin Limited, Calmount Road / Ballymount Avenue

2.7.7.1 Description of Proposed Scheme

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.2.1 of Chapter 4 of Volume 1 of the EIAR, Proposed Scheme Description, two sustainable link roads will be constructed in the Ballymount area due to the existing width constraints within the existing Greenhills Road (R819) to the east of the M50. The existing Ballymount Road Upper connection to Greenhills Road will be closed to vehicular traffic and a new 220m long link road to the south of Ballymount Avenue will provide a connection to Greenhills Road (R819). New retaining walls and earth embankments will be required at this location to facilitate the new road construction. It is proposed to widen the existing Ballymount Avenue and Calmount Road for dedicated bus and cycle tracks and connect Calmount Road to Greenhills Road. The existing Greenhills Road (R819) will be retained for local access and cycling facilities with a cul-de-sac treatment to the northern end where a new approximately 250m long sustainable transport link road will be constructed in the green area to the east of Calmount Road.

As part of the Proposed Scheme the existing roundabout at the Ballymount Avenue / Calmount Road junction is to be converted to a fully signalised junction with bus priority and pedestrian and cyclists facilities. The relevant extract from the General Arrangement drawings in EIAR Volume 3 Part 1 of 3 are shown in Figure 2.7.7.1.

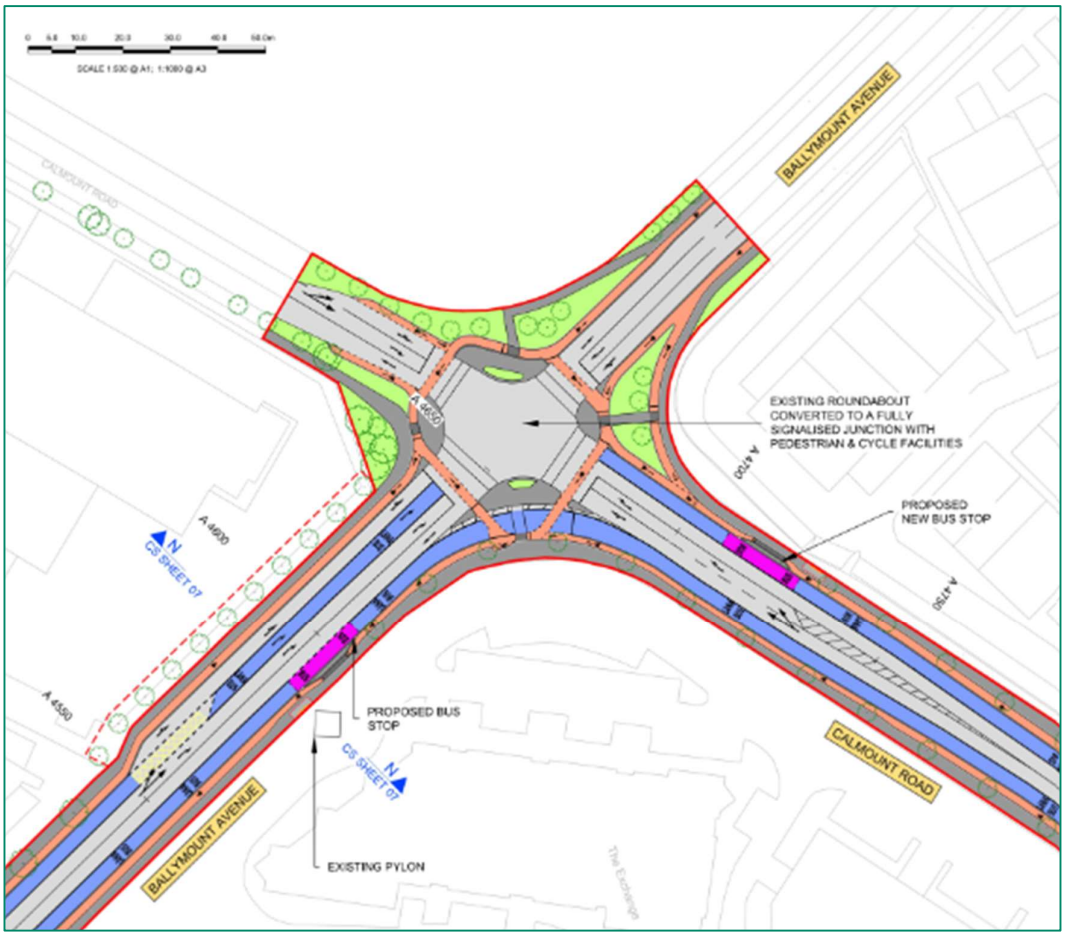


Figure 2.7.7.1: Extract from General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR (Sheet 14)

2.7.7.2 Summary of Issues Raised

The submission raised the following issues:

8. Concern about the impact of the proposed Scheme on operation of junction

The submission expressed the view that the Proposed Scheme would generate a significant impact upon the operational performance of the Calmount Road / Ballymount Avenue Junction.

It asserts that the accumulated impact of reducing the existing levels of vehicle capacity (by converting the junction to traffic signals) in parallel with loading a substantial quantum of additional vehicle traffic movements (away from Greenhills Road) through the Calmount Road / Ballymount Avenue junction is predicted to have a material impact upon the junction's operation resulting in additional delays for vehicle drivers and an associated increase in vehicle queues back along the approach arms. Furthermore, the submission expresses the view the active management of the junction's traffic controls, the application of which will ensure that priority is afforded to the junctions southern and eastern arms, has the potential for further delay to vehicle movements on the northern and western approach arms to the junction.

The submission is concerned that there is a potential for excessive vehicle queues to be generated along the northern and western arms in the proposed junction layout as it has the potential to block the two site access junctions to Blackwin Limited permitted lands, thereby restricting access to/from their recently permitted development on the adjoining lands to the northwest of the Calmount Road / Ballymount Avenue junction.

9. The submission suggests additional lanes at the junction.

The submission believes that there is an opportunity to amend the Proposed Scheme junction design on the northern and western arms of the junction thereby minimising the extent/length of vehicle queues generated back along these two specific arms of the junction that the submission asserts will occur. The amendments involve increasing the number of approach lanes from two to three approach lanes with increased flare lengths on both the northern and western arms of the junction.

2.7.7.3 Response to Issues Raised

1. Junction operation and future traffic volumes

A detailed response to the future traffic volumes along Calmount Road as part of the Proposed Scheme has been provided in Section 2.4.3.2 of this report.

In relation to the specific junction capacity issues raised by the submission, The Junction Design Report provided as TIA Appendix 2 in the EIAR Volume 4 Part 2 of 4 explains the rationale for the proposed junction and also shows the design evolution for this junction, noting that: *"The proposed junction design has evolved on the BusConnects project from initial Concept Design, Emerging Preferred Route, Public Consultation 2, Public Consultation 3 up to the Current Design. The junction design iterations have been undertaken to optimise pedestrian, cyclist and bus priority infrastructure on the scheme."*

The conversion of the Ballymount Avenue / Calmount Road junction from a roundabout to a signalised junction allows for more control of movements through the junction enabling the busiest arms during peak periods to be prioritised.

2. Suggested additional approach lanes

In terms of the impact during the operation of the scheme, the extensive traffic modelling exercise undertaken as part of the Proposed Scheme assessment as presented in Chapter 6 Traffic and Transportation of the EIAR has not identified the need for any additional traffic lanes at this junction in order to facilitate the Proposed Scheme or mitigate anticipated impacts. Pages 99 and 100 of The Junction Design Report in Appendix A6.3 of the EIAR Volume 4 Part 2 of 4 presents the junction assessment results at the Ballymount Avenue / Calmount Road in each peak period where it is demonstrated that the junction will operate at capacity in the AM pear hour, it will be congested for traffic but safer for pedestrians and cyclists and ensure that buses have priority through the junction. In the PM peak hour, the junction operates within capacity.

Figure 2.7.7.2 shows an extract from the planning application drawing titled "Emerging NTA Bus Connects Works", drawing no. 210175-DBFL-TR-SP-DR-C-1121 revision P03, SDCC planning application SD22A/0099.



Figure 2.7.7.2: Extract from SDCC Planning Application SD22A/0099 Blackwin Limited Drawing no. 210175-DBFL-TR-SP-DR-C-1121Energing NTA Bus Connects Works

While the additional lanes suggested by the submission are not required for the Proposed Scheme, the Proposed Scheme layout does not preclude the provision of additional lanes at a future date should the local authority wish to give consideration to this.

If permitted development is constructed before the CBC, then the Proposed Scheme will tie in to the permitted arrangement on those two arms if implemented and this will not have any impact on the Proposed Scheme.

2.7.8 48 - Calmount Holding Limited (Calmount Business Park)

2.7.8.1 Description of Proposed Scheme at this location

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.2.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description, two sustainable link roads will be constructed in the Ballymount area due to the existing width constraints within the existing Greenhills Road (R819) to the east of the M50.

The existing Ballymount Road Upper connection to Greenhills Road will be closed to vehicular traffic and a new 220m long link road to the south of Ballymount Avenue will provide a connection to Greenhills Road (R819), new link 1 in Figure 2.7.8.1. New boundary walls / fencing and earth embankments will be required at this location to facilitate the new road construction. It is proposed to widen the existing Ballymount Avenue and Calmount Road for dedicated bus and cycle tracks and connect Calmount Road to Greenhills Road.

The existing Greenhills Road (R819) will be retained for local access and cycling facilities with a cul-de-sac treatment to the northern end where a new approximately 250m long sustainable transport link road will be constructed in the green area to the east of Calmount Road, new link 2 in Figure 2.7.8.1. New retaining walls and earth embankments will be required at this location to facilitate the new road construction.

In addition, a third new link road is proposed to maintain access for local businesses along the Greenhills Road (R819) and in this area a small roundabout will be constructed with a new link road approximately 90m in length to connect Greenhills Road with Calmount Avenue. This is shown as new link 3 in Figure 2.7.8.1, which generally aligns to the principles of the SDCC Part 8 schemes for the area. Accessible ramps and stairs will be provided to mitigate against the steep gradient on Calmount Avenue where it joins to Greenhills Road.

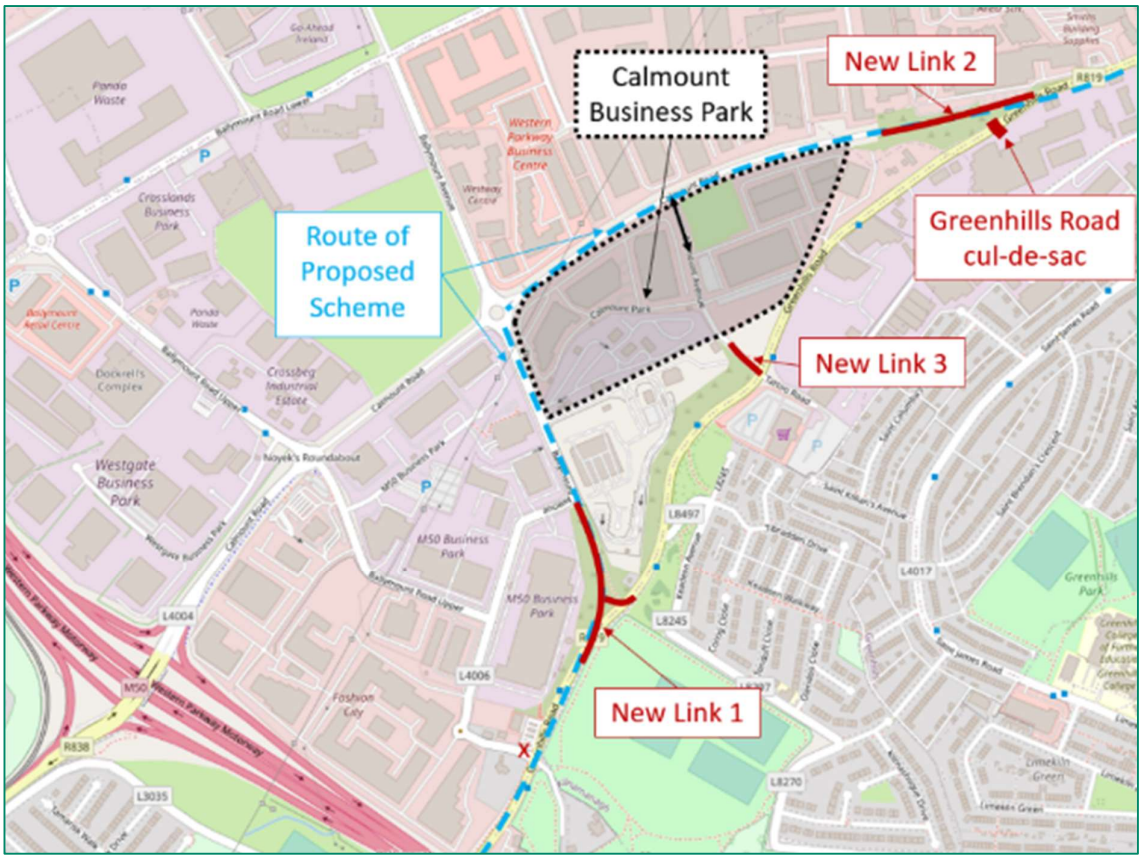


Figure 2.7.8.1: Location of new links included in the Proposed Scheme in the vicinity of Calmount Business Park

The acquisition of land from Calmount Holding Limited is required for new link 3 shown in Figure 2.7.8.1. The relevant extract from the General Arrangement Drawings in the EIAR, Volume 2, Part 1 of 3, Chapter 4 Proposed Scheme Description is shown in Figure 2.7.8.2.

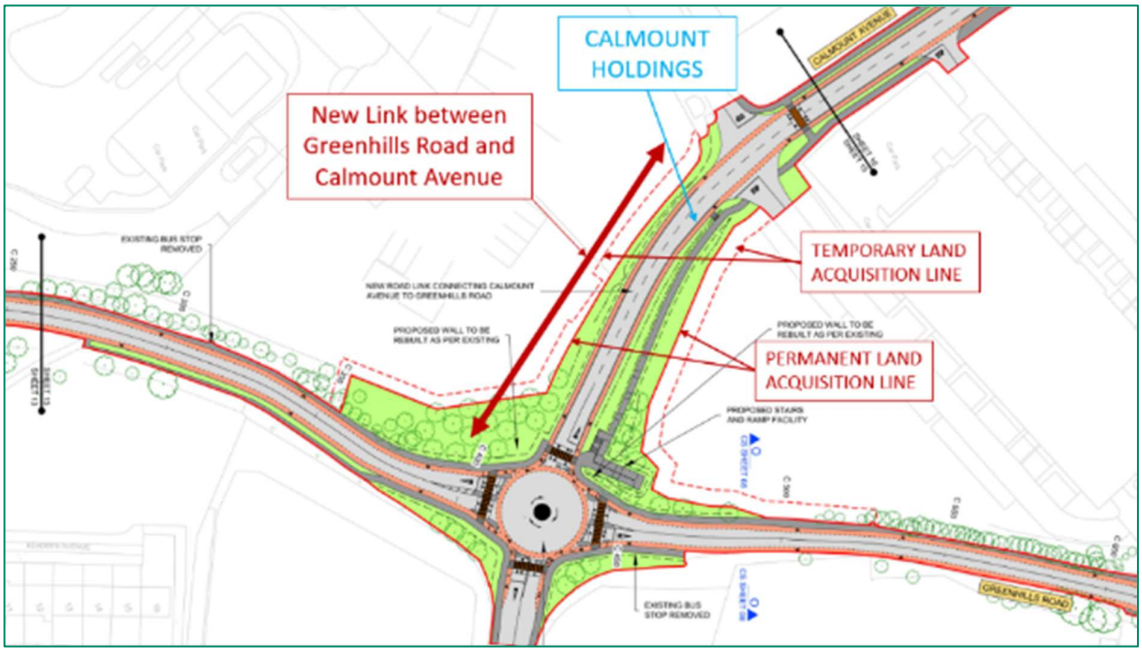


Figure 2.7.8.2: General Arrangement of Proposed Scheme at Calmount Holdings (Sheet 15)

The relevant extract from the CPO Deposit Maps showing the proposed permanent and temporary land acquisition areas at the Greenhills Road / Calmount Avenue junction is shown in Figure 2.7.8.3.

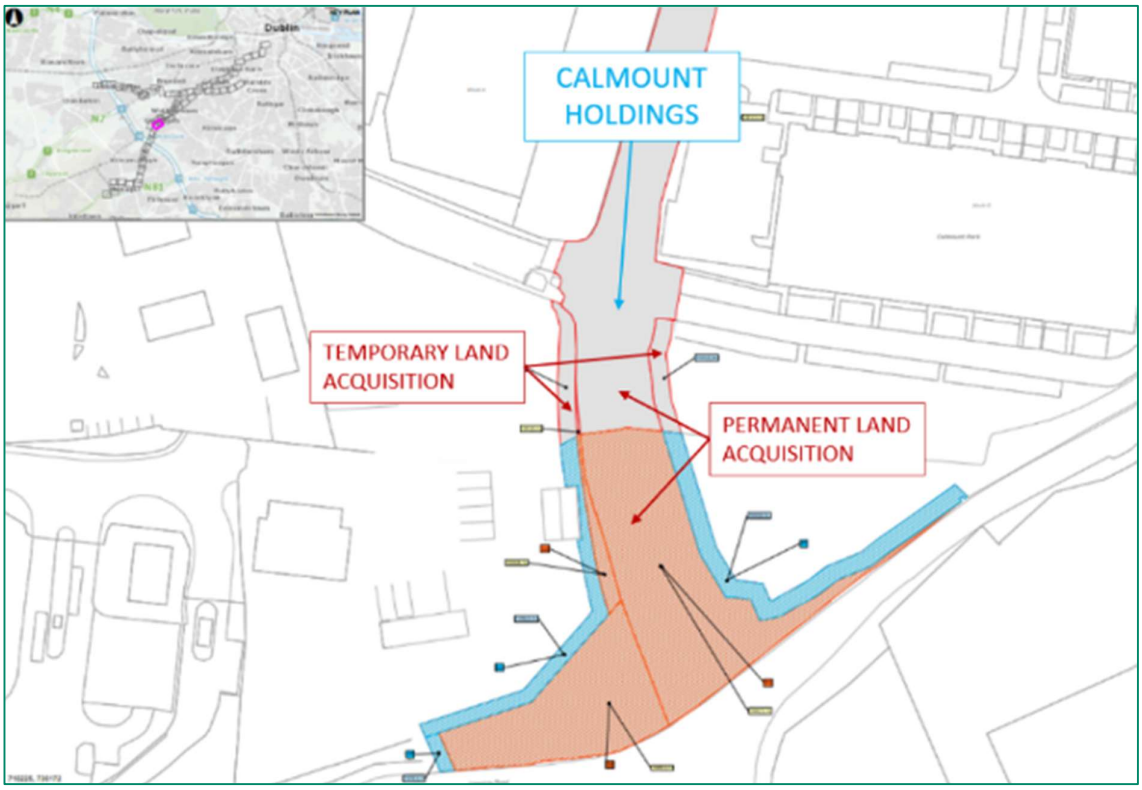


Figure 2.7.8.3: Extract from CPO Deposit Maps at Calmount Holdings

The proposed permanent and temporary land acquisition lines overlain on aerial photography are shown in Figure 2.7.8.4.

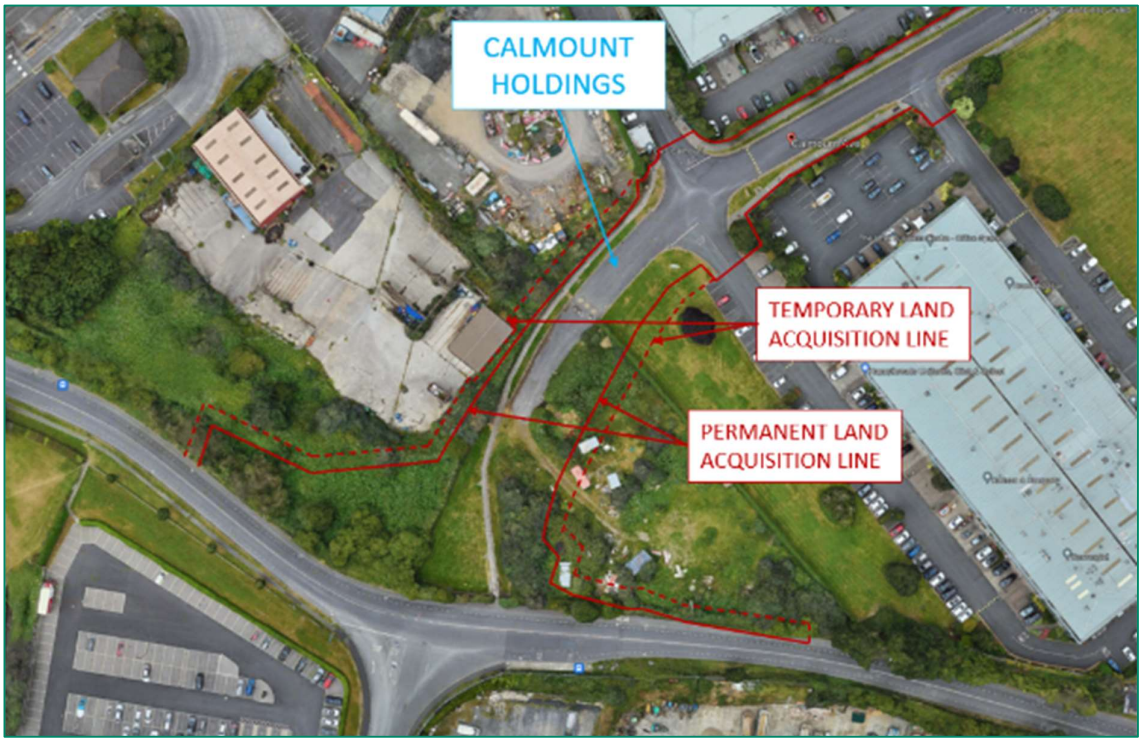


Figure 2.7.8.4: Proposed Land Acquisition lines Calmount Holdings (Image Source: Google)

2.7.8.2 Summary of Issues Raised

This submission objected to CPO and the concerns raised in the submission are summarised in the following section.

i) Generally supportive of proposals
ii) Alternative of widening Greenhills Road not considered
iii) Proposed Scheme does not appear to have engaged properly with the City Edge Project
iv) Land use not considered as per EPA Guidelines
v) impacts on business park has not been fully considered
vi) Impact on potential future development sites has not been considered

2.7.8.3 Response to Issues Raised

i) Generally supportive of proposals

The submission expresses general support for the upgraded bus services and additional road improvements in the Tallaght / Clondalkin and Ballymount areas. The NTA welcomes this general support.

ii) Alternative of widening Greenhills Road not considered

The submission asserts that Chapter 3 of the EIAR does not fully consider all the alternatives in relation to the Greenhills Road and that widening Greenhills Road has not been considered, making specific reference to Section 3.3.2.1.4.

Section 3.3.2.1.4 of EIAR Chapter 3 Consideration of Reasonable Alternatives refers to the section of the Proposed Scheme between Parkview and Ballymount Road Upper, which is further to the south on Greenhills Road than the Calmount Holdings land. Section 3.3.2.1.5 describes the route option

assessments for the section of the Proposed Scheme between Ballymount Road Upper and Walkinstown Roundabout, which is the section within which Calmount Holdings land interest falls.

Section 3.3.2.1.5 describes that following the stage 1 sifting process, three viable route options for this section of the Proposed Scheme were taken forward for assessment and further refinement as follows:

- *Route Option 1 (BW1): This route option would run along R819 Greenhills Road as far as Walkinstown Roundabout;*
- *Route Option 2 (BW2): This route option would turn from R819 Greenhills Road onto a new link road to Ballymount Industrial Estate connecting into Ballymount Avenue. At the Ballymount Avenue / Calmount Road junction, the route would turn onto Calmount Road. A new link would be provided to connect Calmount Road to R819 Greenhills Road allowing the route to continue as far as Walkinstown Roundabout. The existing R819 Greenhills Road would be closed to through traffic; and*
- *Route Option 3 (BW3): This route option would run along R819 Greenhills Road which would be restricted to bus and local access only. General traffic would turn from R819 Greenhills Road onto a new link road to Ballymount Industrial Estate connecting into Ballymount Avenue. At the Ballymount Avenue / Calmount Road junction, the route would turn onto Calmount Road. A new link would be provided to connect Calmount Road to R819 Greenhills Road allowing the general traffic to continue as far as Walkinstown Roundabout.*
- *These three options are shown in Image 3.15 of EIAR Chapter 3, se Figure 2.7.8.5 below. Route Option 1 (BW1) follows the existing Greenhills Road.*

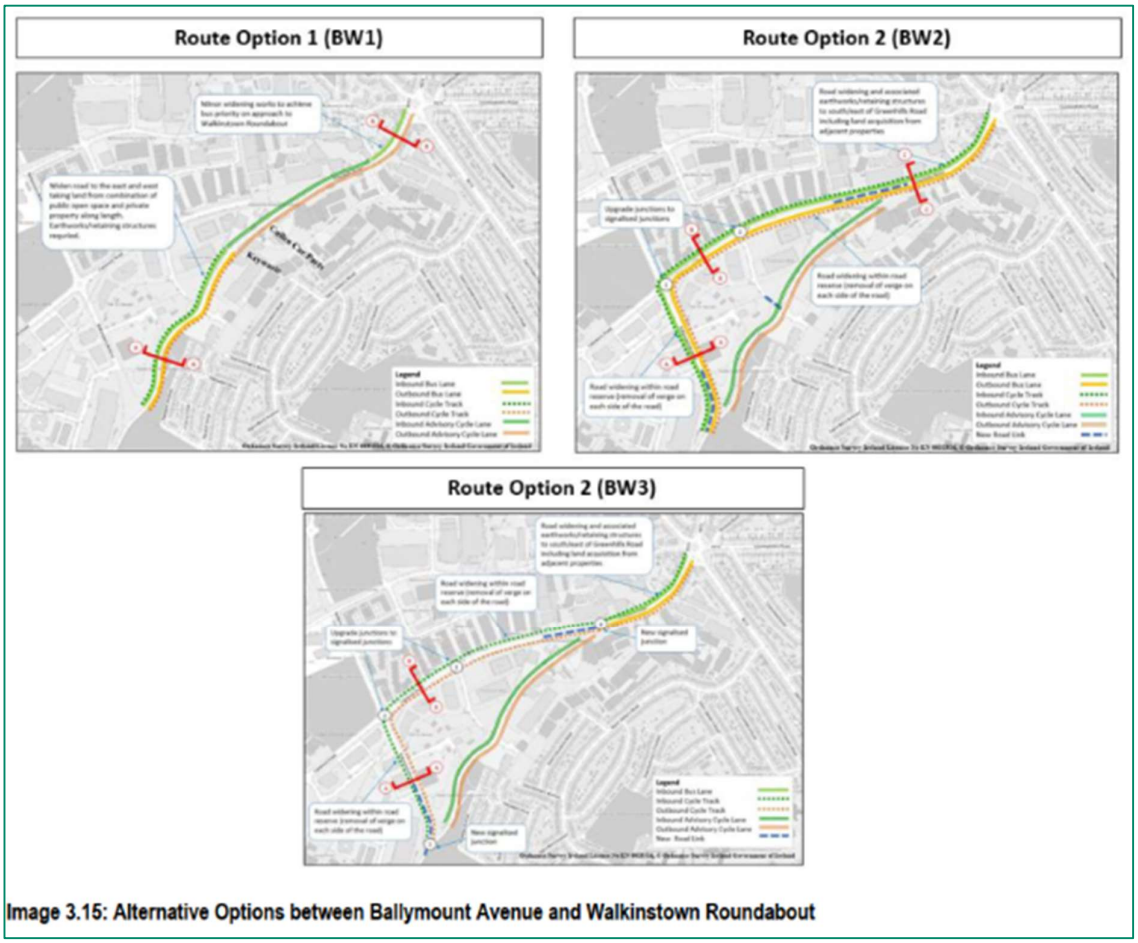


Image 3.15: Alternative Options between Ballymount Avenue and Walkinstown Roundabout

Figure 2.7.8.5: EIAR Chapter 3 Image 3.15

Section 3.3.2.1.5 provides the following description of Route Option 1 (BW1):

"Route Option 1 (BW1): This route option would stay along the existing R819 Greenhills Road alignment. In this area, secondary cycle route 8A follows R819 Greenhills Road between Calmount Road and Walkinstown Roundabout. Beyond this, it follows Calmount Road, Ballymount Avenue and the associated planned links to / from R819 Greenhills Road (included as a development objective in the South Dublin County Council Development Plan 2016 - 2022). Cycle facilities would be required along the length of this route to accommodate the re-routed secondary cycle route 8A. Bus lanes and raised adjacent cycle lanes are provided in each direction between the southern portion of the route and the Keywaste facility by widening the road on each side. This would require land-take from adjacent properties. As R819 Greenhills Road effectively runs along a ridge, earthworks / retaining structures would be required to facilitate the road widening. North of the Keywaste facility, there are a number of buildings which are very close to the existing road. As a result, bus lanes or dedicated cycle lanes are not possible for a 150m section between the Keywaste facility and Cullen Car Parts. North of Cullen Car Parts, the road could be widened to provide bus and raised adjacent cycle lanes in each direction as far as Walkinstown Roundabout (similar to option BW2). This would require road widening resulting in land-take, retaining structures and an associated high cost. A similar extent of works would be required to deliver the cycle facilities alone. However, given the inability to provide bus or cycle lanes between Keywaste and Cullen Car Parts, this level of investment is not considered to be justifiable in the context of the overall route which could not provide continuous priority or cycle lanes. On balance, it was therefore considered that for this section of this option, an inbound bus lane would be provided for approximately 200m in advance of the roundabout (within the existing road reserve)."

As can be seen from the above description, this option follows the existing Greenhills Road and fully considers the potential for widening. Specifically, the description states: "*As R819 Greenhills Road effectively runs along a ridge, earthworks / retaining structures would be required to facilitate the road widening."*

Towards the end of Section 3.3.2.1.5 it is noted that goes on to state that *"In terms of 'Environment', generally, route option BW1, which would require a large amount of road widening along R819 Greenhills Road, resulting in greater potential impact in the environment in terms of air and noise. While significant works would be required to facilitate route options BW2 and BW3, comparatively, these options have less impact on the environment and sensitive receptors."*

In conclusion, Section 3.3.2.1.5 notes that: *"Based on the assessment undertaken, route options BW2 and BW3 appear to offer similar benefits to route option BW1. However, route option BW2 is preferred for the Ballymount area for the following reasons:*

- *It strikes the right balance between cost and delivering reliable journey times compared to BW1 which is cheaper to construct but provides less bus lane priority;*
- *It delivers high quality cycle facilities along the entire length of the route, forming part of secondary cycle route 8A, which are not achievable along R819 Greenhills Road. Cycle access to R819 Greenhills Road, which is identified as a feeder route, could also be maintained in this option;*
- *Compared to route option BW3, this option removes the need for additional signalised junctions associated with bus access to and from the current R819 Greenhills Road alignment. Furthermore, it directly serves Ballymount Industrial Estate which is a major trip attractor with a large employment catchment;*
- *It delivers road links which are included as objectives in the South Dublin County Council Development Plan 2016 – 2022. It also allows R819 Greenhills Road to be downgraded to a local road which is more suitable for its current alignment and geometry; and*
- *It has less impact on the environment compared to other options due to BW2 taking all through traffic away from residential receptors, BW3 taking general traffic away from residential receptors and BW1 bringing traffic closer to residential receptors."*

In summary, Chapter 3 of the EIAR considers all reasonable alternatives in relation to the Greenhills Road including the option of widening Greenhills Road (Route Option 1 (BW1)).

iii) Proposed Scheme does not appear to have engaged properly with City Edge Project

The submission questions whether there has been proper engagement with the "City Edge Project" and asserts that the Proposed Scheme may be premature.

The NTA has engaged with South Dublin County Council and Dublin City Council in respect of the City Edge Strategic Framework.

Within Appendix A2.1 Planning Report contained in the EIAR Volume 4 Appendices Part 1 of 4, Section 3.7.1 on page 62 provides details of the City Edge Strategic Framework (CESF) 2022-2040 as follows.

"The City Edge Strategic Framework (CESF) was 'noted' by the Elected Members of South Dublin County Council and Dublin City Council in May and June 2022. The CESF is described as "a non-statutory plan that sets out a high-level approach and transformational trajectory for the regeneration of City Edge to create a new liveable, sustainable and climate resilient urban quarter". In particular, the CESF proposes the delivery of strategic infrastructure including public transport. It is envisaged that the CESF will be followed by a more comprehensive Statutory Plan which will guide development.

The Proposed Scheme is located within the limits of the City Edge Strategic Framework (CESF) (2022). Within the southern part of the CESF (2022) the Proposed Scheme is located along the Greenhills Road, Ballymount Avenue, Calmount Road and Calmount Avenue. Within the northern part of the CESF (2022) the Proposed Scheme is located along the Nangor Road, Naas Road and Long Mile Road.

Figure 9 of the CESF (2022) identifies two BusConnects Corridors running through the Framework area, including CBC08, with runs along Nangor Road, Naas Road and Long Mile Road, and CBC09 which runs along Greenhills Road, Ballymount Avenue, Calmount Road and Calmount Avenue.

The CESF has adopted several objectives which break down the overall vision. The following objective is relevant to the Proposed Scheme:

> *"Movement: Focus development on the provision of active and public transport. Ensure Transport Oriented Development by focusing new mixed-use and compact urban development on enhanced active travel and public transport corridors".*

The CSEF further states that *"A focus on active modes is particularly important if City Edge is to deliver on connectivity, place-shaping and sustainable mobility. This needs to be balanced with maintaining the strategic function of the Naas Road in carrying and distributing traffic to support the city and wider region".*

Furthermore, the CESF recognises the BusConnects Programme under 'Projects – Planned and Proposed'. The CSEF outlines that "BusConnects seeks to transform Dublin's bus network through a 10-year programme to provide an efficient, reliable and integrated bus system with enhanced capacity. Improved facilities for walking and cycling are integrated into BusConnects proposals". The CESF outlines the importance of public transport investment to the City Edge by stating "significant public transport investment will provide capacity for existing communities and enable growth at City Edge, ensuring sustainable travel is an attractive option for longer distance journeys."

Section 3.7.1.1 of Appendix A2.1 explains that: "*The Proposed Scheme is part of the wider BusConnects Programme to deliver service enhancements which will help facilitate sustainable growth, enhanced permeability and accessibly for active travel modes across the City Edge and the wider Greater Dublin Area. The Proposed Scheme will also provide an efficient, reliable and integrated bus system with enhanced capacity. The Proposed Scheme through the provision of enhanced public transport infrastructure will help to achieve the visions and objectives of the CESF.* "

In Dublin City Council's (DCC) submission on the Section 51 Application for the Proposed Scheme, DCC note that the City Edge Strategic Framework *"is a non-statutory plan being progressed collaboratively by Dublin City Council and South Dublin County Council. It sets out a high level*

strategy for comprehensive regeneration of the area, with implications for land uses and strategic level infrastructure."

In South Dublin County Council's (SDCC) submission on the Section 51 Application for the Proposed Scheme, SDCC note that the City Edge Strategic Framework is a *"non-statutory framework and is not part of the development consent assessment process."* The SDCC submission goes on to state the following: *"South Dublin welcomes the proposals to introduce high quality public transport and safe segregated facilities to the City Edge area via the Bus Connects project. This ties in with the strategic objectives of City Edge to focus on compact growth, active travel, transport orientated development and 15-minute city principles."*

In summary, appropriate engagement has been undertaken in relation to the CESF, which is non-statutory and in the relatively earlier stages of the planning process. The Proposed Scheme is not in considered premature as its implementation will help to achieve the visions and objectives of the CESF.

iv) Land use not considered under Population and Human Health as per EPA Guidelines

The submission comments that land use does not appear to be considered in the EIAR, noting that this is a critical consideration given the link between land use and transport.

Land use is addressed and assessed where appropriate in the EIAR. In Chapter 4 (Proposed Scheme Description) of the EIAR, under the heading 'Land Use and Accommodation Works', land acquisition, both at the construction stage, and in operation, is described. This is also illustrated in and cross-referenced to the General Arrangement drawings included with the EIAR. In Chapter 10 (Population) of the EIAR, Community Land Use and Accessibility at the construction phase is assessed in Section 10.4.3.1, and Commercial Land Use and Accessibility is assessed in Section 10.4.3.2.2, with the assessment conclusion for commercial land take at construction stage being Negative, Not Significant and Short-Term. Section 10.4.4.2.2 concludes that the operational impact of commercial land take will be Negative, Not Significant and Long-Term.

Chapter 11 (Human Health) of the EIAR also addresses impacts of land take on population health, concluding in Section 11.4.3 that no impact on population health is predicted arising from land take associated with the Proposed Scheme.

v)Impacts on business park during construction and operation not fully considered

The submission is concerned that the proposed works will have a potential significant impact on the operation and management of the existing business park during construction and operation and that these impacts have not been properly considered.

Construction

The potential impacts on the business park relating the construction and operation of the Proposed Scheme are comprehensively considered in the EIAR. The construction activities proposed in the vicinity of the business park relate to sub-sections 2b, 2c, 2d and 2e of Section 2 of the Proposed Scheme and details of these are provide in Section 5.3.2.2, Section 5.3.2.3, Section 5.4.2.4 and Section 5.4.2.5 of EIAR Chapter 5 (Construction). These are then assessed with regard to potential environmental effects across the EIAR topic chapters.

Section 5.5.3.2 of Chapter 5 notes that *"When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with residents and business owners prior to construction starting in the area. The duration of the works will vary from property to property, but access and egress will be maintained at all times."*

Temporary lane closures associated with the construction work at this location (sub-sections 2b, 2c, 2d and 2e of Section 2 of the Proposed Scheme) are described in Table 5.8 of the Section 5.8.3 in

EIAR Chapter 5, with diversion routes identified to facilitate access and circulation during the construction stage.

Table 9.1 of EIAR Chapter 9 Noise and Vibration specifically identifies the commercial businesses on Calmount Road and Ballymount Avenue as noise sensitive locations: *"The majority of the Ballymount Avenue and Calmount Road section of the Proposed Scheme is routed through business parks, with large scale business premises and offices within 20m to 50m of the road edge."*

Section 9.6.1 of Chapter 9 (Noise & Vibration) sets out the residual noise and vibration impacts of the Proposed Scheme stating that: *"Once the various mitigation measures are put in place, noise impacts associated with the Construction Phase will be Negative, Not Significant to Slight to Moderate and Temporary during all key Construction Phases during daytime periods."*

Operation

In the operational phase, Section 9.5.2.1 of Chapter 9 states that "Along the new sections of road at Calmount Avenue, and Calmount Road, noise impacts are determined to be slight and long-term."

The existing Calmount Business Park is accessed from the Ballymount Avenue / Calmount Road junction via a cul-de-sac arrangement from Calmount Avenue, as shown in Figure 2.20.6.

Section 4.5.2.1 of Chapter 4 Proposed Scheme Description describes how the Proposed Scheme will improve the road network in the vicinity of Calmount Business Park by the provision of the following:

- a new 220m long link road to the south of Ballymount Avenue will provide a connection to Greenhills Road (R819), new link 1 in Figure 2.7.8.6;
- a new 250m long link road will be constructed from the eastern of Calmount Road to Greenhills Road, new link 2 in Figure 2.7.8.6; and
- a new 90m long link road will be constructed to connect Calmount Avenue with Greenhills Road, new link 3 in Figure 2.7.8.6.

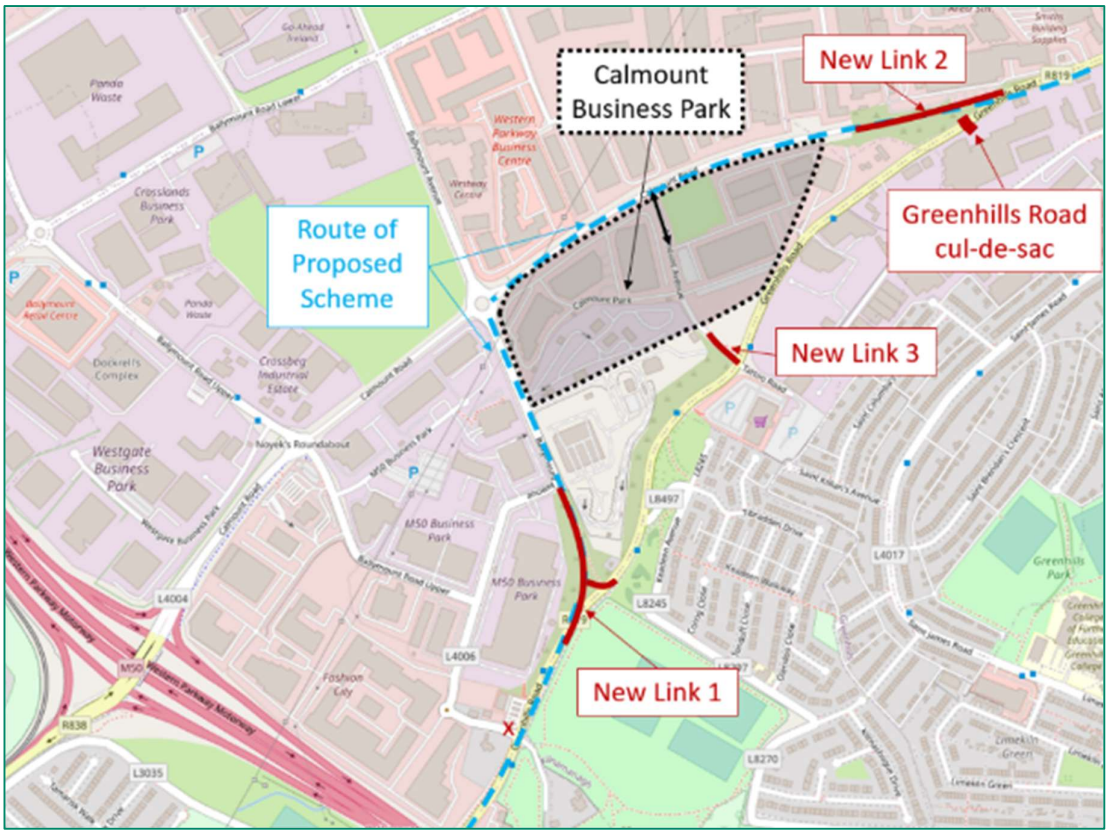


Figure 2.7.8.6: Location of new links included in the Proposed Scheme in the vicinity of Calmount Business Park

All 3 of these links generally align to the principles of the SDCC approved Part 8 schemes for the area.

In summary, no negative impacts on the operation of the business park are predicted in the EIAR.

vi) Impact on potential future development of sites has not been considered during construction and operation

The submission notes that Calmount Business Park still has two remaining development sites and expresses the view that the impact of the Proposed Scheme on the potential future development of these sites has not been considered during construction and operation.

The potential impacts on the business park, which includes the two remaining development sites, during the construction and operation of the Proposed Scheme are comprehensively considered in the EIAR as described in the response to item 2.10.3 v) above. Please refer to the responses to item 2.10.3 v) for these responses.

2.7.9 32 – Walkinstown Area – Walkinstown Residents Association

2.7.9.1 Description of Proposed Scheme

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.2.1 of Chapter 4 of Volume 1 of the EIAR, Proposed Scheme Description, *"the layout of Walkinstown Roundabout has been designed to provide enhanced cycle and pedestrian connectivity around this busy junction as well as improving safety for pedestrians, cyclists, bus and general traffic. A two-way segregated cycle track has been proposed around the junction to allow cyclists to adopt the most direct route around the roundabout (i.e., both directions) and to reduce interactions with motor vehicles. Parallel pedestrian / cyclist raised table crossings have been implemented on all arms to improve pedestrian and cyclist safety. Set back crossings have been used on all arms to promote pedestrian / cyclist desire lines with consideration for vehicle exit lane storage off the roundabout. Cycle detection loops have also been implemented on the two-way segments on approach to the crossings to help promote cycling journey time efficiencies and minimise delays for cyclists crossing multiple arms of the junction. The number of general traffic entry lanes / flares, circulation lanes and angle of entry have been reconfigured to promote safer vehicle movements. Landscaping proposals and revised parking arrangements are also proposed to enhance the area. City bound cyclists will be directed to the offline cycle route along Bunting Road and St. Mary's Road, providing a more direct route linking Walkinstown Roundabout with Kildare Road."*

Section 4.5.3.1 of Chapter 4 states: *"On Walkinstown Road (R819) between Walkinstown Roundabout and the Long Mile Road (R110), it is proposed to provide one bus lane and one general traffic lane in each direction with minimum land take impacting properties on Walkinstown Road (R819) maintaining sufficient front driveway boundary setback lengths for a car to be parked. To accommodate this cross section, land acquisition will be required along the Walkinstown Road (R819). Land acquisition is proposed on the western side of the Walkinstown Road (R819) between Walkinstown Roundabout and Kilnamanagh Road. Between Kilnamanagh Road and Long Mile Road (R110), land acquisition is proposed on the eastern side of Walkinstown Road (R819). It is proposed to introduce an outbound right turn ban for general traffic from Walkinstown Road (R819) to Kilnamanagh Road to improve the efficiency of the junction and minimise bus delays. Kilnamanagh Road will remain accessible from the Walkinstown Road (R819) via Walkinstown Drive. It is also proposed to introduce a right turn ban for northbound right turning traffic from the Walkinstown Road (R819) to the southern entrance of the SuperValu supermarket (Walkinstown Shopping centre) during peak hours to improve the operation of the junction and reduce bus delays. Entry to the shopping centre will be possible via the alternative car park entrance.*

City-bound cyclists will have an alternative segregated cycle route along Bunting Road (GDA Cycle Route 8A) and St. Mary's Road providing a more direct route linking Walkinstown Roundabout with Kildare Road."

2.7.9.2 Summary of Issues Raised

The submission raised the following issues:

1. Location of construction compound in Bunting Park
2. Bunting Road cycle route
3. Balfe Road right turn ban leading to traffic diversion
4. Walkinstown Road; Land acquisition and relocation of mile marker
5. Walkinstown roundabout
6. Junction of St Mary's Road / Kildare Road and Drimnagh Road
7. SUDS

2.7.9.3 Response to Issues Raised

2.Location of construction compound in Bunting Park

A detailed response to the construction compound in Bunting Park as part of the Proposed Scheme has been provided in Section 2.5.3.15 of this report.

3.Bunting Road cycle route

A detailed response to the Bunting Road cycle route as part of the Proposed Scheme has been provided in Section 2.5.3.13 of this report.

4.Balfe Road right turn ban leading to traffic diversion

A detailed response to the turn ban at Balfe Road as part of the Proposed Scheme has been provided in Section 2.5.3.2 of this report.

5.Walkinstown Road; Land acquisition and relocation of mile marker

The submission queries the temporary CPO of gardens along Walkinstown Road, including the timescale and reinstatement works. The submission is also concerned with the relocation of the Mile marker on Walkinstown Road.

Section 4.5.3.1 of EIAR Chapter 4 provides a general overview of the Proposed Scheme on Walkinstown Road (R819) between Walkinstown Roundabout and the Long Mile Road (R110), stating *that " it is proposed to provide one bus lane and one general traffic lane in each direction with minimum land take impacting properties on Walkinstown Road (R819) maintaining sufficient front driveway boundary setback lengths for a car to be parked. To accommodate this cross section, land acquisition will be required along the Walkinstown Road (R819). Land acquisition is proposed on the western side of the Walkinstown Road (R819) between Walkinstown Roundabout and Kilnamanagh Road. Between Kilnamanagh Road and Long Mile Road (R110), land acquisition is proposed on the eastern side of Walkinstown Road (R819)."*

Section 4.6.18.1 of EIAR Chapter 4 provides a summary of the accommodation works and boundary treatment for the entirety of the Proposed Scheme and notes that there are a number of areas along the extents of the route where the Proposed Scheme will result in the requirement for accommodation works and boundary treatments, with specific accommodation works are considered on a case-by-case basis. Section 4.6.18.1 goes on to state that *"To maintain the character and setting of the Proposed Scheme, the approach to undertaking the new boundary treatment works along the corridor is replacement on a 'like for like' basis in terms of material selection and general aesthetics, unless a section of street can benefit from urban improvement appropriate to the area."*

Along Walkinstown the boundary walls will be replaced on a like for like basis and the temporary land acquisition is required to facilitate construction works of the new wall, reinstatement behind it and to tie in the levels of the accesses with the levels of the new footpath.

As identified in Section 16.5.1.7.3 of EIAR Chapter 16 Architectural heritage, *"The proposed temporary land take on Walkinstown Road will necessitate the removal of a milestone (NIAH 50080455) which is of Regional Importance and Medium Sensitivity. It will be temporarily removed to ensure its protection, before being reinstated within the vicinity of the existing. There is potential for damage of the sensitive fabric during its removal, transport, storage, and reassembly. The predicted pre-mitigation Construction Phase Impact is Direct Negative, Significant and Temporary. The proposed mitigation is the recording of the milestone in position prior to the works, labelling the affected fabric prior to its careful dismantling and removal to safe storage, and the reinstatement of the milestone. Recording, overseeing of protective measures and monitoring is to be undertaken by a suitably qualified architectural heritage specialist engaged by the appointed contractor. The predicted post-mitigation impact is Direct Negative, Slight and Temporary."*

6.Walkinstown Roundabout

The submission states that the reduction to 2 running lanes is unacceptable, asserting that it has "*clearly not been modelled as the roundabout is stacked at peak times".* The submission believes that 3 lanes approaches are required, with cycle infrastructure.

The relevant extract from General Arrangement Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR is included in Figure 2.7.5.1

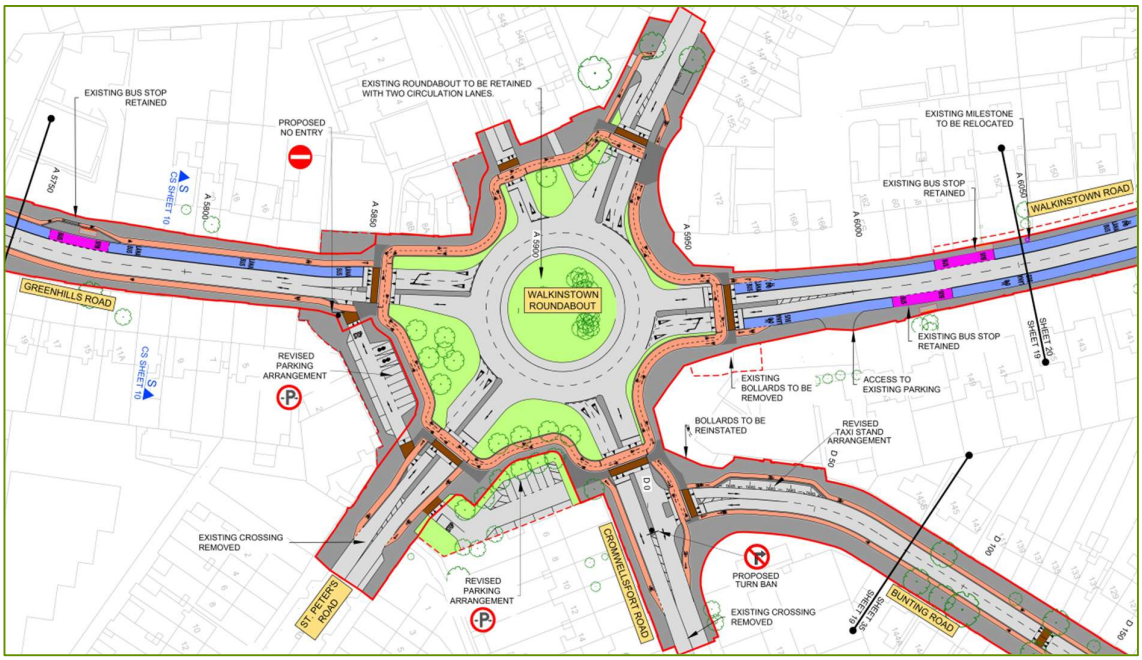


Figure 2.7.9.1: Extract from General Arrangement Drawing (Sheet 19)

The layout of Walkinstown Roundabout has been designed to help achieve the objectives of the Proposed Scheme. To layout has been designed to provide enhanced cycle and pedestrian connectivity around this busy junction as well as improving safety for pedestrians, cyclists, bus and general traffic. A two-way segregated cycle track has been proposed around the junction to allow cyclists to adopt the most direct route around the roundabout (i.e both directions) and to reduce interactions with motor vehicles. Parallel pedestrian/cyclist raised table crossings have been implemented on all arms to improve pedestrian and cyclist safety. Set back crossings have been used on all arms to promote pedestrian/cyclist desire lines with consideration for vehicle exit lane storage off the roundabout. Cycle detection loops have also been implemented on the two-way segments on approach to the crossings to help promote cycling journey time efficiencies and minimise delays for cyclists crossing multiple arms of the junction. The number of general traffic entry lanes/flares, circulation lanes and angle of entry have been reconfigured to promote safer vehicle movements. Landscaping proposals and revised parking arrangements are also proposed to enhance the area.

Section 6.4.6.2.9.2 of Chapter 6 (Traffic & Transport) of Volume 2 of the EIAR notes the following:

"To determine the impact that the Proposed Scheme has in terms of general traffic redistribution on the direct and indirect study areas, the LAM Opening Year 2028 model results have been used to identify the difference in general traffic flows between the Do Minimum and Do Something scenarios and the associated level of traffic flow difference as a result of the Proposed Scheme. The assessment has been considered with reference to both the reductions and increases in general traffic flows along road links."

Section 6.4.6.2.9.3 of Chapter 6 (Traffic & Transport) of Volume 2 of the EIAR notes the following:

"Direct Reductions in General Traffic: The LAM indicates that, during the 2028 Opening Year scenario, there are reductions in general traffic noted along the Proposed Scheme during the AM Peak Hour, as illustrated by the blue lines in Diagram 6.40, which indicates where a reduction of at least -100 combined traffic flows occur"

Figure 2.7.9.2 below extract from Section 6.4.6.2.9.3 shows a reduction in general traffic flow (blue lines) is predicted on all arms of Walkinstown Roundabout in the AM peak hour for opening year 2028.

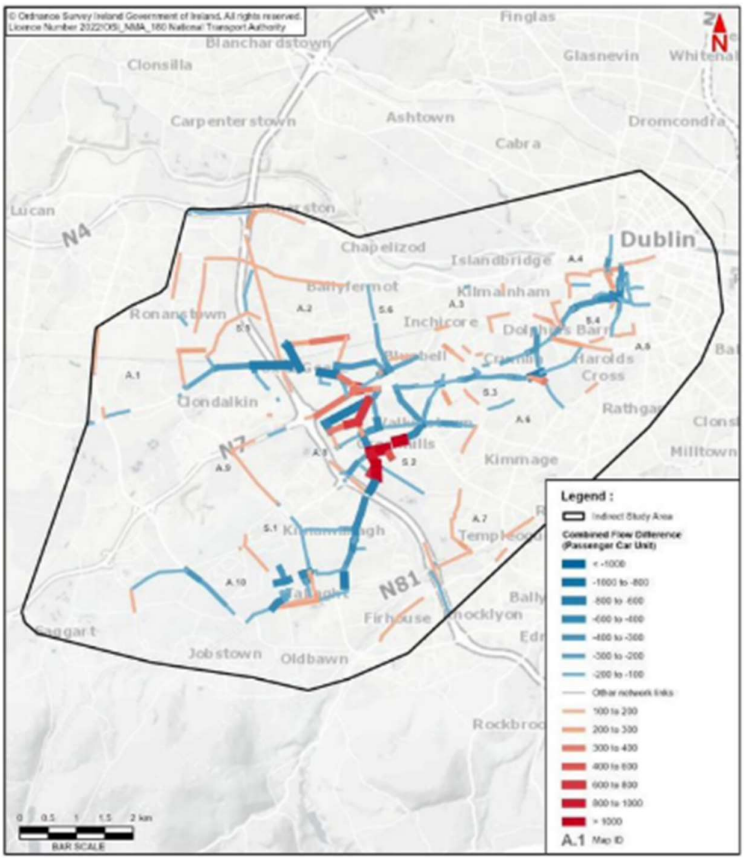


Figure 2.7.9.2: Extract from EIAR Chapter 6 Section 6.4.2.9.3 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour 2028 Opening Year (Image 6.40)

In summary for the AM Peak Hour traffic flows in the 2028 opening year, Section 6.4.6.2.9.3 notes the following:

"the scheme will generally reduce traffic levels along the corridor, with increases in traffic flow only predicted on four links, three of which relate to the closing off of a section of Greenhills Road, and redirection of traffic along Calmount Road via a new link along Ballymount Avenue. Most of this traffic will be transferred from the existing Greenhill Road."

The fourth link referred to above is the Nangor Road north of the N7 and R110.

Section 6.4.6.2.9.4 of Chapter 6 (Traffic & Transport) of Volume 2 of the EIAR notes the following:

"Direct Reductions in General Traffic Flows: The LAM indicates that during the 2028 Opening Year scenario, there are key reductions in general traffic noted along the Proposed Scheme during the PM Peak Hour, as illustrated by the blue lines in Diagram 6.41, which indicates where a reduction of at least -100 combined traffic flows occurs."

Figure 2.7.9.3 below extract from Section 6.4.6.2.9.4 shows a reduction in general traffic flow (blue lines) is predicted on all arms of Walkinstown Roundabout in the PM peak hour for opening year 2028.

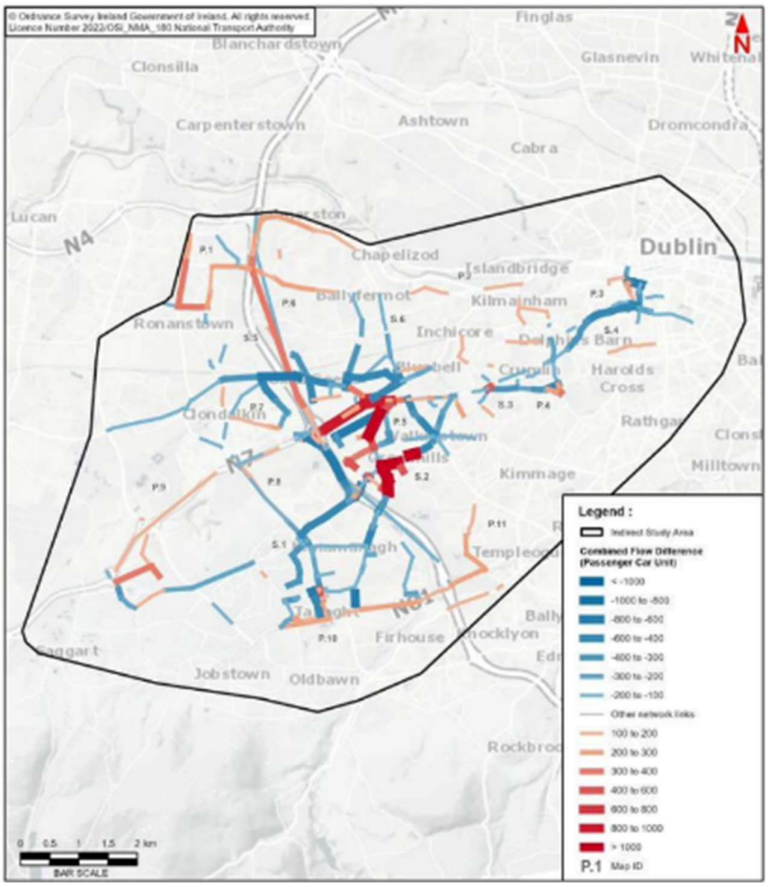


Figure 2.7.9.3: Extract from EIAR Chapter 6 Section 6.4.2.9.4 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour 2028 Opening Year (Image 6.41)

In summary for the PM Peak Hour traffic flows in the 2028 opening year, Section 6.4.6.2.9.3 notes the following:

"the scheme will generally reduce traffic levels along the corridor, with increases in traffic flow only predicted on four links, three of which relate to the closing off of a section of Greenhills Road, and redirection of traffic along Calmount Road via a new link along Ballymount Avenue. Most of this traffic will be transferred from the existing Greenhill Road."

The fourth link referred to above is the Nangor Road / Long Mile Road link.

The Junction Design Report (JDR), included as Appendix A6.3 of EIAR Volume 4 Appendices Part 2 of 4, provides the following additional information in respect of the junction design:

"Summary

The existing major six arm roundabout junction is to be upgraded as per the BusConnects Preliminary Design Guidance Booklet to enhance pedestrian, cyclist and bus priority infrastructure.

Pedestrian Infrastructure

It is proposed to introduce controlled crossings in the form of toucan crossings on all arms of the junction. The crossings are proposed to be offset from the junction by approximately 15-20m to enhance safety and visibility between motorists and pedestrians.

Furthermore the entry and exit lanes of the roundabout junction are proposed to be reduced in width, which will facilitate shorter crossings for pedestrians and cyclists. It is also proposed to raise the pedestrian and cyclist crossings to give greater priority to vulnerable road users.

Cyclists Infrastructure

As noted above, controlled cyclist crossings are proposed on all respective arms of the junction.

The proposed cycle track will travel along Greenhills Road on both sides of the carriageway, connecting onto Walkinstown Roundabout. At the roundabout, a two way cycle track is proposed to cater for cyclists crossing the respective arms of the junction. The cycle route is proposed to continue towards Dublin City Centre via Bunting Road along new proposed cycle tracks.

Bus Priority Infrastructure

It is proposed to provide a Junction Type 3, whereby the bus lane is curtailed prior to the stop line to facilitate left turning vehicles. A bus lane is proposed to be broken at approximately 20m prior to the stop line at the toucan crossing.

A junction type 1 was considered at this location, whereby the bus lane continued upto the stop line, however the proposed arrangement has been adopted as it was considered that this will facilitate greater people movement for all modes of transport."

The JDR goes on to state that in the 2028 AM peak hours the junction is forecast to have a Network Residual Capacity of 14% and a junction delay of 6.96 sec; and in the 2028 PM peak hour, it is forecast to have a Network Residual Capacity of 9% and a junction delay of 8.89 sec.

In summary, the entry and exit lanes of the roundabout junction are proposed to be reduced in width to 2 lanes to facilitate shorter crossings for pedestrians and cyclists. It is also proposed to raise the pedestrian and cyclist crossings to give greater priority to vulnerable road users. The Proposed Scheme at this location provides the optimum layout that balances the competing demands by enhancing bus priority, improving pedestrian and cyclist infrastructure whilst still retaining appropriate capacity for the forecast level of general traffic.

7.Junction of St Mary's Road / Kildare Road and Drimnagh Road

A detailed response to the St Mary's Road / Kildare Road and Drimnagh Road junction as part of the Proposed Scheme has been provided in Section 2.5.3.14 of this report.

8.SUDS

The submission requests that the Proposed Scheme should facilitate the provision of SuDS.

Section 4.6.14.4 of EIAR Chapter 4 Proposed Scheme Description highlights that *"Whilst in some areas the Proposed Scheme will increase the impermeable areas, additional permeable areas are also provided by the softening of urban realm along the routes. The drainage design aims to sustain flow levels within the existing pipe network after a rainfall event by controlling the discharge rate within each catchment. Flows will be controlled by the implementation of SuDS techniques, where practicable. One of the principal objectives of the road drainage system is to minimise the impact of the runoff from the roadways on the surrounding environment via the position of: filter drains, swales, bio-retention areas, tree pits, silt traps and attenuation features if necessary."*

The drainage design is based on a number of best practice general principles, which are set out in the document 'BusConnects Core Bus Corridor Drainage Design Basis' which is included as Appendix K of the Preliminary Design Report in the Supplementary Information. A SuDS drainage design has been developed as a first preference and in accordance with the SuDS Management Train described in the CIRIA SuDS manual (CIRIA 2015). The CIRIA SuDS Manual recommends that when considering SuDS solutions, the preferred approach is a hierarchy whereby runoff using source control solutions (e.g. pervious surfacing) are considered first. Where source control is not possible or cannot fully address an increase in runoff from a development, residual flows are then managed using site controls (e.g. bioretention / infiltration basins). If this is not practical or residual flows remain above existing runoff rates, regional controls (e.g., oversized pipes) are used. SuDS provide the dual benefits of controlling flow and treating water quality.

2.8 Submissions in Relation to the Whole Scheme

2.8.1 Overview of Submissions

Eleven submissions were made which relate to the whole scheme; these are listed below with ABP submission reference number and detailed in the following sub-sections:

- 24 Linda Patton
- 31 Ciaran Cuffe, MEP
- 34 Dublin Commuter Coalition
- 38 Recorder's Residents Association
- 40 Dublin Cycling Campaign
- 41 Senator Mary Seery Kearney
- 44 TII
- 45 DAU – DHLGH
- 55 Brendan Heneghan
- 43 SDCC
- 50 DCC

2.8.2 24 - Linda Patton

2.8.2.1 Overview of submission

The submission raised the following points and issues:

1. Impact on local roads not researched

No attempt made to research routes used by local residents in Terenure to access shops and other amenities in the vicinity of the scheme including Greenhills Road, Walkinstown Roundabout and Walkinstown Avenue.

2. No account of traffic outside rush hours

The proposed bus routes take no account of the many residents whose lives will continue outside of rush hour who will be adversely impacted by proposals such as bus gates, one-way streets, loss of access to streets, loss of certain bus routes, loss of north to south cross city buses, extra traffic on certain roads and restrictions on car parking on roads.

3. Impact on businesses and local residents

In order to maintain communities and local businesses, bus gates and restrictions on turns into residential streets should only operate at peak times. Proposed restrictions for those making journeys which cannot be made using public transport may spend more time travelling further to reach their destination which is not environmentally friendly.

4. Traffic congestion due to school journeys

Apart from cycle lanes there seems to be no proposals, such as provision of more school buses to address this issue.

5. Traffic modelling out of date (Covid)

Since the pandemic many people now work from home reducing work commuting. Therefore, new traffic modelling needs to be carried out. The BusConnects programme should therefore be paused until the future demand for public transport and the full impact on traffic of all the proposed routes is clearer.

6. Public consultation Aarhus compliance

There was an issue surrounding the timing and deadline of the last round of public consultation in the midst of a pandemic, and the use of online consultation only. It is unlikely that the consultation fulfilled the obligations of the Aarhus Convention.

7. Cumulative impact of schemes should be assessed

2.8.2.2 Response to submission

1. Impact on local roads

Detailed response to Proposed Scheme traffic predictions raised by this submission has been provided in Section 2.4.3.2 Response to submission.

It is noted in Section 6.4.6.2.2.1 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR that the modelled forecasts for the 2028 opening year indicate that one of the impacts of the proposed Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme is that there is forecasted to be a reduction of 33% in the number of people travelling via car along the scheme corridor towards the city centre at AM peak hour. Similarly, in the PM peak hour, there is a reduction of 38% in the number of people travelling via car. The scheme corridor includes Greenhills Road and Walkinstown Roundabout.

The Proposed Scheme provides a balance between ensuring that the use of these side streets by through traffic is discouraged at all times, while also ensuring that access by car to local streets, schools and businesses is maintained, via the surrounding road network.

Section 6.4.6.2.9 of EIAR Chapter 6 Traffic and Transport provides details of the General Traffic Assessment. Section 6.4.6.2.9.1 provides an overview and states: ***"****The Proposed Scheme aims to provide an attractive alternative to the private car and promote a modal shift to public transport, walking and cycling. It is, however, recognised that there will be an overall reduction in operational capacity for general traffic along the direct study area given the proposed changes to the road layout and the rebalancing of priority to walking, cycling and bus. This reduction in operational capacity for general traffic along the Proposed Scheme will likely create some level of trip redistribution onto the surrounding road network."*

Section 6.4.6.2.9.1 goes on to state that ***"****The purpose of this section is to assess the overall impact that any redistributed general traffic will have on both the direct and indirect study areas. It should be noted that the impacts presented in this chapter are based on the final Preliminary Design for the Proposed Scheme which includes embedded mitigation to limit environmental and traffic and transport impacts to a minimal level as part of the iterative design development work described previously above.*

Section 6.4.6.2.9.2 discusses the significance of the General Traffic Impact and states*: "To determine the impact that the Proposed Scheme has in terms of general traffic redistribution on the direct and indirect study areas, the LAM Opening Year 2028 model results have been used to identify the difference in general traffic flows between the Do Minimum and Do Something scenarios and the associated level of traffic flow difference as a result of the Proposed Scheme. The assessment has been considered with reference to both the reductions and increases in general traffic flows along road links."*

Direct Study Area

Direct Study Area - AM Peak Hour

Section 6.4.6.2.9.3 of Chapter 6 summarises the General Traffic Flow Difference in the AM Peak Hour and notes the following:

"The contents of Table 6.73 demonstrate that there is a slight to very significant reduction of between -116 and -1,516 general traffic flows along the direct study area during the AM Peak Hour, which is attributed to the Proposed Scheme and the associated modal shift as a result of its implementation. This reduction in general traffic flow has been determined as an overall Positive, Moderate and Long-term effect on the direct study area."

"The contents of Table 6.74 demonstrate that there is an increase of between +613 and +1,462 general traffic flows along the direct study area during the AM Peak Hour.

When compared to Table 6.73, Table 6.74 shows that the scheme will generally reduce traffic levels along the corridor, with increases in traffic flow only predicted on four links, three of which relate to the closing off of a section of Greenhills Road, and redirection of traffic along Calmount Road via a new link along Ballymount Avenue. Most of this traffic will be transferred from the existing Greenhill Road."

Direct Study Area - PM Peak Hour

Section 6.4.6.2.9.4 of Chapter 6 summarises the General Traffic Flow Difference in the PM Peak Hour and notes the following:

"The contents of Table 6.78 demonstrate that there is a slight to very significant reduction of between -141 and -1,508 general traffic flows along the direct study area during the PM Peak Hour, which is attributed to the Proposed Scheme and the associated modal shift as a result of its implementation. This reduction in general traffic flow has been determined as an overall Positive, Significant and Long-term effect on the direct study area. The most significant effect occurs along Belford Square North.

The contents of Table 6.79 demonstrate that there is a slight to significant increase of between +476 to +1,563 general traffic flows along the direct study area during the PM Peak Hour.

When compared to Table 6.78, Table 6.79 shows that the scheme will generally reduce traffic levels along the corridor, with increases in traffic flow only predicted on four links, three of which relate to the closing off of a section of Greenhills Road, and redirection of traffic along Calmount Road via a new link along Ballymount Avenue. Most of this traffic will be transferred from the existing Greenhill Road."

Indirect Study Area

Section 6.4.6.2.9.5 considered the General Traffic Impact Assessment for the indirect study area and notes the following:

Indirect Study Area - AM Peak Hour

"The results of the junction analysis illustrated in Table 6.85 demonstrate that of the total of 190 junctions assessed, 157 junctions are operating with a maximum V / C ratio of below 85% in the Do Something scenarios in the AM Peak Hour in the 2028 Opening Year. A further 26 junctions are operating with a maximum V / C ratio of between 85% - 100%. Therefore, the majority of junctions continue to operate well within capacity with the Proposed Scheme in place.

Overall, the Proposed Scheme is considered to have a Not Significant or Imperceptible and Long-term effect at 176 junctions within the indirect study area. Five of the 190 junctions assessed are shown to have a significance of effect of Negative, Slight and Long-term, and four are shown to have Negative, Moderate and Long-term effects. Five junctions were assessed to have a Positive, Moderate and Long-term effect."

"The results demonstrate that no junctions are predicted to have a significance of effect of significant or higher, therefore, no further assessment of the AM Peak Hour in the 2028 Opening Year is required."

Indirect Study Area - PM Peak Hour

"The results of the junction analysis illustrate that, of a total of 164 junctions assessed, 133 junctions are operating with a maximum V / C ratio of below 85% in the Do Something scenarios in the PM Peak Hour in the 2028 Opening Year. A further 22 junctions are operating with a maximum V / C ratio of between 85% - 100%.

Overall, as a result of redistributed general traffic associated with the Proposed Scheme, the effect at 161 out of 164 junctions assessed is predicted to be Not Significant and Long-term and Imperceptible and Long-term within the Indirect Study Area. Two are shown to have Negative, Moderate and Long-term effects in the 2028 Opening Year PM Peak Hour. "

"The results demonstrate that no junctions are predicted to have a significance of effect of significant of higher, therefore, no further assessment of the PM Peak Hour in the 2028 Opening Year is required."

Summary

Section 6.4.6.2.9.7 provides a summary of the General Traffic Impact Assessment and states:

"Given the improvements to bus priority, walking and cycling as a result of the Proposed Scheme, there will likely be an overall reduction in operational capacity for general traffic along the direct study area. This may in turn result in some redistribution of general traffic away from the main corridor onto the surrounding road network.

Using the TII guidelines as an indicator for best practice, the LAM Opening Year 2028 model results were used to identify the difference in traffic flows between the Do Minimum and Do Something scenarios. The following thresholds have been used to identify where further assessment is required:

• Local / Regional Roads: Traffic redistribution results in an increase above 100 combined flows (i.e. in a two-way direction) along residential, local and regional roads in the vicinity of the Proposed Scheme in the AM and PM peak hours; and

• National Roads: Traffic exceeds 5% of the combined turning flows at junctions with/ on/or with national roads in the AM and PM peak hours as a result of traffic redistribution comparing the Do Minimum to the Do Something scenario with the Proposed Scheme in place.

The threshold impact assessment identified the following roads that required further traffic analysis:

• AM Peak Hour: A total of 63 road links, as listed in Table 6.76; and

• PM Peak Hour: A total of 48 road links, as listed in Table 6.81.

The general traffic impact assessment was undertaken by extracting operational capacities from the LAM at the key junctions along the above road links. To undertake a robust assessment, the outputs for the worst-performing arm at each junction have been assessed. Potential mitigation measures have been considered at junctions where the Significance of Effect is predicted to be Significant or higher.

2028 National Roads Assessment: The highest impact predicted for total inbound flows between the Do Minimum and Do Something scenarios in the AM peak hour is a 2.8% increase at M50 Junction 9, which is below the 5% threshold that has been adopted for further assessment.

The highest impact predicted for total inbound flows between the Do Minimum and Do Something scenarios in the PM peak hour is a 3.3% increase at M50 Junction 11, which is below the 5% threshold that has been adopted for further assessment.

Overall, the Proposed Scheme is expected to have a Negligible effect on turning flows at junctions with National roads in both the AM and PM peak hours in 2028.

2028 and 2043 Local / Regional Roads Assessment: The majority of assessed junctions have V / C ratios of below 85%, i.e. they are operating within capacity for all assessed years in the Do Minimum and Do Something scenarios. This indicates that these junctions will be able to accommodate the additional general traffic volumes redistributed, as a result of the Proposed Scheme and the effect is deemed Imperceptible / Not Significant and Long-term.

A small number of junctions are predicted to operate over capacity (>100% V / C ratio) in the Do Something scenario, however, it is concluded that, in the majority of cases the performance of the junction is similar with and without the Proposed Scheme, or the sensitivity of the road link determines that the overall effect will not be significant.

The results demonstrate that no junctions are predicted to have a significance of effect of significant of higher, therefore, no further assessment is required.

Overall Summary: Overall, it has been determined that the potential impact of the reduction in general traffic flows along the Proposed Scheme will be Positive, Moderate and Long-term whilst the potential impact of the redistributed general traffic along the surrounding road network will be Negative, Sight and Long-term.

It should be noted that effects will be short-lived and localised. Section 5.4.2 of DMURS (2019) recognises that a certain level of traffic congestion is an inevitable feature within urban networks and that junctions may have to operate at saturation levels for short periods of time during the peak hours of the day.

Chapter 1 of the Smarter Travel Policy Document also acknowledges that it is not feasible or sustainable to accommodate continued demand for car use. It should therefore be considered that the traffic congestion that is outlined in the impact assessment is acceptable with regard to the urban location of the area.

Given that the redistributed traffic is not predicted to lead to a significant deterioration of the operational capacity on the surrounding road network, no further mitigation measures have been considered to alleviate the impact outside of the direct study area."

Further information is also provided in Section 6.3.3.1.10.2 General Traffic Impact Assessment Summary Appendix A6.1 Transport Impact Assessment of Volume 4 Part 2 of 4 of the EIAR, which notes: "*Given the improvements to bus priority, walking and cycling as a result of the Proposed Scheme, there will likely be an overall reduction in operational capacity for general traffic along the*

direct study area. This may in turn result in some redistribution of general traffic away from the main corridor onto the surrounding road network.

Using the TII guidelines as an indicator for best practice, the LAM Opening Year 2028 model results were used to identify the difference in traffic flows between the Do Minimum and Do Something scenarios.

……..The general traffic impact assessment was undertaken by extracting operational capacities from the LAM at the key junctions along the above road links. To undertake a robust assessment, the outputs for the worst-performing arm at each junction have been assessed.

……Overall, it is determined that there will be a Low Negative impact from the redistributed general traffic as a result of the Proposed Scheme. Given that the redistributed traffic will not lead to a significant deterioration of the operational capacity on the surrounding road network, no mitigation measures have been considered to alleviate the impact outside of the direct study area.

During the night-time lower traffic flows aligned with more vehicular capacity at junctions will reduce or eliminate traffic redistribution from the Proposed Scheme Corridor. Thus, the impact during this period will be Negligible."

Section 6.3.3.2 Operational Phase Summary notes: *"The Proposed Scheme has been designed and outlined within this assessment to take cognizance in the relevant traffic and transport guidelines outlined in Chapter 9 (References). The assessment demonstrates that the Proposed Scheme will provide significantly enhanced facilities for sustainable modes, helping to provide an attractive alternative to the private car, and promoting a modal shift to walking, cycling and public transport.*

Despite some localised impacts, the assessment demonstrates that overall the surrounding road network has the capacity to accommodate the associated traffic and transport impacts.

Accordingly, it is concluded that the Proposed Scheme will deliver strong benefits from a sustainable transport point of view, allowing for greater capacity along the corridor to facilitate the movement of people, and will not result in a significant deterioration to the existing traffic conditions on the local road network during the operational phase."

2. Traffic outside rush hour assessment

As stated in Section 6.3.3.1.10 General Traffic Transport Impact Assessment Appendix A6.1 Transport Impact Assessment of Volume 4 Part 2 of 4 of the EIAR: *"The AM and PM Peak Hour flows are modelled as occurring between 08:00 to 09:00 and 17:00 to 18:00 respectively. The interpeak periods have not been analysed for this impact assessment as the AM and PM Peak Hour flows present an overall worst-case scenario.* The EIAR has assessed the most reasonable worst case scenario. The interpeak period represents a lower traffic volume on the road networks hence have less impact of noise, air quality

Section 6.4.6.2.9.1 of Chapter 6 of Volume 2 of the EIAR notes: *"It should be noted that the Do Minimum and Do Something scenarios are based on the assumption that travel behaviour will remain broadly consistent over time and that car demand, used for this assessment, represents a reasonable worst-case scenario. It is possible that societal trends in the medium to long term may reduce car demand further due to the ongoing changes to travel behaviours and further shifts towards sustainable travel, flexibility in working arrangements brought on following COVID-19, and delayed car ownership trends that are emerging."*

3. Impact on businesses and local residents

As regards the view expressed that traffic restrictions may have an adverse impact on local businesses so that they would not be able to maintain operations, EIAR Chapter 10 Population includes Appendix A10.2 Economic Impact of the Core Bus Corridors. Section 2 on page 10 the appendix discusses the impact of the Proposed Scheme on local businesses. The conclusion reached is that there is strong international evidence to suggest that the proposed improvements will lead to further increases in the use of sustainable transport. This should, in turn, more than compenstates for reductions in visits by car users. Whilst spend per visitor may fall slightly, the overall spend rises due to the increased overall footfall. This effect should occur as soon as the new proposed routes open

with shoppers choosing to make even more use of sustainable transport decisions. Whilst there is limited evidence of the impact during the construction work, none of the evidence suggested an increase in business insolvency or a departure of businesses from the area during construction works.

Increased people movement will bring more people into the Proposed Scheme corridor, Section 6.4.6.3 of Chapter 6 of Volume 2 of the EIAR notes the following: *"People Movement: Given the proposed amendments to the pedestrian, cycling, bus and parking / loading infrastructure outlined above, the Proposed Scheme will have greater capacity to facilitate the sustainable movement of people travelling along the corridor. A quantitative impact assessment has been undertaken using outputs from the NTA's ERM and LAM, comparing the Do Minimum and Do Something peak hour scenarios for each forecast year (2028, 2043). The results of the assessment demonstrate that there will be an increase of 37% and 27% in the number of people travelling along the Proposed Scheme during the 2028 AM and PM Peak Hours respectively. During the 2043 scenario there will be an increase of 49% and 38% in the number of people travelling along the Proposed Scheme during the AM and PM Peak Hours. These increases are all due to the increased levels of people movement by sustainable modes facilitated by the Proposed Scheme. The analysis also shows that there will be an increase of 11% in the number of passengers boarding buses during the AM and PM Peak hours in 2028. During the 2043 scenario there will be an increase of approximately 6.4% and 38.4% in the number of passengers boarding buses during the AM and PM Peak hours respectively. Overall, it is adjudged that the Proposed Scheme will have a Positive, Very Significant and Long-term effect on the sustainable movement of people along the corridor."*

As regards the view expressed that additional travel distance by non-public transport means to shops due to traffic restrictions, the Proposed Scheme provides a balance between providing bus priority while also ensuring that access by car to local streets and businesses, shops etc. is maintained. Due to an overall forecasted reduction in traffic flows, general routes will offer a reasonable alternative journey time.

Section 6.4.6.2.9.5 of Chapter 6 Traffic & Transport notes the results of the general Traffic Assessment and notes the following in relation to the Indirect Study Area AM Peak Hour:

"The results of the junction analysis illustrated in Table 6.85 demonstrate that of the total of 190 junctions assessed, 157 junctions are operating with a maximum V / C ratio of below 85% in the Do Something scenarios in the AM Peak Hour in the 2028 Opening Year. A further 26 junctions are operating with a maximum V / C ratio of between 85% - 100%. Therefore, the majority of junctions continue to operate well within capacity with the Proposed Scheme in place.

Overall, the Proposed Scheme is considered to have a ***Not Significant or Imperceptible and Long-term effect*** *at 176 junctions within the indirect study area. Five of the 190 junctions assessed are shown to have a significance of effect of* ***Negative, Slight and Long-term****, and four are shown to have* ***Negative, Moderate and Long-term*** *effects. Five junctions were assessed to have a* ***Positive, Moderate and Long-term effect****.*

Capacity issues are noted at the following seven junctions (i.e. they are predicted to operate with a V / C ratio of above 100% in the Do Something scenario):

- *Station Road / Ninth Lock Road (252361);*
- *Killeen Road / Park West Road (14214);*
- *Chapelizod Bypass / Kennelsfort Road Lower (22106);*
- *Spawell Roundabout (9148);*
- *Templeogue Road / Cypress Grove Road (9178);*
- *Citywest Road / Garter Avenue (24298); and*
- *Tallaght Bypass / Whitestown Way / Cookstown Way (24129).*

Six out of seven junctions operate with a maximum V / C ratio of above 100% in both the Do Minimum and Do Something scenarios, therefore, the significance of effect is considered to be ***Negative, Moderate and Longterm****, at worst. Spawell Roundabout operates with a V / C ratio of 85-100% in*

the Do Something, however, the sensitivity of this road link is deemed to be 'negligible', therefore, the significance of effect is ***Not Significant*** *and* ***Long-term*** *overall.*

The results demonstrate that no junctions are predicted to have a significance of effect of significant or higher, therefore, no further assessment of the AM Peak Hour in the 2028 Opening Year is required."

Section 6.4.6.2.9.5 of Chapter 6 Traffic & Transport notes the results of the general Traffic Assessment and notes the following in relation to the Indirect Study Area PM Peak Hour:

"The results of the junction analysis illustrate that, of a total of 164 junctions assessed, 133 junctions are operating with a maximum V / C ratio of below 85% in the Do Something scenarios in the PM Peak Hour in the 2028 Opening Year. A further 22 junctions are operating with a maximum V / C ratio of between 85% - 100%.

Overall, as a result of redistributed general traffic associated with the Proposed Scheme, the effect at 161 out of 164 junctions assessed is predicted to be Not Significant and Long-term and Imperceptible and Long-term within the Indirect Study Area. Two are shown to have Negative, Moderate and Long-term effects in the 2028 Opening Year PM Peak Hour.

Capacity issues are noted at the following 9 junctions:

- *Chapelizod Bypass / Kennelsfort Road Lower (22106);*
- *Chapelizod Bypass / The Oval (22117);*
- *Memorial Road / Con Colbert Road (14124);*
- *Ballymount Road Lower / Ballymount Retail Centre (16166);*
- *Walkinstown Avenue / Long Mile Road (8196);*
- *Naas Road / Turnpike Road (16113);*
- *M50 Northbound / J9 Off-slip (16190);*
- *M50 J10 NB off slip to Naas Road (16183); and*
- *Glenview Roundabout / Tallaght Bypass (24103).*

Six out of 9 junctions operate with a maximum V / C ratio of above 100% in both the Do Minimum and Do Something scenarios, therefore, the significance of effect is considered to be ***Not Significant and Long-term****. At the remaining three junctions, the sensitivity of the road links is considered to be 'negligible', therefore, the overall significance of effect is* ***Not Significant and Long-Term****. One junction was assessed to have a* ***Positive, Moderate and Long-term effect****.*

The results demonstrate that no junctions are predicted to have a significance of effect of significant of higher, therefore, no further assessment of the PM Peak Hour in the 2028 Opening Year is required."

Section 6.4.6.2.9.6 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR states that:

"2028 and 2043 Local / Regional Roads Assessment: The majority of assessed junctions have V / C ratios of below 85%, i.e. they are operating within capacity for all assessed years in the Do Minimum and Do Something scenarios. This indicates that these junctions will be able to accommodate the additional general traffic volumes redistributed, as a result of the Proposed Scheme and the effect is deemed ***Imperceptible / Not Significant and Long-term****.*

A small number of junctions are predicted to operate over capacity (>100% V / C ratio) in the Do Something scenario, however, it is concluded that, in the majority of cases the performance of the junction is similar with and without the Proposed Scheme, or the sensitivity of the road link determines that the overall effect will not be significant.

The results demonstrate that no junctions are predicted to have a significance of effect of significant of higher, therefore, no further assessment is required.

Overall Summary: Overall, it has been determined that the potential impact of the reduction in general traffic flows along the Proposed Scheme will be ***Positive, Moderate and Long-term*** *whilst the potential impact of the redistributed general traffic along the surrounding road network will be* ***Negative, Sight and Long-term****.*

It should be noted that effects will be short-lived and localised. Section 5.4.2 of DMURS (2019) recognises that a certain level of traffic congestion is an inevitable feature within urban networks and that junctions may have to operate at saturation levels for short periods of time during the peak hours of the day.

4. Traffic congestion due to school journeys

School journeys were considered for the Proposed Scheme as noted in Section 4.1.2.2 Commissioned Traffic Survey Data of the Transport Impact Assessment Appendix A6.1 Transport Impact Assessment of Volume 4 Part 2 of 4 of the EIAR: *"Due to the scale of the Proposed Scheme, a full set of consistent up to date traffic counts for a neutral period e.g. November / February when schools, colleges were in session was completed for the Proposed Scheme. Traffic surveys were undertaken in November / December 2019 (Pre COVID- 19) with the surveyed counts used as inputs to the model calibration and validation process of the strategic model and micro-simulation model."*

Data taken from this traffic count formed part of the overall traffic impact assessment for the proposed scheme.

The overall predicted reduction in car journeys resulting from implementation of the Proposed Scheme will reduce traffic congestion. Detailed response to Proposed Scheme traffic predictions raised by this submission has been provided in Section 2.4.3.2 Response to submission.

Figure 2.8.1 below is an extract from Section 4.2 (Table 4.1) Chapter 4 of Volume 2 of the EIAR summarising the changes for bus and cycle travel provision for the Proposed Scheme.

Total Length of Proposed Scheme	**15.5km (+3.9km offline cycling facility)**	
Features	**Existing (km)**	**Proposed Scheme (km)**
Bus Lanes		
Inbound	5.4	14.2
Outbound	4.5	13.8
Bus Priority through Traffic Management		
Inbound	0.3	0.6
Outbound	0.3	0.6
Total Bus Priority (both directions)	10.5	29.2 (+176%)
Bus Measures		
Proportion of Route with Bus Priority Measures	34% (Core Bus Corridor)	94% (Core Bus Corridor)
Cycle Facilities – Segregated		
Inbound	2.1	16.6
Outbound	1.7	17.4
Cyclist Facilities – Non-segregated (not including un-segregated Bus Lanes)		
Inbound	8.8	0.8
Outbound	9.1	0.8
Cyclist Facilities – Overall		
Total Cyclist Facilities (both directions)	21.7	38.5
Proportion Segregated	17.2%	93%
Other Features		
Number of Pedestrian Signal Crossings	135	181
Number of Residential Properties with Land Acquisition	n/a	55

Figure 2.8.1: Extract from EIAR Chapter 4 – Summary of Changes as a result of the Proposed Scheme (Table 4.1)

5. Traffic modelling out of date (Covid)

The following is noted in Section 2.1 of Chapter 2 of Volume 2 of the EIAR, in relation to the effect of COVID-19:

"The COVID-19 pandemic brought about a short-term change in travel patterns in the Greater Dublin Area (which led, for example, to fewer people using public transport and more people working from home). Travel demand and patterns of travel have now started to return to pre-pandemic levels and are anticipated to grow in line with population growth. The impacts on travel demand and patterns of travel are still dependent on the quality of the transport system, in particular the reliability of a bus service that is not constrained by general traffic congestion."

Chapter 06 (Traffic & Transport) of Volume 2 of the EIAR has considered the potential traffic & transport impacts associated with the Construction and Operational Phases of the Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme. Section 6.4.6.2.9.1 of this document has addressed the flexibility in working arrangements brought on following COVID – 19 and states:

"The Proposed Scheme aims to provide an attractive alternative to the private car and promote a modal shift to public transport, walking and cycling. It is, however, recognised that there will be an overall reduction in operational capacity for general traffic along the direct study area given the proposed changes to the road layout and the rebalancing of priority to walking, cycling and bus. This reduction in operational capacity for general traffic along the Proposed Scheme will likely create some level of trip redistribution onto the surrounding road network.

It should be noted that the Do Minimum and Do Something scenarios are based on the assumption that travel behaviour will remain broadly consistent over time and that car demand, used for this assessment, represents a reasonable worst-case scenario. It is possible that societal trends in the medium to long term may reduce car demand further due to the ongoing changes to travel behaviours and further shifts towards sustainable travel, flexibility in working arrangements brought on following COVID-19, and delayed car ownership trends that are emerging."

In summary it is considered that the traffic assessment contained in the EIAR, and the traffic data upon which it is based (collected pre-covid pandemic), represents a reasonable basis for the assessment.

6. Public consultation Aarhus compliance

Ireland ratified the Aarhus Convention in June 2012 and it entered into force in Ireland in September 2012. Prior to that ratification, Ireland had to ensure that all the provisions of the Convention were implemented in national law, which took a number of years, and involved over 60 pieces of legislation.

Accordingly, Ireland's obligations under the Aarhus Convention have been fully incorporated into Irish legislation and include rights of access to information on the environment, rights of participation in planning determinations, rights of access to adequate review procedures and various other rights.

These are now statutory provisions, which are binding on all applicable parties.

In relation to transport infrastructure projects, the applicable statutory provisions are set out in the relevant planning and transport legislation, which include requiring major projects to seek planning consent from An Bord Pleanála. Those application processes for large infrastructure schemes provide for a statutory process requiring the making available for public review all of the applicable information set out in the legislation and permitting the making of submissions in relation to the proposals to the determining body, being An Bord Pleanála.

Thereafter, the legislation provides for the holding of an Oral Hearing, enabling direct public engagement and participation in the decision making process.

As part of the scheme development stage, various non-statutory public consultation processes have been undertaken. These processes are in excess of the requirements of the Aarhus Convention, whose obligations are already enshrined in Irish legislation including "statutory public consultations" which is the stage that the project has now reached.

The NTA notes the comment regarding the technical nature and volume of the documents presenting a potential barrier to the general public seeking access to information relating to the scheme. Given the nature of such infrastructure schemes as BusConnects Core Bus Corridors, there is invariably a substantial amount of technical information which needs to be provided, so as to ensure that the

consent application is comprehensive in nature to meet legislative requirements and provide the competent authority with the necessary information to allow them to reach a decision. Volume 1 of the EIAR comprises the Non-Technical Summary of the EIAR for the Proposed Scheme. Chapter 1 in Volume 2 of the EIAR contains information on the content and structure of the EIAR. Section 1.5.6 of Chapter 1 sets out the information which must be contained in the EIAR. The NTA has sought to make the information as concise as possible, while ensuring that the necessary information has been provided. Section 1.5.7 of Chapter 1 sets out the structure of the EIAR. It is considered that the structure of the EIAR does provide the necessary legibility for those interested parties (both lay persons and technical specialists) to find the information of relevance to them. While the EIAR has been prepared in compliance with the EIA Directive, it has also been written to make it accessible to a wider, non-specialist audience in so far as possible.

In May 2017 the NTA launched the BusConnects Programme and then in June 2018 published the Core Bus Corridors Project Report. The report was a discussion document outlining proposals for the delivery of Core Bus Corridor Routes across Dublin.

Since the commencement of the non-statutory period of the CBC Infrastructure Works, there has been a total of three rounds of non-statutory public consultation.

First Round of Non-Statutory Public Consultation - The first round of non-statutory public consultation on the Emerging Preferred Route Options was from November 2018 until May 2019 divided into three phases. The reason it was divided into three phases was primarily due to the fact that the BusConnects Infrastructure team carried out all aspects of the first round without external design service providers having been appointed at that stage. Moreover, the BusConnects Infrastructure team sought to gain maximum engagement from the public from the commencement of the CBC Infrastructure Works to raise awareness, establish relationships and gain immediate insight and knowledge of the issues at an early stage.

It was also important that at the start of the non-statutory consultation that considerable time and resources were dedicated by the BusConnects Infrastructure team to initiate contact with potential impacted properties. Each of the potentially impacted property owners were offered the opportunity to meet with members of the BusConnects Infrastructure team on a one-to-one basis which meant a significant amount of resources had to be dedicated to this process.

Second Round of Non-Statutory Public Consultation – The non-statutory public consultation for the Preferred Route Options ran from March 2020 to April 2020 as Ireland entered the first lockdown due to the Covid-19 pandemic. The consultation continued in deference to the number of online submissions received during this period. A number of public facing elements of the consultation were cancelled in line with Government health guidelines, however, all other elements of the consultation including online versions of the brochures, supporting documentation were available. Other communication tools including the Freephone, email and digital aspects remained active for submissions to be received.

Third Round of Non-Statutory Public Consultation – This round of non-statutory public consultation for the Preferred Route Options from November 2020 to December 2020 was added due to the disruption caused to the second-round consultation process. It was important that further engagement was facilitated to communicate design development changes prior to concluding the determination of the Preferred Route Options. Methods had emerged whereby traditional public information events could be replaced by virtual online alternatives to offset the restrictions that continued associated with the Covid-19 Pandemic. Accordingly, all elements of the public consultation and stakeholder engagement were conducted virtually or online in line with the Government health guidelines.

7. Cumulative impact of schemes should be assessed

The potential of cumulative impacts arising from the construction and operation of the Proposed Scheme in-combination with other projects (including the other proposed BusConnects schemes) has been considered in Chapter 21 in Volume 2 of the EIAR. Section 21.1 in Chapter 21 states:

"This chapter reports the assessment of cumulative impacts of the Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme (hereafter referred to the Proposed Scheme) in combination with other existing and or approved projects and projects which, at the time of assessment, were yet to be approved, but for which a decision on such project is reasonably foreseeable over the likely consenting and construction period anticipated for the Proposed Scheme. In addition, the chapter addresses the potential for interactions between impacts on different environmental factors of the Proposed Scheme itself on the receiving environment."

Section 21.2.2.1 makes specific reference to the other BusConnects Core Bus Corridors:

"….As noted previously, the other 11 BusConnects Core Bus Corridor schemes were also included for assessment. While each of the other BusConnects Core Bus Corridor schemes will be subject to an application for approval, they have a similar likelihood of going ahead as this Proposed Scheme and therefore, the potential cumulative effects of the other BusConnects Core Bus Corridor schemes are of relevance to the potential cumulative effects of this Proposed Scheme so they were included on the preliminary long list….."

Section 21.2.7 of EIAR Chapter 21 considers the cumulative traffic impacts for the operation scenario and states: *"For operational cumulative effects including the Proposed Scheme, the assessment has been undertaken based on a scenario where all the other 11 Core Bus Corridor schemes are also operational."*

Section 21.3.2.1 of Chapter 21 summaries the detailed assessment of cumulative impacts on Traffic and Transport, which is set out in Appendix A6.1 in Volume 4 of the EIAR (Traffic Impact Assessment Report) as follows:

"Traffic Related Cumulative Effects

To examine the potential cumulative traffic effects that the Proposed Scheme may have in combination with any of the other Core Bus Corridor schemes, an area of influence for each scheme was determined to understand the scale of traffic displacement and its interactions with other schemes. The 'area of influence' is the area in which traffic flows are likely to change as a result of the Proposed Scheme measures as indicated by the transport modelling. The outcome of this assessment revealed that the Proposed Scheme has direct and indirect interface with the proposed Kimmage, Liffey Valley and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes.

In terms of direct interfaces, the Kimmage to City Centre Core Bus Corridor Scheme proceeds along New Street South and interacts with the proposed implementation of traffic management measures for the Proposed Scheme at the Kevin Street Upper junction. Works proposed to the junction include the introduction of kerblines realignment, cyclist protection islands build-outs, footway paving, pedestrian crossings, cycle tracks and landscaping at Kevin Street Upper / New Street South / Patrick Street junction. The traffic management measures to be implemented by the Proposed Scheme are located at Kevin Street Upper / New Street South / Dean Street / Patrick Street junction as shown on General Arrangement drawing BCIDA-ACM-GEO_GA-0809_XX_00-DR-CR-0033 in Volume 3 of this EIAR.

The Liffey Valley to City Centre Core Bus Corridor Scheme proceeds along Cornmarket and High Street and interacts with proposed implementation of traffic management measures for the Proposed Scheme at the Nicholas Street / Christchurch Place junction. Works proposed to the junction include the introduction of kerblines realignment, cyclist protection islands build-outs, footway paving, pedestrian crossings, cycle tracks and landscaping at High Street / Nicholas Street / Christchurch Place / Winetavern Street junction. The traffic management measures to be implemented by the Proposed Scheme are located at High Street / Nicholas Street / Christchurch Place / Winetavern Street junction as shown on General Arrangement drawing BCIDA-ACM-GEO_GA-0809_XX_00-DR-CR-0034 in Volume 3 of this EIAR.

The BusConnects Infrastructure team have coordinated the respective scheme designs to provide flexibility in the proposals such that implementation of physical works can be coordinated or delivered in sequence should both schemes be consented. Once in place, both Core Bus Corridor Schemes will provide increased capacity, faster journey times and improved reliability for buses which should lead

to considerable mode shift from car transport to public transport, which will reduce traffic levels generally across the road network in and around both corridors.

In terms of indirect effects, modelling has indicated that both the Proposed Scheme and the Kimmage and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes have overlapping traffic ZoI e.g., each scheme results in traffic displacement effecting the other corridor.

When all three schemes are operational (as well as all other proposed Core Bus Corridor schemes), this has the effect of constraining the opportunity for traffic to displace onto adjoining / adjacent roads when compared to the effect when only one of the Core Bus Corridor schemes is operational. In addition to this, with all the Core Bus Corridor schemes operational, there is predicted to be a higher modal shift from private car trips to sustainable modes of travel compared to the singular scheme scenario. This is due to the combined effect of all Core Bus Corridor schemes being operational and the journey time savings and reliability for bus travel and the interchange opportunities that this provides to travel around Dublin in combination with the BusConnects network re-design proposals. In addition, the Core Bus Corridor schemes will facilitate a step change in the level of segregated cycling provision in comparison with existing conditions along the entire length of the corridors resulting in more people cycling.

The result of the above is that the cumulative effect of all Core Bus Corridors in operation and in tandem with the roll out of the wider Greater Dublin Area Transport Strategy measures, future growth in overall travel demand is catered for by sustainable modes. No significant negative effects over and above those considered in the standalone assessments for the Operational Phase were predicted in the cumulative impact assessment and therefore no additional mitigation measures are considered necessary."

Section 21.4.1.1 notes the following in relation to impacts on communities and the local economy:
"The topics of 'Population' and 'Human Health' are inextricably linked. Chapter 10 (Population) of this EIAR has focused on how the Proposed Scheme could have impacts on communities and the local economy (commercial businesses). As outlined in the methodology in Chapter 11 (Human Health), the social conditions, community networks and economic conditions within which people live are considered wider determinants of health and have an important influence on human health."

The potential for cumulative biodiversity impacts has been considered Chapter 21. Construction and operational phase cumulative biodiversity impacts have been considered in Sections 21.3.1.7 and 21.3.2.7 respectively.

No significant cumulative biodiversity impacts are predicted.

2.8.3 31 - MEP – Ciarán Cuffe

2.8.3.1 Overview of submission

The submission raised the following points and issues:

1. Advocate for the Proposed Scheme

The submission expresses how pleased the MEP is to have this opportunity to express their support for the Proposed Scheme. The submission notes the following: "The Inclusion of traffic calming measures and continuous cycle lanes will help commuters feel safe in making the switch to active travel. In particular, I applaud the focus on improving pedestrian' and cyclists' experiences of interchanges and roundabouts along Dublin's arterial roads. The simplification of the junction at Christ Church Cathedral will also greatly enhance the experience of navigating the city as a pedestrian."

2. Separation between road, cycle and footpath

Method of separation between road, cycle lane and footpath is unclear throughout the general arrangement drawings. National cycle manual should be adhered to as closely as possible.

3. Adequate cycle parking

Adequate bicycle parking should be provided near the bus interchange in Belgard Square. Bicycle parking should be included elsewhere on the route especially inside the Grand Canal but should not result in narrow footpaths.

4. Greenery for zipway on Blessington Road

Existing Zipway should be adorned with greenery.

5. Truncation of cycleway Main Street Tallaght and signage on Old Greenhills Road.

Regrettable that cycle lane ends suddenly at top of Main Street Tallaght, this cycle lane should feed back onto the road rather than cyclists sharing footpath space with pedestrians. Signage prohibiting cars on Old Greenhills Road should be clear.

6. Bus stops wheelchair access

Floating bus stops throughout the scheme should be wide enough to accommodate wheelchair boarding. Bus stops should be relocated if necessary to wider parts of street.

7. 7.Remove road median for wide footpaths

Carriageway central median at Dolphin's Barn and Patrick Street where footpaths are narrow should be removed in favour of expanding active travel infrastructure.

8. Bus passengers disembark onto cycle lane – revise

Bus stops on Clogher Road should be altered so passengers don't have to disembark directly into cycle lane.

2.8.3.2 Response to submission

1. Advocate for the Proposed Scheme

The NTA welcomes the support from the MEP for the Proposed Scheme. Requests to consider minor alterations of the Proposed Scheme are noted and the NTA provides responses to those requests as set out in the following sections.

2. Separation between road, cycle and footpath

As noted in Section 4.6.3.1 Cycle Tracks of Chapter 4 of Volume 2 of the EIAR: *"Segregated cycle tracks have been provided where practicable, with the exception of a proposed quiet street along a short section of Clogher Road, west of Sundrive Road, where the road is very narrow for a distance of approximately 200m. Traffic will be controlled in this section through the use of a bus gate at the junction of Clogher Road / Sundrive Road The remaining length of this alternative route includes a dedicated cycle lane (Bunting Road, St. Mary's Road, Kildare Road and the rest of Clogher Road) with a view to providing an alternative safe route for cyclists navigating between the Walkinstown Roundabout and the Grand Canal cycle route at R111 Parnell Road.*

At-grade cycle tracks (as per NCM Section 4.3.4) may be used as an alternative where the appointed contractor (in liaison with the suitably qualified arborist engaged by them), deems that a no-dig

technique is required following on-site inspection of a tree's root protection area (RPA). In these instances, the cycle tracks will be at carriageway level and segregated from general traffic using slip formed kerbing. Such assessments are likely to be required in areas where the existing kerbs are proposed to be retained due to the presence of existing trees at the road edge."

Figure 2.8.3.1 is an extract from Section 4.6.3.1 Cycle Tracks of Chapter 4 of Volume 2 of the EIAR showing the "preferred cross-section template" for the Proposed Scheme which includes protected cycle tracks, providing vertical segregation from the carriageway to the cycle track and vertical segregation from the cycle track to the footpath.

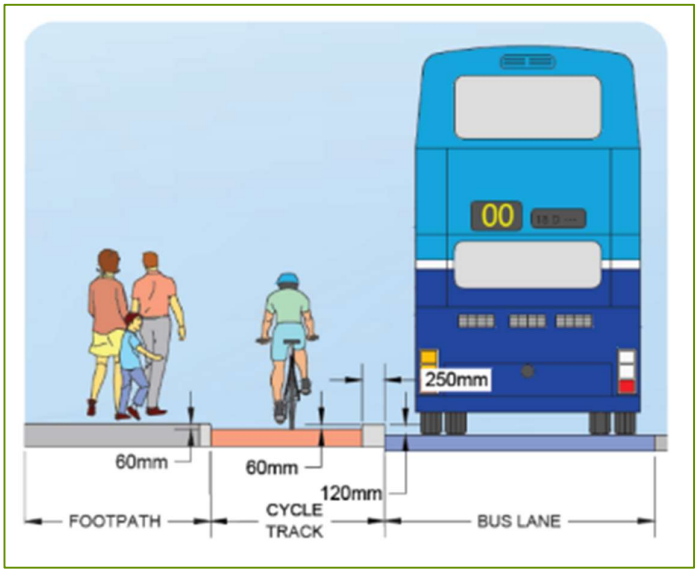


Figure 2.8.3.1: Extract from Section 4.6.3.1 Cycle Tracks of Chapter 4 of Volume 2 of the EIAR (Image 4.14)

The General Arrangement Drawings can be viewed in conjunction with the Typical Cross Sections Drawings which are provided as an appendix to Chapter 4 Proposed Scheme Description in Part 1 of 3 of Volume 3 of the EIAR to inform road cross-sections indicating vertical separation of carriageway elements.

3. Adequate cycle parking

As noted in Section 4.6.3 of Chapter 4 of Volume 2 of the EIAR, cycle stands will generally be provided, where practicable, at island Bus Stops and key additional locations as noted in the Landscaping General Arrangement drawings (BCIDC-ACM-UBR_ZZ-0809_XX_00-DR-LL-9001) in Volume 3 of the EIAR and in accordance with the cycle parking provision shown in the bus stop arrangements shown in Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors of Volume 4 Part 1 of 4 of the EIAR.

The Bus Interchange at Tallaght has been developed in consultation with South Dublin County Council considering SDCC proposed Public Realm development adjacent to Belgard Square West which includes bicycle parking provision.

Figure 2.8.3.2 is an extract from South Dublin County Council Part 8 application drawing - Site layout Plan – Tallaght Luas Stop.



Figure 2.8.3.2: Extract from SDCC Part 8 Planning Application drawing (Site Layout Plan – Tallaght Luas Stop, Drawing No. 03)

The provision of additional bike storage facilities does not form part of the Proposed Scheme.

4. Greenery for zipway on Blessington Road

It is not proposed to alter the existing "Zipway" on Blessington Road, as noted in Section 4.5.1.5 Cycling Provision of Chapter 4 of Volume 2 of the EIAR: *"On Blessington Road, the existing cycle 'Zipway' will remain in place (Primary Route SO5 of the GDA Cycle Network Plan)."*

Additional greening of the carriageway median is proposed on Blessington Road. Figure 2.8.3.4 is an extract from Landscape General Arrangement Drawings at Blessington Road from Figures: Part 1 of 3 of Volume 3 of the EIAR.

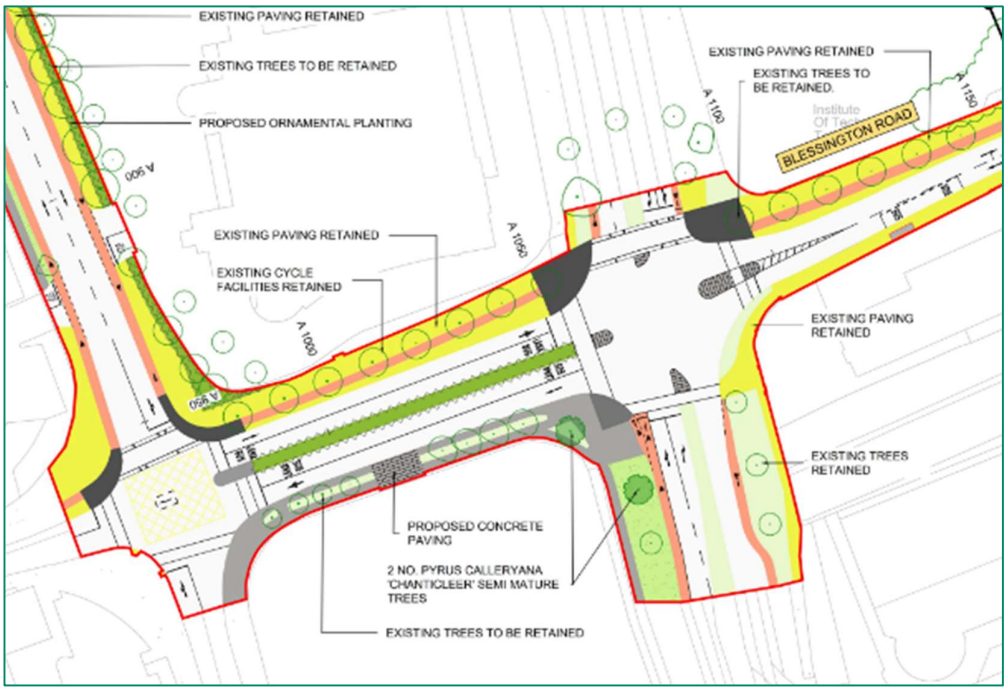


Figure 2.8.3.4: Extract from Landscaping General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR

5. Truncation of Main Street cycleway and signage on Old Greenhills Road

It is not proposed to alter the existing off-road cycle track on Blessington Road / Main Street Tallaght.

As noted in Section 4.5.1.5 Cycling Provision of Chapter 4 of Volume 2 of the EIAR: *"On Blessington Road, the existing cycle 'Zipway' will remain in place (Primary Route SO5 of the GDA Cycle Network Plan)."*

6. Bus stop wheelchair access

The NTA notes the submissions' comments in relation to the importance for considering the wheelchair access at bus stops. In Section 11 of EIAR Chapter 4 Proposed Scheme Description Appendix A.4.1 Preliminary Design Guidance Booklet (PDGB) sets out the key measures to address the concerns raised in relation to vulnerable users at these locations which is further elaborated in Section 4.13.2, 4.13.3 of the Preliminary Design Report provided as Supplementary Information. These details have evolved as a result of direct consultation between the NTA and representative mobility groups, accessibility audits and road safety audits.

As described in PDGB Section 11.1 Island Bus Stop, these types are the preferred bus stop option to be used as standard on the CBC project where space constraints allow. Where space constraints do not allow for an island bus stop, as is the case at Artane Cottages Lower, PDGB Section 11.2 Shared Bus Stop Landing Zone provides an option consisting of a shared bus stop landing zone that may be considered. This proposed arrangement will remove the conflict between cyclists and stopping buses by ramping cyclists up to the footpath level where they continue through the stop.

Section 11.2 goes on to explain that to address the pedestrian/cyclist conflict, which would apply to wheelchair users also, the cycle track should be narrowed on approach to the bus stop and yellow bar markings should be provided to alert cyclists to the potential conflict ahead. In addition to this, at the bus stop, the cycle track should be deflected to provide a 1.0m wide boarding/alighting zone for bus passengers, including wheelchair users. Also, appropriate tactile kerbing should be provided to ensure that visually impaired users are aware of crossing areas.

The Shared Bus Stop Landing Zone is the bus stop arrangement at this location and is in accordance with EIAR Chapter 4 Proposed Scheme Description Appendix A.4.1 Preliminary Design Guidance Booklet.

Bus stops located where available footpath width is a minimum, the width constraint generally exists over a length of footway / roadway, as noted in Section 4.6.4.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR:

"To improve the efficiency of the bus service along the Proposed Scheme the positions and number of bus stops have been reviewed as part of a bus stop assessment.

The criteria for consideration when locating a bus stop are as follows:

- *Driver and waiting passengers are clearly visible to each other;*
- *Location close to key facilities;*
- *Location close to main junctions without affecting road safety or junction operation;*
- *Location to minimise walking distance between interchange stops;*
- *Where there is space for a bus shelter;*
- *Location in pairs, 'tail to tail' on opposite sides of the road;*
- *Close to (and on exit side of) pedestrian crossings;*
- *Away from sites likely to be obstructed; and*
- *Adequate footway width.*

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections on route, reducing to approximately 250m in urban centres. It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided."

As part of the design of the Proposed Scheme a detailed review of bus stop locations was undertaken as set out in Bus Stop Review Analysis in Appendix H.2 (using the methodology as set out in Appendix H.1) of the Preliminary Design Report provided as Supplementary Information. This exercise was carried out to review existing bus stops along the route of the Proposed Scheme and, where appropriate to rationalise these stops in line with best practice criteria mentioned above.

7. Remove road median for wide footpaths

At both Dolphin's Barn and Patrick Street the carriageway central median provides opportunity for green planting in an urban environment where existing trees are retained and new tree planting is proposed for Dolphin's Barn and new ornamental planting is proposed for Patrick Street and Nicholas Street.

The eastern footpath width at Dolphin's Barn is a minimum of 1.8m wide which allows for a minimum segregated cycle track and 3.0m wide general traffic and bus lanes. DMURS defines the absolute minimum footway width for road sections as 1.8m based on the width required for two wheelchairs to pass each other.

At Patrick Street and Nicholas Street the western footpath is a minimum of 2.0m generally with a pinch point 1.5m wide at a ramp structure outside No.18 Nicholas Street which allows for a minimum segregated cycle track and 3.0m wide general traffic and bus lanes. Section 4.6.1 Mainline Cross-section of the EIAR Volume 2 Main Chapter 4 Proposed Scheme Description described that 2.0m is a desirable minimum width for footpaths with 1.2m being an absolute minimum width at pinch points.

As described in Section 5.4 of Appendix A4.1 Preliminary Design Guidance Booklet of EIAR Chapter 4 Proposed Scheme Description, one of the core objectives of the CBC project is to provide segregated cycling facilities along the routes. Physical segregation ensures that cyclists are protected from motorised traffic as well as providing segregation from pedestrians. This latter segregation is achieved by the inclusion of a 60mm high minimum vertical kerb is required on the footpath side of the cycle track to ensure that the kerb is properly detectable by visually impaired pedestrians using the footpath. This removes the risk of errant cyclists straying on to the footpath.

8. Revise design to avoid bus passenger disembarking onto cycle lane

Layout of bus stops on Clogher Road are based on the National Cycle Manual In-Line Bus Stop Option 2 adapted for segregated cycle track width of 1.5m.

2.8.4 34 - Dublin Commuter Coalition

2.8.4.1 Overview of submission

The submission raised the following points and issues:

1. Advocate for the Proposed Scheme

The submission set out that the Dublin Commuter Coalition is a voluntary advocacy group for public transport users, cyclists, and pedestrians in Dublin and surrounding counties. The submission noted that the Dublin Commuter Coalition support the Proposed Scheme and are glad to see that more than three years of public engagement has resulted in a planning application.

They believe the project will be a catalyst for greater usage of public transport and active travel. However, they stated that the proposed design requires significant changes for this to happen.

2. Provide enforcement cameras

The submission outlined its views in relation to the importance of enforcement for lawful use of bus lanes, cycle lanes and other measures such that the benefits of the Proposed Scheme will be realised by bus passengers. Without a plan for camera enforcement, the effects of the improvements proposed in the scheme will not be seen by bus users.

3. Provide 24/7 bus lane operation

The submission outlined its view that all proposed bus lanes and bus gates should be operational on a 24/7 basis.

4. Junction design

The submission has queried the design approach undertaken by the NTA in relation to adopting international best practice. The submission requested that Dutch-style junctions be used throughout the Proposed Scheme.

5. Pedestrian crossings

The submission stated that two-stage pedestrian crossings should be avoided in line with DMURS Section 4.4.3 and Section 4.3.2 of DMURS.

Additionally, the submission noted that many three and four-way junctions are missing pedestrian crossings entirely on one or more arms.

6. Bus stop design

The submission raised concerns about the proposed width of bus stop islands and noted that they will lead to conflict between bus passengers and cyclists.

7. Shared space

The submission noted that the Proposed Scheme includes for the provision of shared space for pedestrians and cyclists at several junctions and asserted that this is an unsuitable arrangement for busy urban junctions.

The submission strongly recommended that alternatives to the proposed design are considered and that pedestrians and cyclists be segregated at all junctions for the safety and comfort of everyone.

8. Bicycle parking.

The submission states the Proposed Scheme does not state where bike parking will be located, nor does it appear in the general arrangement drawings. The submission suggests that to encourage a significant modal shift for walking and cycling, that in addition to the proposed cycle infrastructure, it is important to provide for the best quality bicycle cycle parking facilities at bus stops and public transport interchanges.

The submission recommends that conditions be set to provide for additional identified areas of dedicated cycle parking and inclusion of stands and storage locations which complement the provided cycle lanes and interface with public transport stops and interchanges.

9. Segregation of cyclists and motor traffic

The submission states that the Proposed Scheme lacks segregation of cyclists from motor traffic along Greenhills Road/Calmount Avenue and several junctions such as Calmount Avenue/Calmount Road, Ballymount Avenue/Greenhills Road etc.

The submission requests that these sections be redesigned to segregate cyclists properly from general traffic.

10. Nicholas Street

The submission notes that the northbound cycle lane is narrowed to a substandard 1.3m wide and the footpath is narrowed to 1.5m to accommodate carriageway widening for two general traffic lanes as Nicholas Street approaches High Street. Bus priority disappears closer to the High Street junction to facilitate a third general traffic lane. The submission states that this proposed layout is unsafe and unsuitable in a city centre location and the scheme prioritises car traffic over public transport, walking and cycling.

11. Naas Road / Long Mile Road junction

The submission states that this junction is simply terrible for pedestrians and cyclists and needs to be completely redesigned.

2.8.4.2 Response to submission

1. Advocate for the Proposed Scheme

The NTA recognises the benefit of the continued engagement with the Dublin Commuter Coalition and other advocacy groups through the three rounds of non-statutory public consultation, community forums and one to one meetings in developing the Proposed Scheme. The NTA welcomes the support from the advocacy group for the Proposed Scheme. Requests to modify particular detailed design aspects of the Proposed Scheme are noted and the NTA provides responses to those requests as set out in the following sections. The NTA looks forward to continuing to collaborate with the Dublin Commuter Coalition in achieving the Proposed Scheme objectives which have many synergies with the Dublin Commuter Coalition members vision in creating a Dublin that works for all users of sustainable transport.

2. Provide enforcement cameras

The NTA acknowledges the comments raised in relation to camera enforcement. Whilst enforcement for the lawful use of bus lanes is currently a matter for An Garda Síochána, the NTA is separately exploring proposals and methods for bus lane enforcement as set out under Measure *INT20 – Enforcement of Road Traffic Laws* of the Draft Greater Dublin Area Transport Strategy 2022-2042. Notwithstanding this, specific measures have been considered in the development of the Proposed Scheme that will help deter inappropriate and unlawful use of bus lanes including advanced bus signal detection systems which will activate green signals at traffic lights for authorised vehicles only.

3. Provide 24/7 bus lane operation

All bus lanes will operate 24 hours a day 7 days a week. It should be noted that the hours of operation of the bus gates will be subject to on-going review based on prevailing traffic conditions and the goal of achieving the project objectives. The NTA and local authorities will co-operate in good faith to address any issues with the hours of operation that may arise during the lifetime of the Proposed Scheme.

4. Junction design

i. Principles of Protected Junction Design for BusConnects

It is important to note that no two junctions are the same. Junctions on the Proposed Scheme have broadly been categorised into 4 types of junction as set out in Appendix A4.1 BusConnects Preliminary Design Guidance Booklet (PDGB) of the EIAR and specifically set out at each location in the Junction Design Report which have been included in Appendix A6.3 of Volume 4 Part 2 of 4 of the EIAR and summarised in Table 4.6, Table 4.12, Table 4.20, Table 4.27, Table 4.32 and Table 4.39 in Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR. A more detailed description of the junction types on the Proposed Scheme is provided in Sections 5.3.3.1, 5.3.3.2, 5.3.3.3 and 5.3.3.4 of the Preliminary Design Report with a detailed summary of the junction types along the Proposed Scheme also provided in Table 5-2 of the Preliminary Design Report.

The junction types set out in the PDGB directly align to the Proposed Scheme core aim and objectives. One of the core aims of the Proposed Scheme is to:

"Enhance the potential for cycling by providing safe infrastructure for cycling, segregated from general traffic wherever practicable."

The proposed scale of the BusConnects CBC Infrastructure Works will be transformational for cycling in Dublin, delivering a large number of the primary cycling routes identified in the Greater Dublin Area Cycle Network plan. With proposals of this scale, it is critical that the overall design approach matches the stated ambition, and can achieve a longevity that such investment deserves. With this in mind, the NTA set about developing 'Design Principles' for the project. These principles would complement existing documents and standards such as the National Cycle Manual and DMURS. The PDGB was developed to outline the agreed design principles and to enable consistency of design.

Documents such as the National Cycle Manual and DMURS continue to serve the engineering and development industry well and over the past 7-10 years and have played an important role in allowing Ireland to follow international best practice. The PDGB, like all guidance documents, was developed to be cognisant of the everchanging nature of society, including commuting patterns and behaviours. To acknowledge the expected increase in cycling numbers and to set about achieving the necessary 'step change' to cater for this increase, international best practice from countries which have already experienced this transition successfully was consulted. The ambition of the PDGB was to take the benefits of the traditional junction layout from the National Cycle Manual and supplement this with a range of measures aimed at increasing protection for cyclists and reducing uncontrolled conflict with pedestrians.

The Netherlands has one of the highest rates of bicycle use in the world, provides the widest range of cycling know-how and is famous worldwide for its cycling infrastructure. The 'Ontwerpwijzer Fietsverkeer' (Dutch Cycle Design Guide) was used during the development of the PDGB. Of particular interest to the NTA, was how the design of junctions could be improved to offer better protection to cyclists.

The typical protected junction layout, as shown in Figure 2.8.4.1, offers significant safety improvements compared to the traditional junction layout. The deflection of the cycle track at the junction allows the protection kerb (Note 4) to be positioned on the corner of the junction. In urban locations subject to spatial constraints, the protection kerb provides a tighter turning radius for vehicles and will force the left-turning motorist to reduce speed before making the tighter turn. This design layout also keeps straight-ahead and right-turning cyclists on the raised-adjacent cycle track as far as the junction, avoiding any cyclist-vehicle conflict at weaving and merging lanes, for example, where access to a dedicated left-turn lane would previously have necessitated a vehicle to cross the cycle lane. Right-turning cyclists will navigate the cycle lane on the junction and turn right (in a controlled manner) after it crosses the side arm. Other benefits to this junction design include:

a) Traffic Signal arrangement removes any uncontrolled pedestrian-cyclist conflict;

b) Raised and protected cycle track approaching junction;

c) Reduced risk of side-swipe due to the removal of cyclist-vehicle conflict at weaving and merging lanes on all approaches;

d) Improved right-turning safety; and

e) Improved sight lines for left turning traffic.

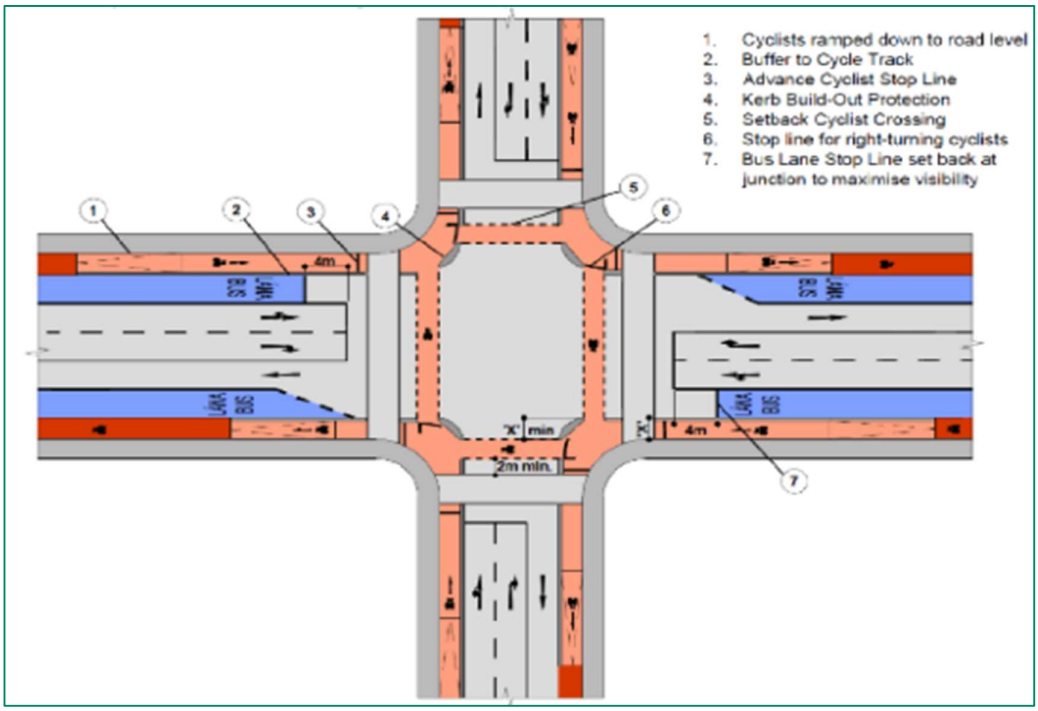


Figure 2.8.4.1: Typical Junction layout from BusConnects Design Guidance Booklet

ii. Pedestrian-cyclist conflict

Spatial constraints are an important factor in determining any junction design. This is especially the case in urban settings. Where possible, the protected junction has been proposed to be retrofitted into all existing junctions, taking into consideration the best practice from international settings including the Netherlands. The NTA notes the Dublin Commuter Coalition has set out their preference for the 'Dutch style' junction type as described within the submission. There are, however, legislative, behavioural and other practical considerations that need to be taken into account when looking at these international examples. Consideration for all of these elements has led to the development of the four junction types described in the PDGB.

An important consideration during the development of the PDGB was implementation of measures to mitigate pedestrian-cyclist conflict. The 'dutch-style' junction described in the submission is typical of many junctions in the Netherlands and it allows for a potential un-signalised conflict between pedestrians and cyclists, which depends on a level of courtesy to ensure that collisions are avoided. Following discussions with Irish disability groups, the issue of this potential conflict was raised as a significant concern along the core bus corridors for the visually impaired and for the mobility impaired, based on their members' experiences. Pedestrians are the most vulnerable of road users, and the addition of disability exacerbates this vulnerability. The four junction types within the PDGB have specifically been set out to mitigate these potential conflicts insofar is reasonably practicable.

Similarly, the layout of the 'dutch style' junctions described in the submission can result in a reduced level of service for pedestrians. The layout of these junctions requires a multi-movement, sometimes multi-directional, non-continuous crossings for pedestrians required with at least 3 crossing movements (2 x cycle track crossing, 1x carriageway) to cross a side road of a typical junction. The intermediate landing area for pedestrians between the cycle track and carriageway requires a suitably sized holding area for pedestrians to wait before crossing the road, this can require a significant space for urban locations. Junction types 1-3 in the PDGB aim to consolidate and segregate/confine this waiting area to within the footpath, thus creating a more legible and functional use of the available space for all users with direct crossing facilities that align to the principles of DMURS.

It is for these reasons that the layout of the 'dutch style' junctions described in the submission have not been adopted for junctions on the Proposed Scheme.

iii. Use of traffic signals to yield to cyclists

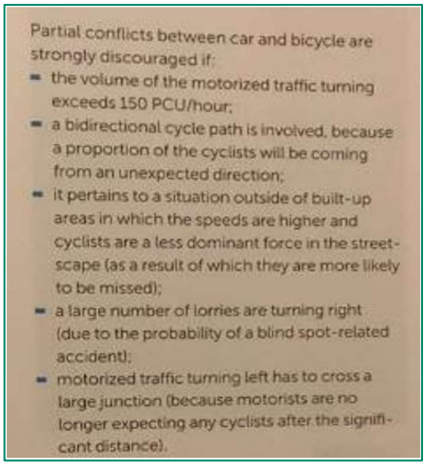
The concept of allowing both cyclists and general traffic to proceed together in the same direction is not uncommon and the same traffic signals arrangement also caters for left-turning traffic. In the

Netherlands, there are scenarios where the equivalent right-turn movement can be green whilst cyclists are also green. There is, however, an additional requirement to yield to cyclists in this Dutch scenario, see Figure 2.8.4.2.



Figure 2.8.4.2: Example from the Netherlands of traffic signals + give way signage controlling turning traffic and cyclists (Source: Dutch Design Guide Ontwerpwijzer Fietsverkeer)

The arrangement depicted above from the Netherlands is beneficial for cyclists in that it minimises delay time but should be subject to design thresholds such as heavy turning volumes, HGV movements (difficulty with blind spots), high speed environments etc. which have been considered during the design of junctions as part of the Proposed Scheme. The PDGB also includes guidance on appropriate signage to be provided to reinforce the requirement for motorists to yield to straight ahead traffic in such locations.



Partial conflicts between car and bicycle are strongly discouraged if:

- the volume of the motorized traffic turning exceeds 150 PCU/hour;
- a bidirectional cycle path is involved, because a proportion of the cyclists will be coming from an unexpected direction;
- it pertains to a situation outside of built-up areas in which the speeds are higher and cyclists are a less dominant force in the street-scape (as a result of which they are more likely to be missed);
- a large number of lorries are turning right (due to the probability of a blind spot-related accident);
- motorized traffic turning left has to cross a large junction (because motorists are no longer expecting any cyclists after the signifi-cant distance).

Figure 2.8.2: Extract from Dutch Design Guide Ontwerpwijzer Fietsverkeer

Dutch authorities have a suite of solutions for different scenarios – no one solution works everywhere. For junctions to operate safely and effectively, it is critical that the control of all movements is considered. All road users can have their own traffic signals at junctions (pedestrians, cyclists, buses, vehicles). To achieve optimum operational efficiency including the efficient movement of cyclists, it is also possible for some movements to occur safely at the same time. To assist with these design decisions, thresholds for turning movements have been used. Chapter 6 (Page 153) of the Dutch Design Guide Ontwerpwijzer Fietsverkeer discourages partial conflicts between cyclists and vehicles if the volume of turning vehicular traffic exceeds 150 PCUs per hour. See the above extract from Ontwerpwijzer Fietsverkeer which identifies the above threshold in Figure 4.1.3.3.

To put the above turning thresholds into context, 150 PCUs per hour equates to approximately 5 cars on average turning per 120 second cycle, or between 3 and 4 cars turning on average per 90 second cycle. The Proposed Scheme also provides other measures such as kerb segregation, advanced position cycle stop lines and early starts for cyclists which will further segregate and reduce the number of interactions between cyclists and vehicles. All these elements form the basis of a typical junction design and operation, thus no one element of a junction design should be considered in isolation.

21 of the 41 key junctions on the Proposed Scheme have implemented this approach to achieve optimum operational effectiveness including the efficient movement of cyclists. Introducing separate signal phases will increase delay for cyclists at junctions. This arrangement will promote the sustainable mode hierarchy for cyclists at junctions by providing priority to ahead cyclists over left turning vehicles. At each of these junctions the left turning vehicle traffic volumes in these locations are estimated to be less than the 150PCU threshold and similarly low HGV volumes are estimated in line with the principles established by international guidance. In addition to specific signage such as that presented in Figure 39 and Figure 40 of the PDGB, at each of the 21 locations a three to five second early start for cyclists is typically provided to further mitigate the potential for the number of interactions with vehicles/cyclists at these locations. The Proposed Scheme has also been subject to Road Safety Audits at different stages that have informed the design development of the Proposed Scheme.

11 of the 41 key junctions on the Proposed Scheme have implemented junctions where cyclists have a separate signal phase to vehicles.

Separately, the NTA, South Dublin County Council and Dublin City Council will continue to promote the already established driver awareness campaign that seeks to promote driver awareness in line with the Road Safety Authority rules of the road as noted below.

"When turning left, or right, all drivers must watch out for cyclists going ahead or turning. When making a turn, watch out for cyclists in front of you or coming up on your left or right. Do not overtake a cyclist as you approach a junction if you are turning left or right, as the cyclist may be continuing straight ahead."

5. Pedestrian crossings

The NTA acknowledges the comments raised in the submission and note that the Proposed Scheme will increase the number of controlled pedestrian crossings from 135 in the existing to 181 in the Proposed Scheme, equating to a 34% increase. Additionally, there will be an increase in the number of raised table crossings on side roads from 29 in the existing to 159 in the Proposed Scheme, representing a significant increase.

The summary level design rationale for each of the junctions on the Proposed Scheme is set out in Appendix A6.3 Junction Design Report of the Traffic Impact Assessment Report of Volume 4 Part 2 of 4 of the EIAR. For the pedestrian crossings at the junctions of Greenhills Road /Mayberry Road and Long Mile Road / Walkinstown Road, direct single movement crossings were explored in accordance with the approach set out in Section 5.6 of the PDGB. However, at these locations two stage crossings are the preferred design as a straight-across would result in a crossing distance of greater than 19m. As such the overall junction performance and people movement would be reduced by introducing direct single stage crossings on all arms which is not desirable at these locations.

Page 137 of the Junction Design Report Appendix A6.3 of Volume 4 Part 2 of 4 of the EIAR notes the following in relation to pedestrian infrastructure at Long Mile Road / Walkinstown Road junction:

"The existing pedestrian infrastructure is proposed to be upgraded. The proposal will relocate the two-stage pedestrian crossing from the western arm to the eastern arm and upgrade it to a toucan crossing to cater for both sustainable modes of travel. Removal of the pedestrian crossing on the western arm will offer efficiency into the junction performance. The proposal will also introduce a direct single stage crossing across Walkinstown Road due to the removal of an existing left turn slip. This will assist to reduce pedestrian crossing distances, thus enhancing pedestrian permeability. The existing pedestrian infrastructure is proposed to be upgraded. The proposal will remove the pedestrian crossing and be replaced with the toucan crossing to the west at the Long Mile Rd / Walkinstown Rd junction.

Controlled pedestrian crossings are proposed on the side arms of the junction to facilitate pedestrian priority across Slievebloom Road and Balfe Road."

6. Bus stop design

The NTA welcomes Dublin Commuter Coalition's comments in relation to the importance of considering the pedestrian/cyclist interaction at bus stops. In Section 11 of EIAR Chapter 4 of Part 2 of the EIAR, Proposed Scheme Description Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) of Part 4 of the EIAR sets out the key measures to address the concerns raised in relation to

vulnerable users at these locations which is further elaborated in Section 4.14 of the Preliminary Design Report in the Supplementary Information. These details have evolved as a result of direct consultation between the NTA and representative mobility groups, accessibility audits and road safety audits which have been carried out during the development of the Proposed Scheme.

As described in PDGB Section 11.1 Island Bus Stop, these types are the preferred bus stop option to be used as standard on the CBC project where space constraints allow. Island bus stops reduce the potential for conflict between pedestrians, cyclists and stopping buses by deflecting cyclists behind the bus stop, thus creating an island area for boarding and alighting passengers. On approach to the bus stop island the cycle track is intentionally narrowed, with yellow bar markings also used to promote a low-speed single file cycling arrangement on approach to the bus stop. Similarly, a horizontal cycle track deflection is proposed on the approach to the island to reduce cyclists' speed on approach to the controlled pedestrian crossing point on the island. To address the potential pedestrian/cyclist conflict, a pedestrian priority crossing point is provided for pedestrians accessing the bus stop island area.

Where space constraints do not allow for an island bus stop, PDGB Section 11.2 Shared Bus Stop Landing Zone provides an option consisting of a shared bus stop landing zone that may be considered. This proposed arrangement will remove the conflict between cyclists and stopping buses by ramping cyclists up to the footpath level where they continue through the stop.

Section 11.2 goes on to explain that to address the pedestrian/cyclist conflict, which would apply to wheelchair users also, the cycle track should be narrowed on approach to the bus stop and yellow bar markings should be provided to alert cyclists to the potential conflict ahead. In addition to this, at the bus stop, the cycle track should be deflected to provide a 1.0m wide boarding/alighting zone for bus passengers, including wheelchair users. Also, appropriate tactile kerbing should be provided to ensure that visually impaired users are aware of crossing areas.

7. Shared space

The National Cycle Manual notes that where practicable, the segregation of pedestrians and cyclists is desirable, and shared facilities should not be considered as a first option. The National Cycle Manual recognises, however, that in some cases, shared facilities are appropriate. The design of the Proposed Scheme has been undertaken such that pedestrians and cyclists are segregated wherever practicable and shared spaces are only used in specifically constrained locations, typically at junctions where there is insufficient space to provide a protected junction thereby requiring cyclists to make turning movements via toucan crossings.

Provision of signage and road markings will encourage cyclists to carefully negotiate these areas such that safety of pedestrians is not compromised.

8. Bicycle parking

As noted in Section 4.6.3 of Chapter 6 of Volume 2 of the EIAR, bike racks will generally be provided, where practicable, at Bus Stops and key additional locations as noted in the Landscaping General Arrangement drawings (BCIDC-ACM-UBR_ZZ-0809_XX_00-DR-LL-9001) in Volume 3 of this EIAR and in accordance with the cycle parking provision shown in the bus stop arrangements shown in Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors of Volume 4 Part 1 of 4 of the EIAR.

The Bus Interchange at Tallaght has been developed in consultation with South Dublin County Council considering SDCC proposed Public Realm development adjacent to Belgard Square West which includes bicycle parking provision.

9. Segregation of cyclists and motor traffic

The section of existing Greenhills Road (R819) from south of Kilakee Drive junction to the proposed cul-de-sac opposite the proposed Calmount Road extension is for local access with existing advisory cycle lanes retained. The Proposed Scheme routing for the improved cycling infrastructure will be diverted from this section of Greenhills Road via a new link road connecting Greenhills Road to Ballymount Avenue and on to Calmount Road which will be extended to meet Greenhills Road to the east.

10. Nicholas Street

The Emerging Preferred Route Option (EPR) included bus and cycle lanes, in each direction, along R137 Patrick Street and R137 Nicholas Street. To accommodate this, the central median was to be removed or the bus lane shared with cyclists.

Between the EPR and Preferred Route Option as a result of feedback from the public consultations, environmental assessment and design development, on R137 Patrick Street, the design retains the tree-lined median. In addition, the junction of R137 Nicholas Street and R810 High Street is to be remodelled to provide improved facilities for buses, cyclists and pedestrians.

Section 6.3.5.2 of Chapter 6 of Volume 2 of the EIAR note the following in relation to cycling infrastructure: *"The cycle facilities along Section 4 of the Proposed Scheme primarily comprise on-road cycle lanes located on both sides of the carriageway, with widths between 1.2m and 1.5m. On the R110 Dolphin's Barn Street / R110 Cork Street / St Luke's Avenue / Dean Street / R137 Patrick Street and R137 Nicholas Street, advisory cycle lanes are provided on both sides of the road throughout, with an exception between R111 Parnell Street and R811 South Circular Road junctions where the outbound cycle lane is replaced with a bus lane for part of this section."*

In relation to 1.3m cycle track width and 1.5m footpath width, in Appendix A4.1 BusConnects Preliminary Design Guidance Booklet (PDGB) of the EIAR. Sections 5.3 and 5.6 of the PDGB states the following:

"The minimum width is 1.5m, which, based on the NCM Width Calculator, allows for single file cycling. Localised narrowing of the cycle track below 1.5m may be necessary over very short distances to cater for local constraints (e.g. mature trees).

2.0m is the desirable minimum width for a pedestrian footpath. This width should be increased in areas catering for significant pedestrian volumes where space permits. DMURS defines the absolute minimum footway width for road sections as 1.8m based on the width required for two wheelchairs to pass each other (see Figure 10). At specific pinch points, Building for Everyone: A Universal Design Approach, defines acceptable minimum footpath widths as being 1.2m wide"

Pages 189 and 190 of the Junction Design Report in Appendix A6.3 of the EIAR Volume 4 Part 2 of 4 notes the following in relation to Nicholas Street / Christchurch Road junction:

"Pedestrian Infrastructure

The existing pedestrian infrastructure is proposed to be upgraded. The proposal will remove the pedestrian island on High Street to allow for a single stage crossing and a larger footway. A single stage crossing is proposed on Christchurch Place instead of the existing two stage crossing. On Nicholas Street the proposed pedestrian crossing has been moved further south to allow for a single stage crossing instead of the existing three stage crossing, to provide a more direct and convenient crossing for pedestrians. This junction is subject to high volumes of pedestrians in the existing situation. The proposal will assist to capture for pedestrian permeability at this location.

Cyclists Infrastructure

The proposal is to upgrade the junction to cater for cycle tracks on all arms entering and exiting the junction. Dedicated cycle crossings have been proposed across the junction. A direct cyclist crossing is also proposed to cater for movements from High Street to Nicholas Street to cater for the cyclist desire line. Were feasible, physical build outs are proposed to offer cyclists greater protection

Bus Priority Infrastructure

It was not feasible to propose a bus lanes through the junction. On the southbound lane of Patrick Street there is a tapered bus lane start, and on the northbound side there is a break in the bus lane in advance of the junction to cater for vehicle movements and to facilitate buses getting into Lane 2 ahead towards Winetavern Street. On High Street, the bus lane is proposed to be curtailed to facilitate a shared bus and left turn lane into Winetavern street. The projected low volume of left turning vehicles in the projected opening year will ensure traffic can be catered in the shared lane to assist in minimizing the impact upon bus priority

Design Evolution

The proposed junction design has evolved on the BusConnects project from initial Concept Design, Emerging Preferred Route, Public Consultation 2, Public Consultation 3 up to the Current Design. The junction design iterations have been undertaken to optimise pedestrian, cyclist and bus priority infrastructure on the scheme."

The extract from the General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description showing Proposed Scheme at Nicholas Street / Christchurch Place is shown below in Figure 2.8.4.3.

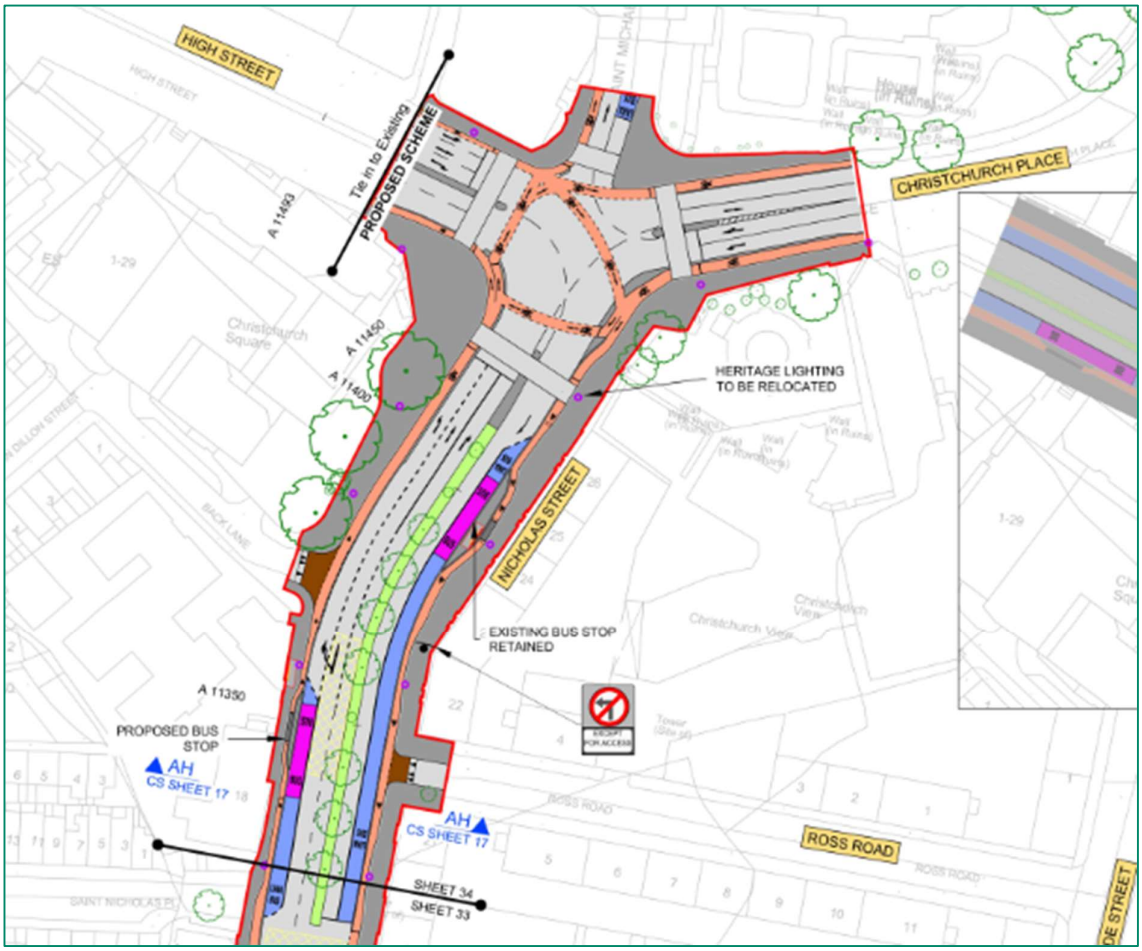


Figure 2.8.4.3: Extract from General Arrangement Drawings at Nicholas Street / Christchurch Place junction (Sheet 34)

11. Naas Road / Long Mile Road junction

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.5.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description, at the New Nangor Road (R134) / Naas Road (R810) junction a new pedestrian and cycling bridge with accessible ramps and stairs on all approaches to the junction has been proposed to provide increased pedestrian and cycling safety, permeability and accessibility at this junction.

A proposed continuous inbound bus lane with dedicated left turn bypass facility will provide enhanced bus priority between the New Nangor Road (R134) and the Naas Road (R810). This will require land acquisition and boundary modifications including new retaining structures in conjunction with the new bridge access ramps and steps. A new bus lane is proposed within the junction for the outbound buses heading towards New Nangor Road (R134) to improve bus priority along the corridor. As a result, the general traffic lane allocation from the Long Mile Road (R110) will be revised to two straight ahead lanes towards the New Nangor Road (R134) and two left turn lanes towards the Naas Road (R810).

As outlined in the GDA Cycle Network Plan, this section of the corridor aligns with the proposed Primary Route 7B / N10 until cyclists re-join New Nangor Road beyond the M50 overbridge. The route also aligns with Secondary Route 8C2 along its extents.

The extract from the General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description showing Proposed Scheme at New Nangor Road / Naas Road / Long Mile Road junction is shown below in Figure 2.8.4.4.

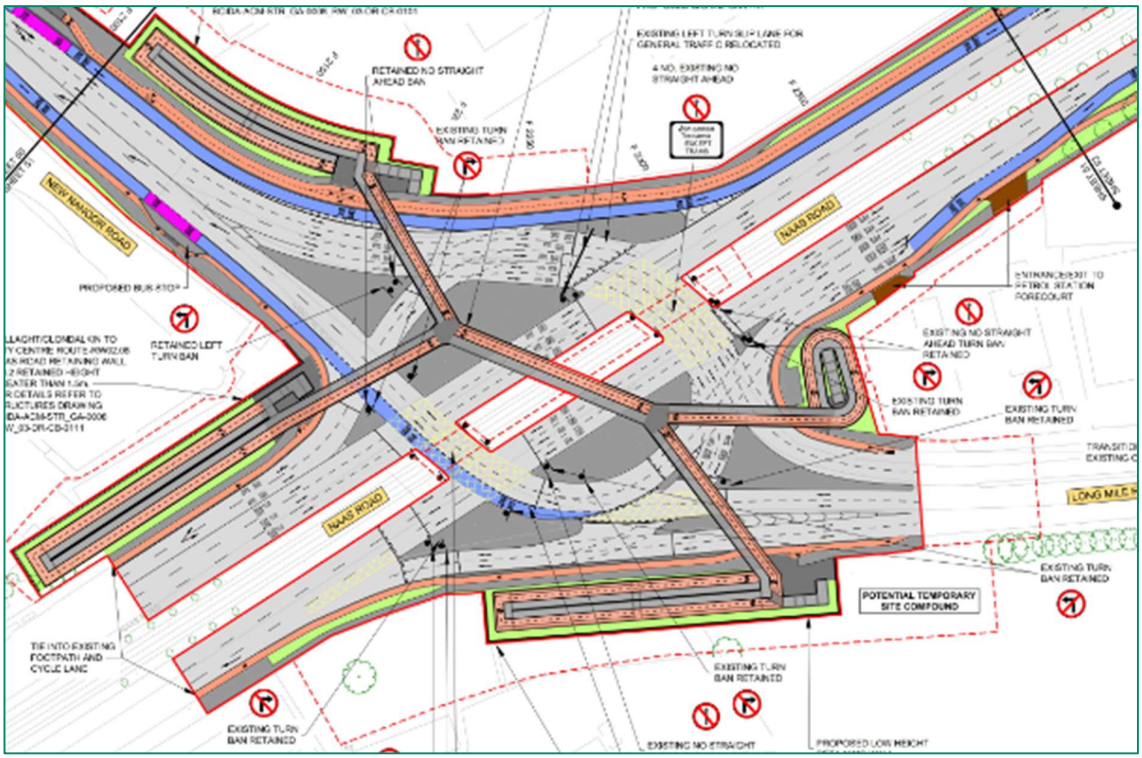


Figure 2.8.4.4: Extract from General Arrangement Drawings at New Nangor Road / Naas Road / Long Mile Road junction (Sheet 51)

Section 3.4.1.2.1 of EIAR Chapter 3 Consideration of Reasonable Alternatives notes that the draft Preferred Route Option proposed an overbridge for pedestrians and cyclists at this location which would greatly reduce conflicts with traffic.

Section 4.4.2.1 of the Preferred Route Option (PRO) Report, provided as part of the Supplementary Information, provides details of the consideration of the option for the proposed overbridge. Section 4.2.2.1 states: "*The R134 New Nangor Road/R110 Long Mile Road/R810 Naas Road junction is a very large and complex traffic signal-controlled intersection, catering for large traffic flows and has the LUAS red line running through the middle of it. For pedestrians to cross the road at present they must use signal-controlled crossing, crossing one link at a time. At present it can take between 4 and 5 minutes to cross the R110 Long Mile Road using these signals, and the EPR Option (Figure 4-9) did not propose any changes to the facilities for pedestrians or cyclists. While the pedestrian and cycle flows are low at present this is likely to change in the years to come as the regeneration of the lands around the intersection gets underway. For this reason, consideration has been given to how pedestrians and cyclists can be better catered for at this location.*"

Section 4.4.2 of the PRO Report summarises the assessment of this alternative option ("Option 2") when compared to the EPR Option as follows:

"Overall, the alternative arrangement provides a more reliable and direct crossing facility for pedestrians and cyclists compared to the multiple toucan crossings in the EPR Option, each with a delay for users while they wait at each crossing.

When compared to the EPR Option, the alternative option improves significantly the safety of pedestrian and cyclists by removing the conflict with vehicular traffic.

Furthermore, the proposed improvements will make for a significantly more pleasant journey for pedestrians and cyclists using the junction as they will no longer be interacting with vehicular traffic.

Also, the alternative arrangement will improve the junction performance for general traffic due to no longer having to incorporate phases for pedestrians and cyclists, which offsets the additional capital costs of the proposed structures.

Although the alternative option requires increased land take than the EPR Option, it is noted that the alternative offers improved connection with lands zoned "to facilitate enterprise and/or residential led regeneration", as well as passing through an area designated a Key District Centre in the Naas Road Lands Local Area Plan. The alternative offers an improvement in encouraging/supporting planned development and in providing for economic opportunities. Thus, in terms of accessibility, social inclusion and integration the alternative proposal is considered to have some advantages over the EPR Option arrangement. There is no significant difference between the two alternatives in terms of impact on the environment."

Table 4.4 of the PRO Report provides the Assessment Summary, see Figure 2.8.4.5.

Table 4-4: Assessment Summary

Assessment Criteria	Option 1 (EPR)	Option 2 (Alt)
Economy		
Integration		
Accessibility & Social Inclusion		
Safety		
Environment		
Overall		

Figure 2.8.4.5: Table 4.4 of PRO Report

Section 4.4.2.2 of the PRO Report concludes that *"the Preferred Route Option for the pedestrian and cyclist facilities will be the provision of a grade separated bridge at the R134 New Nangor Road/R110 Long Mile Road/R810 Naas Road junction; as despite the high capital cost, there would be more advantages through improved traffic performance, integration, accessibility and particularly better safety in comparison to the at-grade crossings."*

As noted above, Section 4.4.2 of the PRO Report states that *"the alternative arrangement will improve the junction performance for general traffic due to no longer having to incorporate phases for pedestrians and cyclists."* This absence of at-grade pedestrian and cyclists in the Proposed Scheme is reflected in the design of the junction shown on the General Arrangement Drawings (see Figure 2.6.3.1) and on the junction design details provided in pages 33-36 of the Junction Design Report which forms Appendix A6.3 of Chapter 6 Traffic and Transport Appendices in EIAR Volume 4 Part 2 of 4. As such the at-grade crossing points referred to by the submission will not be available as option for pedestrians and cyclists, with the proposed ramps, steps and bridges providing the only available route.

2.8.5 38 - Recorder's Residents Association

2.8.5.1 Overview of submission

The submission raised the following points and issues:

1. Aarhus Convention compliance

The submission states that residents have felt excluded from the consultation process for Bus Connects and queries if there has been compliance with the Aarhus Convention due to Covid lock down, residents' unfamiliarity with IT, lack of information books at public meetings. Also, corridor by corridor applications may be interpreted as a financial deterrent to public participation.

2. Incomplete planning application

The submission notes that the proposed Scheme application finishes at Christchurch. There is no reference to how the Proposed Scheme completes the journey to the City Centre or to the North Side of the City.

3. Displaced traffic

The submission notes that the cumulative effect of displaced general traffic from Corridors 10/12 and Corridor 11 will generate additional traffic demand on surrounding routes and result in substantial increase in milage/fuel costs for residents and businesses.

4. Common good

The submission states that the Proposed Scheme considers the need of a small proportion of Dublin's population while ignoring the needs of half of Dublin's population who travel by car/van.

5. Cumulative traffic predictions

The submission requests that all three BusConnects corridors are considered together and accurate predictions for the increase in general traffic on all affected roads needs to be published.

6. Bus usage

The submission questions the availability of buses to be able to meet existing demand and future growth requirement and notes that car usage will only reduce by 1.5% in the period to 2042.

Also notes that all BusConnects corridors have moved much further apart, this will negatively impact members of the public who may have difficulties walking longer distances to bus stops.

7. Access to Lidl store

The submission notes that the Proposed Scheme will compromise access by bus to Lidl on Greenhills Road due to walking distance between Greenhills Road and the proposed bus stop on Calmount Road.

8. Walkinstown roundabout traffic

The submission expresses concern that the reduction in lane numbers from 3 to 2 at Walkinstsown roundabout will cause increased traffic queueing on all approach arms.

9. Carbon emissions

The submission believes that there will hugely increased queuing across the area with resultant extra carbon emissions and negative health implications, contrary to the Carbon Emissions Reduction Policy by Government.

2.8.5.2 Response to submission

1. Aarhus Convention compliance

Ireland ratified the Aarhus Convention in June 2012 and it entered into force in Ireland in September 2012. Prior to that ratification, Ireland had to ensure that all the provisions of the Convention were implemented in national law, which took a number of years, and involved over 60 pieces of legislation.

Accordingly, Ireland's obligations under the Aarhus Convention have been fully incorporated into Irish legislation and include rights of access to information on the environment, rights of participation in planning determinations, rights of access to adequate review procedures and various other rights.

These are now statutory provisions, which are binding on all applicable parties.

In relation to transport infrastructure projects, the applicable statutory provisions are set out in the relevant planning and transport legislation, which include requiring major projects to seek planning consent from An Bord Pleanála. Those application processes for large infrastructure schemes provide for a statutory process requiring the making available for public review all of the applicable information set out in the legislation and permitting the making of submissions in relation to the proposals to the determining body, being An Bord Pleanála.

Thereafter, the legislation provides for the holding of an Oral Hearing, enabling direct public engagement and participation in the decision making process.

As part of the scheme development stage, various non-statutory public consultation processes have been undertaken. These processes are in excess of the requirements of the Aarhus Convention, whose obligations are already enshrined in Irish legislation including "statutory public consultations" which is the stage that the project has now reached.

The NTA notes the comment regarding the technical nature and volume of the documents presenting a potential barrier to the general public seeking access to information relating to the scheme. Given the nature of such infrastructure schemes as BusConnects Core Bus Corridors, there is invariably a substantial amount of technical information which needs to be provided, so as to ensure that the consent application is comprehensive in nature to meet legislative requirements and provide the competent authority with the necessary information to allow them to reach a decision. Volume 1 of the EIAR comprises the Non-Technical Summary of the EIAR for the Proposed Scheme. Chapter 1 in Volume 2 of the EIAR contains information on the content and structure of the EIAR. Section 1.5.6 of Chapter 1 sets out the information which must be contained in the EIAR. The NTA has sought to make the information as concise as possible, while ensuring that the necessary information has been provided. Section 1.5.7 of Chapter 1 sets out the structure of the EIAR. It is considered that the structure of the EIAR does provide the necessary legibility for those interested parties (both lay persons and technical specialists) to find the information of relevance to them. While the EIAR has been prepared in compliance with the EIA Directive, it has also been written to make it accessible to a wider, non-specialist audience in so far as possible.

In relation to the effect of the Covid lock down it should be noted that every effort was made by the NTA to facilitate public participation and engagement during the Covid-19 pandemic.

Second Round of Non-Statutory Public Consultation – The non-statutory public consultation for the Preferred Route Options ran from March 2020 to April 2020 as Ireland entered the first lockdown due to the Covid-19 pandemic. The consultation continued in deference to the number of online submissions received during this period. A number of public facing elements of the consultation were cancelled in line with Government health guidelines, however, all other elements of the consultation including online versions of the brochures, supporting documentation were available. Other communication tools including the Freephone, email and digital aspects remained active for submissions to be received.

Third Round of Non-Statutory Public Consultation – This round of non-statutory public consultation for the Preferred Route Options from November 2020 to December 2020 was added due to the disruption caused to the second-round consultation process. It was important that further engagement was facilitated to communicate design development changes prior to concluding the determination of the Preferred Route Options. Methods had emerged whereby traditional public information events could be replaced by virtual online alternatives to offset the restrictions that continued associated with the Covid-19 Pandemic. Accordingly, all elements of the public consultation and stakeholder engagement were conducted virtually or online in line with the Government health guidelines.

In relation to transport infrastructure projects, the applicable statutory provisions are set out in the relevant planning and transport legislation, which include requiring major projects to seek planning consent from An Bord Pleanála. Those application processes for large infrastructure schemes provide for a statutory process requiring the making available for public review all of the applicable information set out in the legislation, and permitting the making of submissions in relation to the proposals to the determining body, being An Bord Pleanála. Thereafter, the legislation provides for the holding of an Oral Hearing, enabling direct public engagement and participation in the decision making process.

The fees payable for observations / submissions are determined by An Bord Pleanála, as allowed by Section 144 of the Planning and Development Act 2000, as amended.

Section 38 of the Planning and Development Act 2000 provides that certain documents relating to planning applications shall be made available for inspection and purchase by members of the public. The Act does not prescribe fees for copying the relevant documents and the only reference in the Act to the fee to be charged for such a service is contained in section 38(4) which states: "(4) Copies of the documents under this section shall be made available for purchase on payment of a specified fee not exceeding the reasonable cost of making such a copy." The fees payable for obtaining hard copies of the various EIAR documents for the Proposed Scheme have been determined by the NTA and do not exceed the reasonable cost of making a copy of the EIAR documents.

2. Incomplete planning application

The Proposed Scheme is one of 12 schemes to be delivered under the BusConnects Dublin - Core Bus Corridors Infrastructure Works within the NTA's overall BusConnects programme.

EIAR Volume 2 Chapter 2 Need for the Proposed Scheme outlines the policy context that underpins the Proposed Scheme as well as the regional and local transport need for the Proposed Scheme. Section 2.2.1.5 notes the following:

"To inform the preparation of the GDA Transport Strategy, the NTA prepared the Core Bus Network Report (NTA 2015) for the Dublin Metropolitan Area, which identified those routes on which there needed to be a focus on high capacity, high frequency and reliable bus services, and where investment in bus infrastructure should be prioritised and concentrated. The Core Bus Network is defined as a set of primary orbital and radial bus corridors which operate between the larger settlement centres in the Dublin Metropolitan Area.

The development and implementation of priority infrastructure on the Core Bus Network is to ensure that delays are minimised, reliability is improved through peak and off-peak periods and mode shift from the private car is made more attractive.

The reason for focussing on the Core Bus Network is to maximise the return on future investment in bus infrastructure and to facilitate efficient operation of bus services, thereby improving the attractiveness of public transport for a large proportion of the population of the Dublin Metropolitan Area and beyond.

The Core Bus Network Report focused on the overall existing bus service network and identified locations where the bus network is operating sub-optimally. The network is dominated by a radial network to / from Dublin City Centre, supplemented by low frequency orbital and local bus routes serving larger destinations outside of the City Centre core.

The following methodology was employed to determine the need for the future core bus infrastructure network:

> *1) The existing bus network and bus infrastructure in the Dublin Metropolitan Area was analysed, including the identification, mapping and categorising of the existing bus infrastructure. This analysis identified all roads that have dedicated road space for bus, and other bus priority infrastructure such as Bus Gates, junction bus priority and bus only through routes;*
>
> *2) Journey time delays of the bus network in the Dublin Metropolitan area were examined;*

3) The frequency of bus services between stops during the peak period was examined to help identify where the highest volume of bus traffic is on the network;

4) A demand analysis, including a broad understanding of trip demand was undertaken; and

5) Using the above analysis, specific corridors where investment is to be prioritised in the network were identified and mapped.

……..The GDA Transport Strategy 2016 – 2035 concluded that this high-quality Core Bus Network would form an integral part of the improved public transport infrastructure measures for the Dublin Metropolitan Area. The final resulting Core Bus Network presented in the GDA Transport Strategy represents the most important bus routes within the Dublin Metropolitan Area, generally characterised by high passenger volumes, frequent services and significant trip attractors along the routes."

As stated in EIAR Chapter 2 Need for the Scheme and EIAR Chapter 3 Consideration of Reasonable Alternatives, the Proposed Scheme terminates within the City Centre at Christchurch Place from where bus services will join the prevailing traffic management regime in the City Centre.

The planning application for the Proposed Scheme includes the full extents of the Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme.

3. Cumulative effect of displaced traffic

Section 21.3.2.1 of Chapter 21 (Cumulative Impacts & Environmental Interactions) of Volume 2 of the EIAR notes the following:

"A multi-tiered modelling framework (described further in Chapter 6 (Traffic & Transport) of this EIAR) was developed to support this iterative design process, whereby the emerging design for each of the Proposed Schemes has been tested using the transport models as part this iteration both in isolation and with all Core Bus Corridor schemes in place. Each of the CBC projects worked closely together to align proposals at direct interface points (e.g., overlapping junctions) as well in the indirect / offline areas where displaced traffic would arise. This included the provision of complimentary traffic management arrangements and/or turn bans to ensure that any displaced traffic was kept to a minimum and/or was maintained on higher capacity roads, whilst continuing to meet scheme objectives along the Proposed Scheme.

For the Proposed Scheme, the iterative process concluded when the design team were satisfied that the Proposed Scheme both in isolation and in combination with the other 11 Core Bus Corridor Schemes, met its required objectives (maximising the people movement capacity of the Proposed Scheme) and that the environmental impacts and level of residual impacts were reduced to a minimum.

To examine the potential cumulative traffic effects that the Proposed Scheme may have in combination with any of the other Core Bus Corridor schemes, an area of influence for each scheme was determined to understand the scale of traffic displacement and its interactions with other schemes. The 'area of influence' is the area in which traffic flows are likely to change as a result of the Proposed Scheme measures as indicated by the transport modelling. The outcome of this assessment revealed that the Proposed Scheme has direct and indirect interface with the proposed Kimmage, Liffey Valley and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes.

…..In terms of indirect effects, modelling has indicated that both the Proposed Scheme and the Kimmage and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes have overlapping traffic ZoI e.g., each scheme results in traffic displacement effecting the other corridor.

When all three schemes are operational (as well as all other proposed Core Bus Corridor schemes), this has the effect of constraining the opportunity for traffic to displace onto adjoining / adjacent roads when compared to the effect when only one of the Core Bus Corridor schemes is operational. In addition to this, with all the Core Bus Corridor schemes operational, there is predicted to be a higher modal shift from private car trips to sustainable modes of travel compared to the singular scheme scenario. This is due to the combined effect of all Core Bus Corridor schemes being operational and

the journey time savings and reliability for bus travel and the interchange opportunities that this provides to travel around Dublin in combination with the BusConnects network re-design proposals. In addition, the Core Bus Corridor schemes will facilitate a step change in the level of segregated cycling provision in comparison with existing conditions along the entire length of the corridors resulting in more people cycling.

The result of the above is that the cumulative effect of all Core Bus Corridors in operation and in tandem with the roll out of the wider Greater Dublin Area Transport Strategy measures, future growth in overall travel demand is catered for by sustainable modes. No significant negative effects over and above those considered in the standalone assessments for the Operational Phase were predicted in the cumulative impact assessment and therefore no additional mitigation measures are considered necessary."

4. Common good

Section 21.6.2 of Chapter 21 of Volume 2 of the EIAR notes the following:

"For Operational Effects, the assessments assume all 12 proposed Bus Corridor Schemes would be operational, along with other identified projects and Greater Dublin Area Transport Strategy projects included in the Do Minimum and Do Something scenarios. For traffic and transport, the assessment predicted that the Proposed Scheme and the other 11 Core Bus Corridor schemes are expected to facilitate a long term, profound positive cumulative effect on People Movement by sustainable modes. The Core Bus Corridor schemes are seen to enable significant improvements in People Movement by sustainable modes along the direct Core Bus Corridor routes, particularly by bus and cycling, with reductions in car mode share due to the enhanced sustainable mode provision. The Proposed Scheme and the other 11 Core Bus Corridor schemes provide for enhanced integration and efficiencies for all public transport modes by facilitating substantial increases in public transport average network wide travel speeds.

As stated in Section 2.1 of Chapter 2 of the EIAR, the Proposed Scheme aims to meet growth demand by:

"enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of 'People Movement'. People Movement is the concept of the optimization of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed Scheme. The aim is to reduce journey times for modes of transport with higher person carrying capacity (bus, walking and cycling), which in turn provides significant efficiencies and benefits to users of the transport network and the environment."

Section 2.4 notes the following:

"The Proposed Scheme has been designed to facilitate improved efficiency of the transport network through the improvement of the infrastructure for active (walking and cycling) and public transport modes making them attractive alternatives to car-based journeys. Central to the design is the optimisation of roadway space with a focus on the movement of people rather than vehicles along the route and through the junctions. A typical doubledeck bus takes up the same road space as three standard cars but typically carries 50-100 times the number of passengers per vehicle. On average, a typical double-deck bus carries approximately 60-70 passengers making the bus typically 20 times more efficient in providing people movement capacity within the equivalent spatial area of three cars. These efficiency gains can provide a significant reduction in road network congestion where the equivalent car capacity would require 50 or more vehicles based on average occupancy levels. Consequently, by prioritising the movement of bus over cars, significantly more people can be transported along the limited road space available. Similarly, cyclists and pedestrians require significantly less roadway space than general traffic users to move safely and efficiently along the route. Making space for improved pedestrian and cycle infrastructure can significantly benefit these sustainable modes and encourage greater use of these modes.

The Proposed Scheme design involves the prioritisation of people movement, focusing on maximising the throughput of sustainable modes (i.e., walking, cycling and bus modes). A quantitative people-movement assessment, as part of the transport impact assessment, facilitates a comparison of the Do Minimum and Do Something peak-hour scenarios for the forecast years (2028 and 2043). The benefits resulting from the 2028 AM Peak Hour people-movement assessment shows that there is

projected to be an increase of 145% in the number of people travelling by bus, an increase of 45% in the number of people walking or cycling, and a reduction of 33% in the number of people travelling by car along the route of the Proposed Scheme.

The transport modelling also presents demand outputs for people movement by bus in terms of passenger loadings along the corridor. The results indicate that the improvements in bus priority infrastructure with the Proposed Scheme in place show a substantial increase in bus patronage during the peak hours."

In relation to the cumulative impacts on Traffic and Transport and car usage Appendix A6.1 (Transport Impact Assessment) notes the following for Cumulative Assessment:

"In general, total trip demand (combining all transport modes) will increase into the future in line with population and employment growth. A greater share of the demand will be by sustainable modes (Public transport, Walking, Cycling) as facilitated by the GDA Strategy implementation.

The analysis indicates that the 12 BusConnects Proposed Schemes in place, there will be a high positive impact on sustainable mode share. The schemes will prevent any increase in private car traffic within the study area and will instead result in a reduction in car trips below 2020 levels.

In the 2028 Opening Year scenario, it is estimated that for people travelling within a 500m catchment area of the Core Bus Corridor schemes (including City Centre) there will be a 12% increase in public transport trips, 2% decrease in general traffic trips (i.e., motorists) and a 14% increase in cycling trips in the AM Peak Hour. Across the whole day (7am-7pm), there will be a corresponding 12% increase in public transport, 3% decrease in general traffic and a 12% increase in cycling trips each day. In the 2043 Design Year scenario, it is estimated that for people travelling within the 500m Core Bus Corridor catchment area for all Core Bus Corridor schemes (including City Centre) there will be a 6% increase in public transport trips, 6% decrease in general traffic trips (i.e., motorists) and a 10% increase in cycling trips in the morning peak hour. Across the whole day (7am-7pm) in 2043, there will be a 7% increase in public transport, 7% decrease in general traffic and a 11% increase in cycling trips each day.

General traffic levels reduce more in 2043 when compared to 2028 due to the increased level of additional nonbus public transport infrastructure and services (MetroLink, Luas extensions and DART+ from the Greater Dublin Area Transport Strategy) in tandem with the road capacity reduction measures as part of the Proposed Scheme leading to increased usage on all public transport modes.

The modelling outputs for the 2028 Cumulative Opening Year scenario demonstrate that there is a high growth in bus patronage along all the Core Bus Corridor schemes in the AM Peak Hour….

In the 2028 Opening Year AM Peak Hour scenario with the Proposed Schemes in place, there will be an estimated 10% more passenger boardings across all public transport services and 17% more boardings on bus services. In the 2028 Opening Year PM Peak Hour scenario with the Proposed Schemes in place, there will be an estimated 11% increase in total passengers boarding Public transport services and 18% more passengers boarding buses services.

In the 2043 Design Year AM and PM Peak Hour scenarios, increase in total passengers boarding all public transport services will be 7% and 8% respectively, and the increase in passengers boarding bus services will increase by 11% and 14% respectively.

Overall, the Proposed Schemes are expected to deliver a High Positive Cumulative Impact on People Movement by sustainable modes."

Figure 2.8.5.1 below is an extract from Chapter 2 of the EIAR showing the predicted people movement by mode during the 2028 AM peak hour.

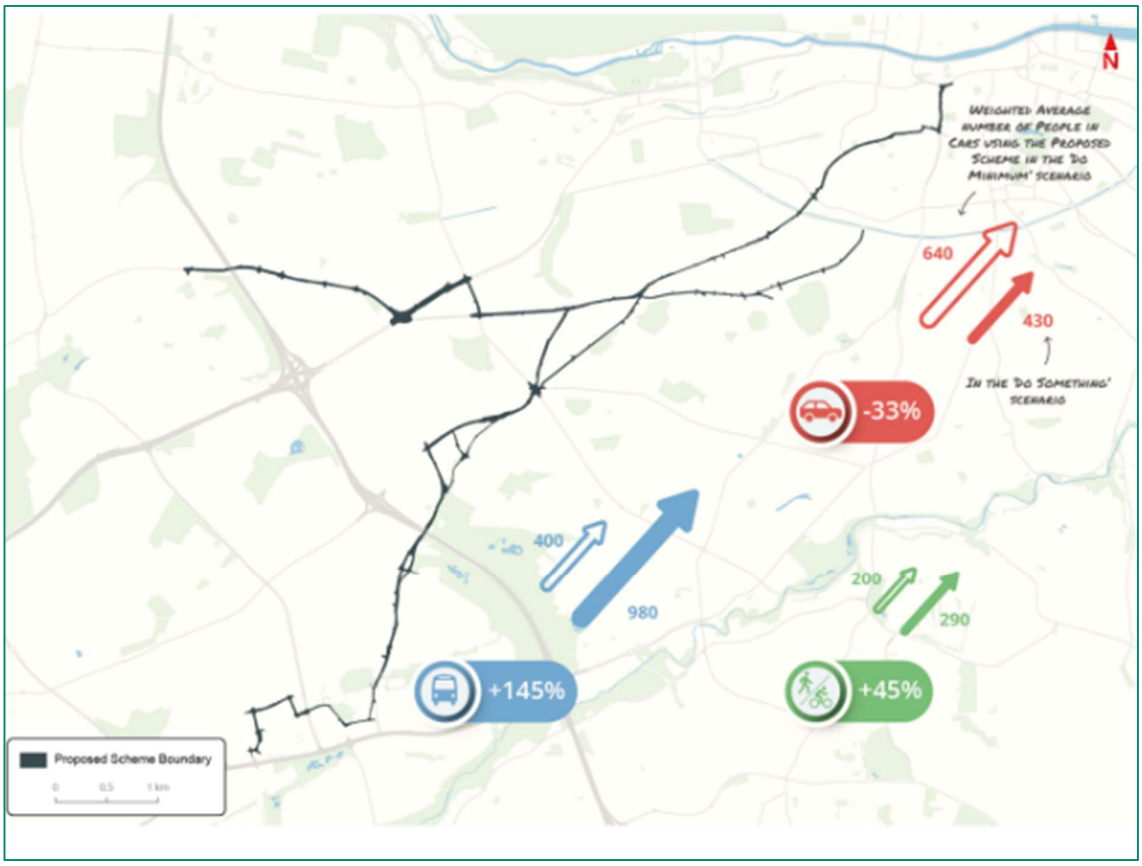


Figure 2.8.5.1: Extract from EIAR Chapter 2 People Movement by Mode during the 2028 AM Peak Hour (Image 2.11)

Section 21.3.2.3.4 notes the following in relation to general traffic for assessment purposes:

"The Do Minimum and Do Something scenarios are based on the assumption that travel behaviour will remain broadly consistent over time and that car demand, used for this assessment, represents a likely worst-case scenario. It is possible that societal trends in the medium to long term may reduce car demand further due to the ongoing changes to travel behaviours and further shifts towards sustainable travel, flexibility in working arrangements brought on following COVID-19 restrictions, and delayed car ownership trends that are emerging. Due to the uncertainties around how travel behaviours may change in the future, it was considered prudent to assess a worst-case scenario based on current trends for the core scenario."

5. Cumulative traffic predictions

Section 21.2.7 of EIAR Chapter 21 Cumulative Impacts Environmental Interactions considers the cumulative traffic impacts for the operation scenario and states: *"For operational cumulative effects including the Proposed Scheme, the assessment has been undertaken based on a scenario where all the other 11 Core Bus Corridor schemes are also operational."*

Section 21.3.2.1 of Chapter 21 summaries the detailed assessment of cumulative impacts on Traffic and Transport, which is set out in Appendix A6.1 in Volume 4 of the EIAR (Traffic Impact Assessment Report), as follows:

"Traffic Related Cumulative Effects

To examine the potential cumulative traffic effects that the Proposed Scheme may have in combination with any of the other Core Bus Corridor schemes, an area of influence for each scheme was determined to understand the scale of traffic displacement and its interactions with other schemes. The 'area of influence' is the area in which traffic flows are likely to change as a result of the

Proposed Scheme measures as indicated by the transport modelling. The outcome of this assessment revealed that the Proposed Scheme has direct and indirect interface with the proposed Kimmage, Liffey Valley and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes.

In terms of direct interfaces, the Kimmage to City Centre Core Bus Corridor Scheme proceeds along New Street South and interacts with the proposed implementation of traffic management measures for the Proposed Scheme at the Kevin Street Upper junction. Works proposed to the junction include the introduction of kerblines realignment, cyclist protection islands build-outs, footway paving, pedestrian crossings, cycle tracks and landscaping at Kevin Street Upper / New Street South / Patrick Street junction. The traffic management measures to be implemented by the Proposed Scheme are located at Kevin Street Upper / New Street South / Dean Street / Patrick Street junction as shown on General Arrangement drawing BCIDA-ACM-GEO_GA-0809_XX_00-DR-CR-0033 in Volume 3 of this EIAR.

The Liffey Valley to City Centre Core Bus Corridor Scheme proceeds along Cornmarket and High Street and interacts with proposed implementation of traffic management measures for the Proposed Scheme at the Nicholas Street / Christchurch Place junction. Works proposed to the junction include the introduction of kerblines realignment, cyclist protection islands build-outs, footway paving, pedestrian crossings, cycle tracks and landscaping at High Street / Nicholas Street / Christchurch Place / Winetavern Street junction. The traffic management measures to be implemented by the Proposed Scheme are located at High Street / Nicholas Street / Christchurch Place / Winetavern Street junction as shown on General Arrangement drawing BCIDA-ACM-GEO_GA-0809_XX_00-DR-CR-0034 in Volume 3 of this EIAR.

The BusConnects Infrastructure team have coordinated the respective scheme designs to provide flexibility in the proposals such that implementation of physical works can be coordinated or delivered in sequence should both schemes be consented. Once in place, both Core Bus Corridor Schemes will provide increased capacity, faster journey times and improved reliability for buses which should lead to considerable mode shift from car transport to public transport, which will reduce traffic levels generally across the road network in and around both corridors.

In terms of indirect effects, modelling has indicated that both the Proposed Scheme and the Kimmage and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes have overlapping traffic ZoI e.g., each scheme results in traffic displacement effecting the other corridor.

When all three schemes are operational (as well as all other proposed Core Bus Corridor schemes), this has the effect of constraining the opportunity for traffic to displace onto adjoining / adjacent roads when compared to the effect when only one of the Core Bus Corridor schemes is operational. In addition to this, with all the Core Bus Corridor schemes operational, there is predicted to be a higher modal shift from private car trips to sustainable modes of travel compared to the singular scheme scenario. This is due to the combined effect of all Core Bus Corridor schemes being operational and the journey time savings and reliability for bus travel and the interchange opportunities that this provides to travel around Dublin in combination with the BusConnects network re-design proposals. In addition, the Core Bus Corridor schemes will facilitate a step change in the level of segregated cycling provision in comparison with existing conditions along the entire length of the corridors resulting in more people cycling.

The result of the above is that the cumulative effect of all Core Bus Corridors in operation and in tandem with the roll out of the wider Greater Dublin Area Transport Strategy measures, future growth in overall travel demand is catered for by sustainable modes. No significant negative effects over and above those considered in the standalone assessments for the Operational Phase were predicted in the cumulative impact assessment and therefore no additional mitigation measures are considered necessary."

In addition, Section 7.2.3 of Appendix A6.1 (Transport Impact Assessment) of Volume 4 Appendices Part 2 of 4 of the EIAR states the following:

"Cumulative transport demand for the 2028 and 2043 assessment years have been included in the analysis contained within this chapter, using travel demand forecasting, which accounts for increases

in population and economic activity, in line with planned growth contained within the NPF, Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland region and the local development plans for GDA local authorities. It is envisaged that the population will grow by 11% up to 2028 and 25% by 2043 (above 2016 census data levels). Similarly, employment is due to grow by 22% by 2028 and 49% by 2043 (Source: NTA Reference Case Planning Sheets 2028, 2043).”

Section 7.2.4.3.1 of Appendix A6.1 discusses 2028 AM Peak Hour people Movement across all Proposed Schemes and notes the following:

“As indicated in Diagram 7.5, on average across all Proposed Schemes, there is a predicted reduction of 32% in the number of people travelling via car, an increase of 57% in the number of people travelling via bus and an increase of 52% in people walking or cycling along the Proposed Schemes during the AM Peak Hour. It should be noted that the model predicts limited change in total walking trips between each scenario. This is due to the fact that walking trips in the Do Minimum scenario are also transferring to public transport and cycling due to the improved provision with any new walkers transferring from car replacing these trips.”

Figure 2.8.5.2 below is an extract from Appendix A6.1 of the EIAR showing the predicted people movement by mode across all Proposed Schemes during the 2028 AM peak hour.

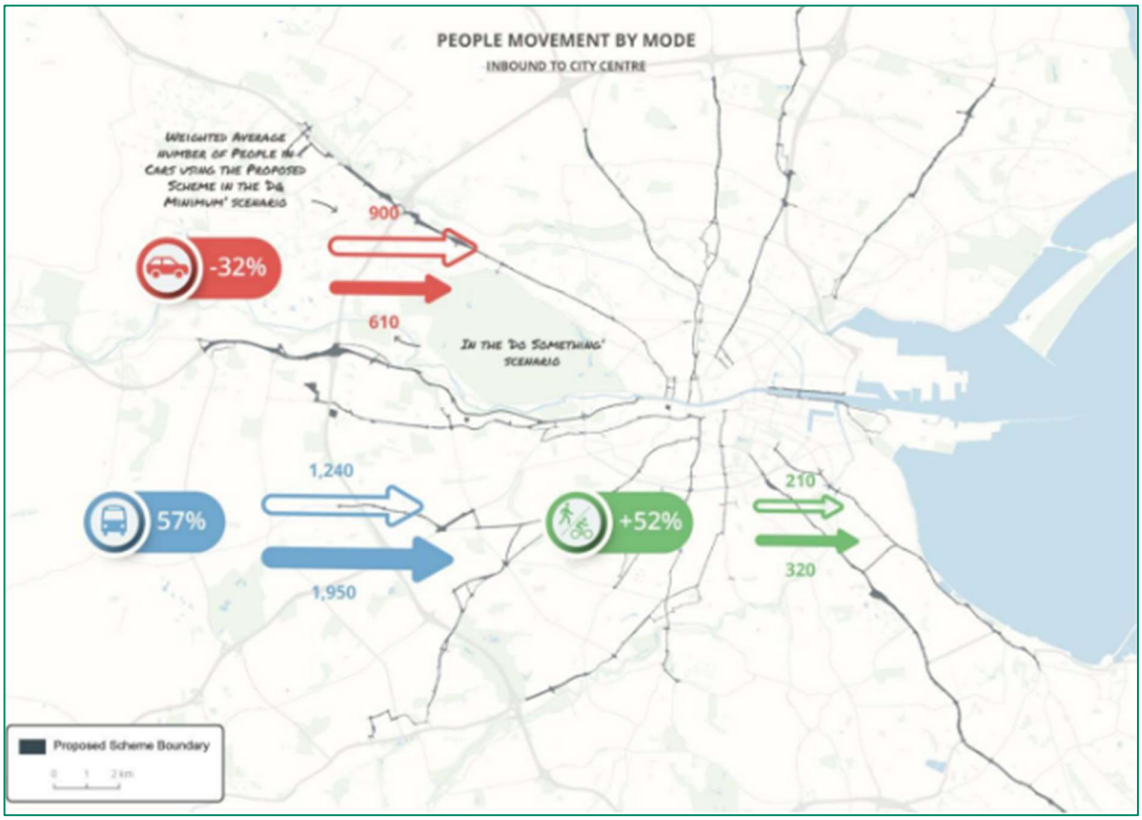


Figure 2.8.5.2: Extract from EIAR Appendix A6.1 People Movement by Mode across all proposed Schemes during the 2028 AM Peak Hour (Diagram 7.5)

“As indicated in Diagram 7.6, on average across all Proposed Schemes, there is a predicted reduction of 30% in the number of people travelling via car, an increase of 50% in the number of people travelling via bus and an increase in 38% in the number of people walking or cycling along the Proposed Schemes during the PM Peak Hour.”

Figure 2.8.5.3 below is an extract from Appendix A6.1 of the EIAR showing the predicted people movement by mode across all Proposed Schemes during the 2028 PM peak hour.

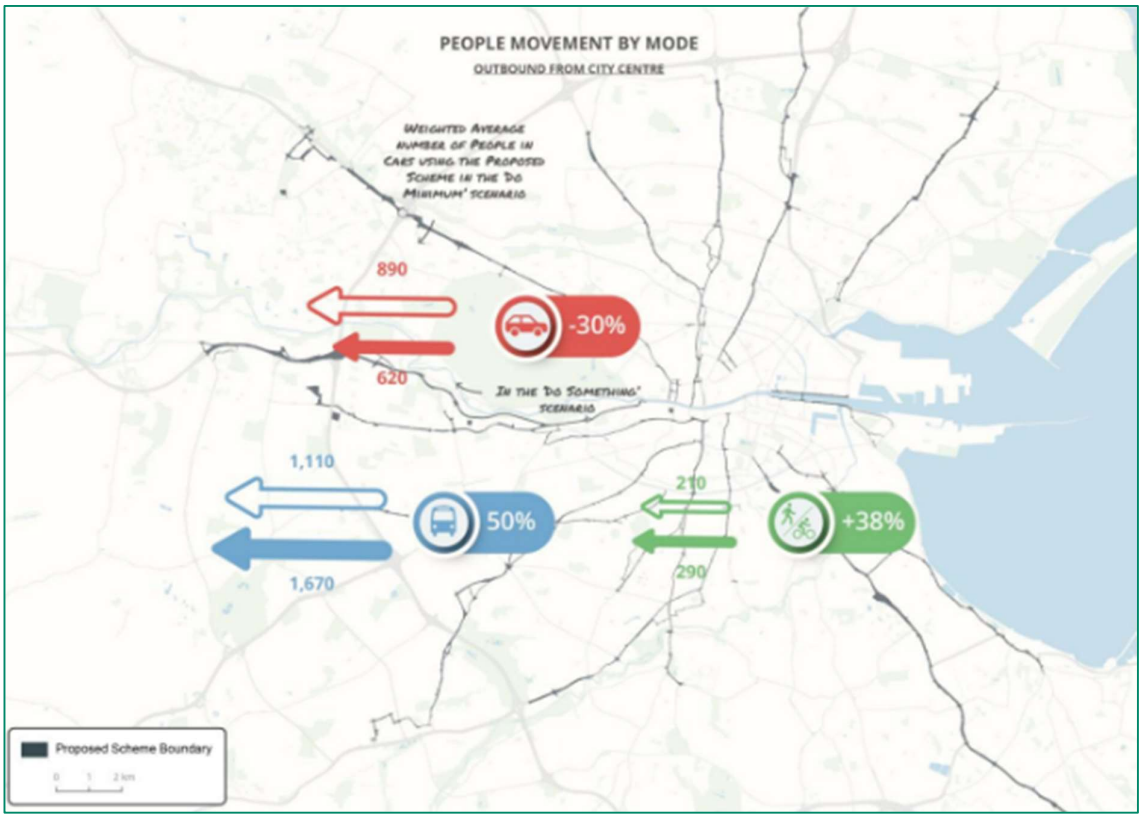


Figure 2.8.5.3: Extract from EIAR Appendix A6.1 People Movement by Mode across all proposed Schemes during the 2028 PM Peak Hour (Diagram 7.6)

6. Bus usage

Meeting future growth requirements

As stated in Section 2.1 of Chapter 2 of the EIAR, the Proposed Scheme aims to meet growth demand by:

"enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of 'People Movement'. People Movement is the concept of the optimization of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed Scheme. The aim is to reduce journey times for modes of transport with higher person carrying capacity (bus, walking and cycling), which in turn provides significant efficiencies and benefits to users of the transport network and the environment."

Section 2.4 notes the following:

"The Proposed Scheme has been designed to facilitate improved efficiency of the transport network through the improvement of the infrastructure for active (walking and cycling) and public transport modes making them attractive alternatives to car-based journeys. Central to the design is the optimisation of roadway space with a focus on the movement of people rather than vehicles along the route and through the junctions. A typical doubledeck bus takes up the same road space as three standard cars but typically carries 50-100 times the number of passengers per vehicle. On average, a typical double-deck bus carries approximately 60-70 passengers making the bus typically 20 times more efficient in providing people movement capacity within the equivalent spatial area of three cars. These efficiency gains can provide a significant reduction in road network congestion where the equivalent car capacity would require 50 or more vehicles based on average occupancy levels. Consequently, by prioritising the movement of bus over cars, significantly more people can be transported along the limited road space available. Similarly, cyclists and pedestrians require significantly less roadway space than general traffic users to move safely and efficiently along the route. Making space for improved pedestrian and cycle infrastructure can significantly benefit these sustainable modes and encourage greater use of these modes.

The Proposed Scheme design involves the prioritisation of people movement, focusing on maximising the throughput of sustainable modes (i.e., walking, cycling and bus modes). A quantitative people-movement assessment, as part of the transport impact assessment, facilitates a comparison of the Do Minimum and Do Something peak-hour scenarios for the forecast years (2028 and 2043). The benefits resulting from the 2028 AM Peak Hour people-movement assessment shows that there is projected to be an increase of 145% in the number of people travelling by bus, an increase of 45% in the number of people walking or cycling, and a reduction of 33% in the number of people travelling by car along the route of the Proposed Scheme.

The transport modelling also presents demand outputs for people movement by bus in terms of passenger loadings along the corridor. The results indicate that the improvements in bus priority infrastructure with the Proposed Scheme in place show a substantial increase in bus patronage during the peak hours."

Bus Stop locations and spacing

As noted in Section 4.6.4.5 of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR:

"To improve the efficiency of the bus service along the Proposed Scheme the positions and number of bus stops have been reviewed as part of a bus stop assessment.

The criteria for consideration when locating a bus stop are as follows:

- *Driver and waiting passengers are clearly visible to each other;*
- *Location close to key facilities;*
- *Location close to main junctions without affecting road safety or junction operation;*

  Location to minimise walking distance between interchange stops;
- *Where there is space for a bus shelter;*
- *Location in pairs, 'tail to tail' on opposite sides of the road;*
- *Close to (and on exit side of) pedestrian crossings;*
- *Away from sites likely to be obstructed; and*
- *Adequate footway width.*

For the Core Bus Corridor Infrastructure Works it is proposed that bus stops should be preferably spaced approximately 400m apart on typical suburban sections on route, reducing to approximately 250m in urban centres. It is important that bus stops are not located too far from pedestrian crossings as pedestrians will tend to take the quickest route, which may be hazardous. Locations with no or indirect pedestrian crossings should be avoided."

As part of the design of the Proposed Scheme a detailed review of bus stop locations was undertaken as set out in Bus Stop Review Analysis in Appendix H.2 (using the methodology as set out in Appendix H.1) of the Preliminary Design Report provided as Supplementary Information. This exercise was carried out to review existing bus stops along the route of the Proposed Scheme and, where appropriate to rationalise these stops in line with best practice criteria mentioned above.

A Bus Stop Review Methodology Report has been completed for the Proposed Scheme (refer to Appendix H of the Preliminary Design Report provided in the Supplementary Information with the application).

As noted in Section 1 of the Bus Stop Review Methodology Report:

"The Core Bus Network Report (2015) noted that the distances between bus stops influences the efficiency of the bus network. In general, the lower the distances between stops along a corridor, the higher the delay that is incurred for buses. This delay is caused through acceleration and deceleration and delays associated with pulling in and out of bus stops with some estimates suggesting that stopping at bus stops makes up in excess of 20% of the journey times along the QBC corridors. International literature on bus stop spacing recommends a distance of 300 to 500m (NTA Report on Core Bus Network Infrastructure Network, February 2015) between stops in suburban areas is

optimum, whereas in Dublin many routes have bus stops located at far lower spacing. The Core Bus Network Report concluded that increasing spacing between bus stops was part of the solution to reduce delays along the corridors."

The bus stop review methodology included consideration of the capacity of each proposed bus stop to cater for the projected bus numbers. In a number of locations, existing and proposed bus stops were rationalised based on best practice principles related to bus stop placement.

The bus stop review included a catchment analysis using the NTA Geographical Information System (GIS) data. The Network Analyst Extension in ArcGIS software was then used to generate 400m and 800m walking bands to reflect 5 and 10-minute walking catchments of bus stops. Further detailed analysis of the existing bus catchment analysis for the Proposed Scheme is included in the Preliminary Design Report Appendix H2 (Bus Stop Review Analysis), included in the Supplementary Information, which shows the proposed 400m and 800m catchment areas as shown below in Figure 2.8.5.4, Figure 2.8.5.5, Figure 2.8.5.6, Figure 2.8.5.7 and Figure 2.8.5.8 extract from Preliminary Design Report Appendix H2 and Appendix H3.

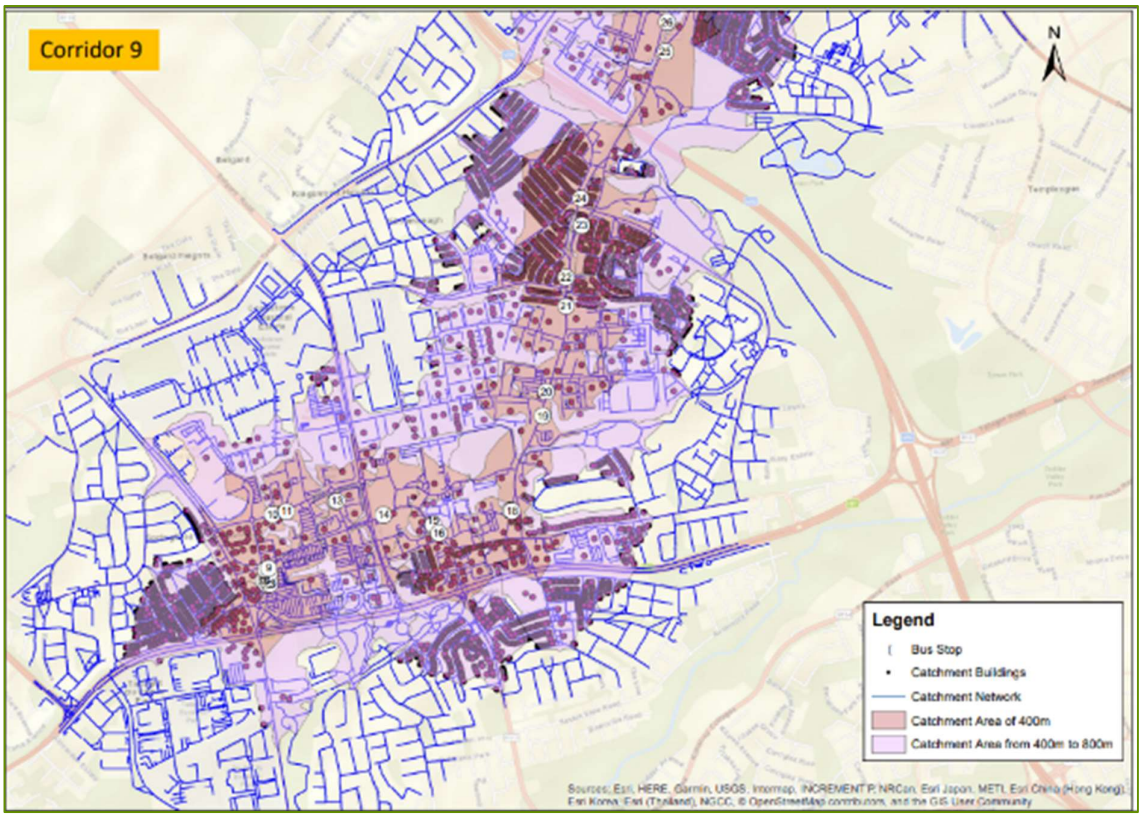


Figure 2.8.5.4: Extract from EIAR Appendix H2 Bus Stop Review Analysis Tallaght to City Centre Section

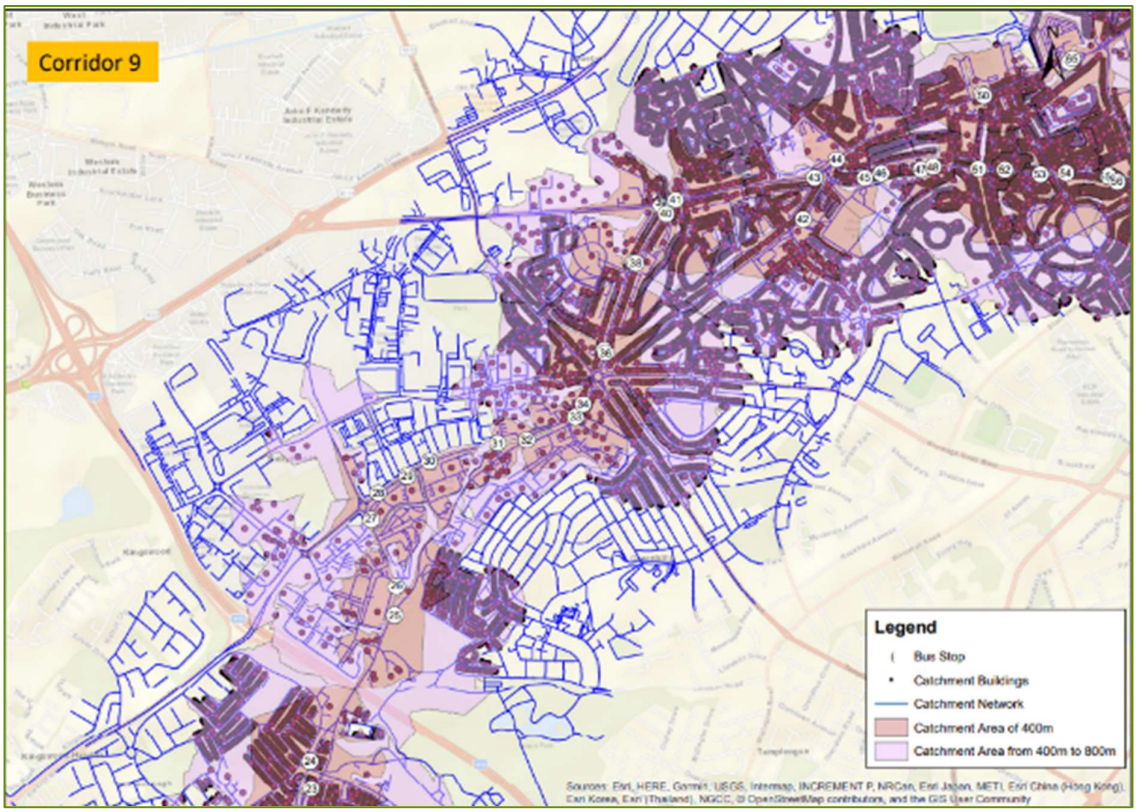


Figure 2.8.5.5: Extract from EIAR Appendix H2 Bus Stop Review Analysis Tallaght to City Centre Section

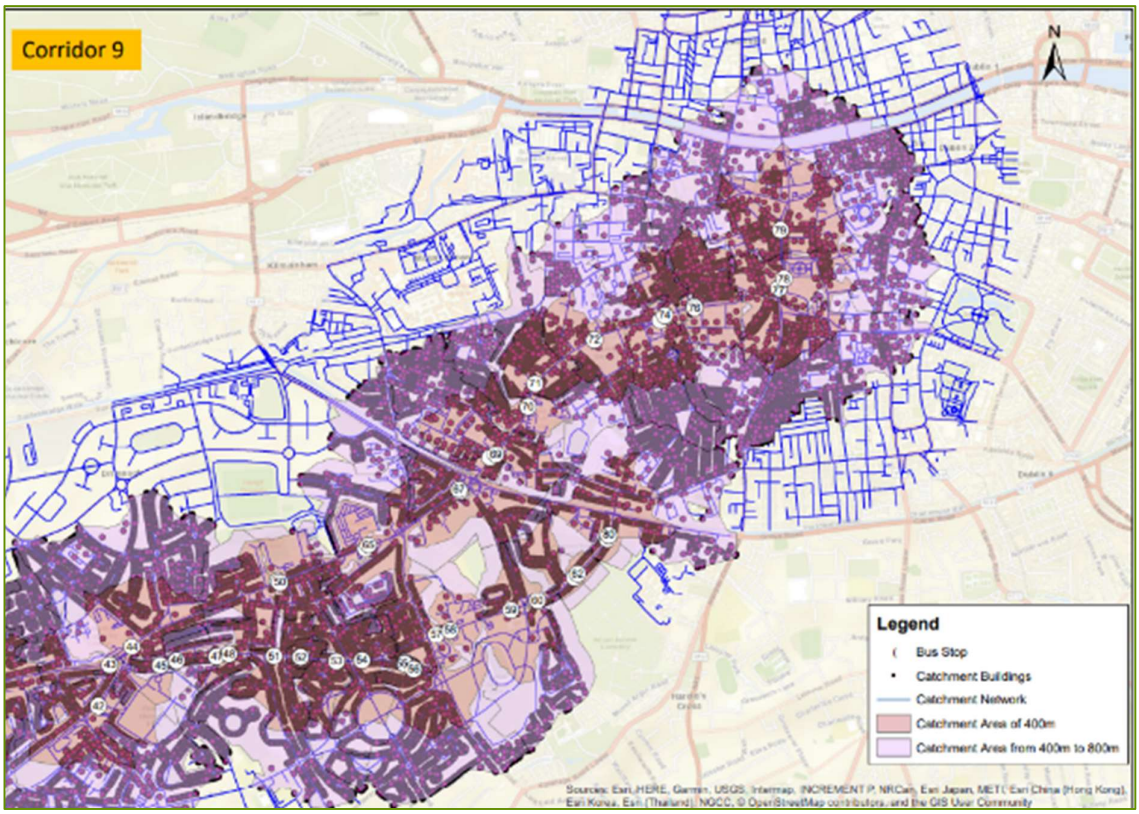


Figure 2.8.5.6: Extract from EIAR Appendix H2 Bus Stop Review Analysis Tallaght to City Centre Section

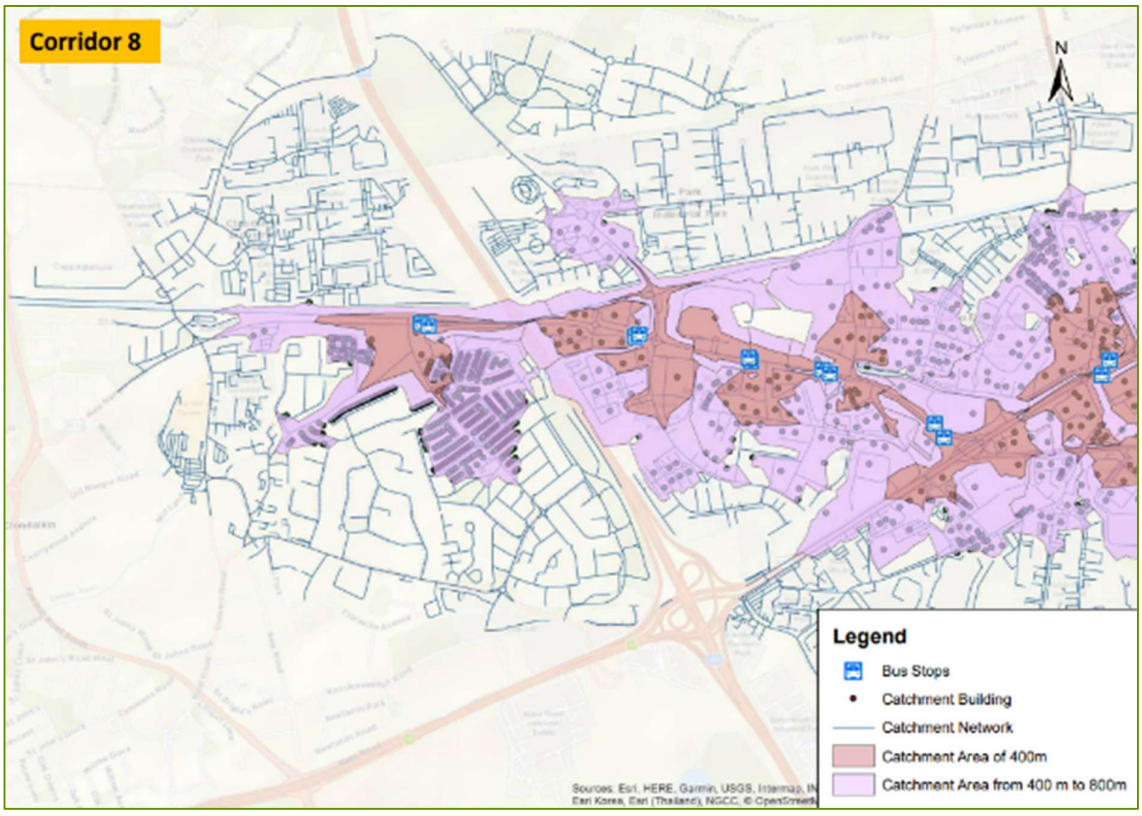


Figure 2.8.5.7: Extract from EIAR Appendix H3 Bus Stop Review Analysis Clondalkin to Drimnagh Section

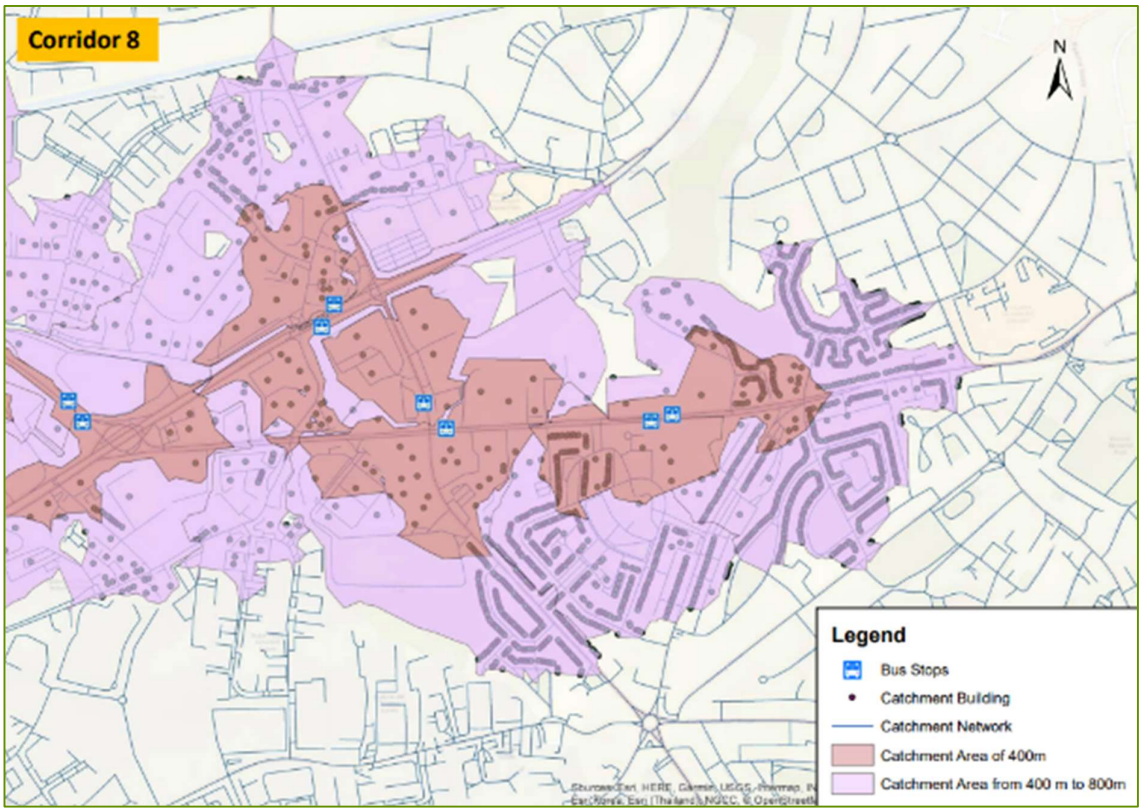


Figure 2.8.5.8: Extract from EIAR Appendix H3 Bus Stop Review Analysis Clondalkin to Drimnagh Section

7. Access to Lidl store

The existing bus stops 2373 (inbound) 2336 (outbound) are proposed to be removed as they are not on the proposed Scheme bus route, new bus stops on the Proposed Scheme Route are proposed near the Ballymount Avenue / Greenhills Road junction (inbound and outbound) and near the Calmount Road / Calmount Avenue junction (inbound and outbound). The nearest inbound and outbound bus stops to the Lidl store are approximately 350 metres away at the Calmount Avenue / Calmount Road junction which will be accessible for cyclists, pedestrians and general traffic via the new Calmount Avenue road extension linking Calmount Avenue with Greenhills Road at the proposed roundabout junction. This distance is within the 400m (5 minute) bus stop catchment area as noticed in response to previous query relating to bus stop locations and spacing.

The nearest bus stops to the Lidl store are indicated in Figure 2.8.5.9 below.

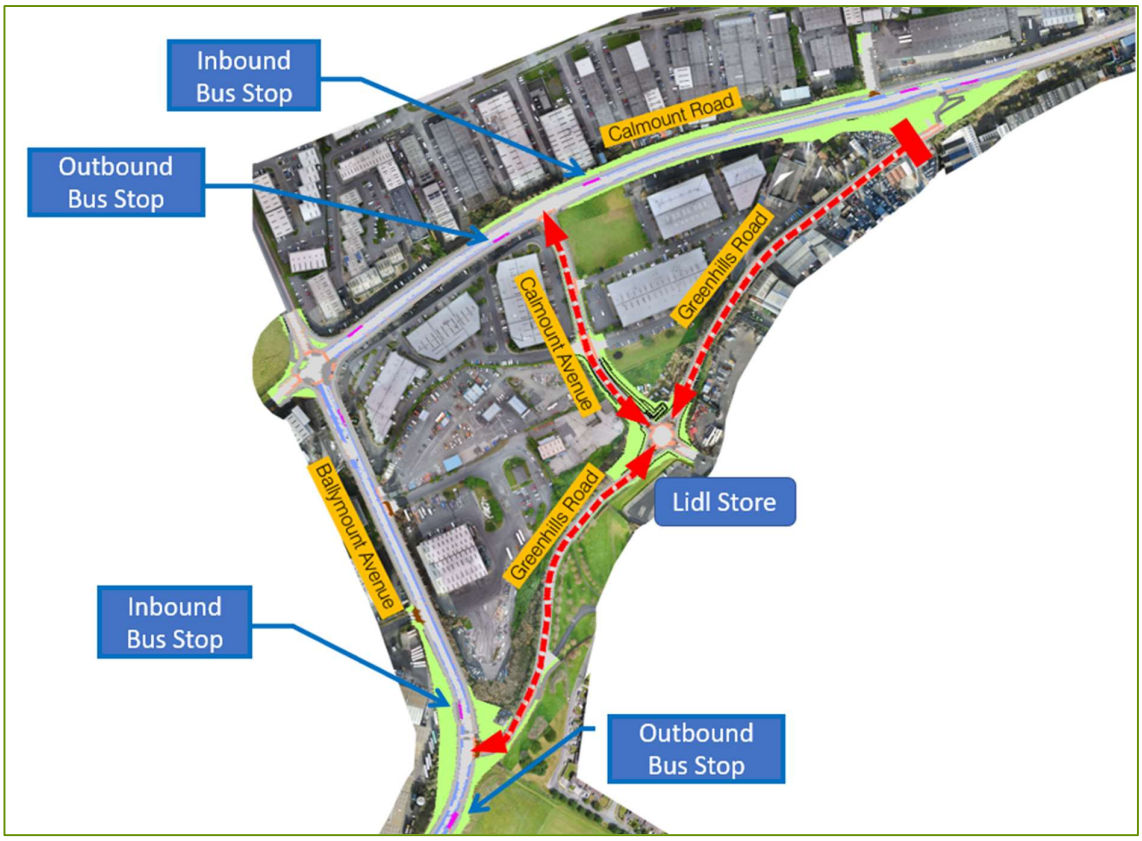


Figure 2.8.5.9: Access Routes to Commercial Businesses on Greenhills Road between Kilakee Drive and Greenhills Industrial Estate

8. Walkinstown roundabout traffic

The layout of Walkinstown Roundabout has been designed to provide enhanced cycle and pedestrian connectivity around this busy junction as well as improving safety for pedestrians, cyclists, bus and general traffic. A two-way segregated cycle track has been proposed around the junction to allow cyclists to adopt the most direct route around the roundabout (i.e both directions) and to reduce interactions with motor vehicles. Parallel pedestrian/cyclist raised table crossings have been implemented on all arms to improve pedestrian and cyclist safety. Set back crossings have been used on all arms to promote pedestrian/cyclist desire lines with consideration for vehicle exit lane storage off the roundabout. Cycle detection loops have also been implemented on the two-way segments on approach to the crossings to help promote cycling journey time efficiencies and minimise delays for cyclists crossing multiple arms of the junction. The number of general traffic entry lanes/flares, circulation lanes and angle of entry have been reconfigured to promote safer vehicle movements. Landscaping proposals and revised parking arrangements are also proposed to enhance the area.

Section 6.4.6.2.9.2 of Chapter 6 (Traffic & Transport) 0f Volume 2 of the EIAR notes the following:

"To determine the impact that the Proposed Scheme has in terms of general traffic redistribution on the direct and indirect study areas, the LAM Opening Year 2028 model results have been used to identify the difference in general traffic flows between the Do Minimum and Do Something scenarios and the associated level of traffic flow difference as a result of the Proposed Scheme. The assessment has been considered with reference to both the reductions and increases in general traffic flows along road links."

Section 6.4.6.2.9.3 of Chapter 6 (Traffic & Transport) of Volume 2 of the EIAR notes the following:

"Direct Reductions in General Traffic: The LAM indicates that, during the 2028 Opening Year scenario, there are reductions in general traffic noted along the Proposed Scheme during the AM Peak Hour, as illustrated by the blue lines in Diagram 6.40, which indicates where a reduction of at least -100 combined traffic flows occur"

Figure 2.8.5.10 below extract from Section 6.4.6.2.9.3 shows a reduction in general traffic flow (blue lines) is predicted on all arms of Walkinstown Roundabout in the AM peak hour for opening year 2028.

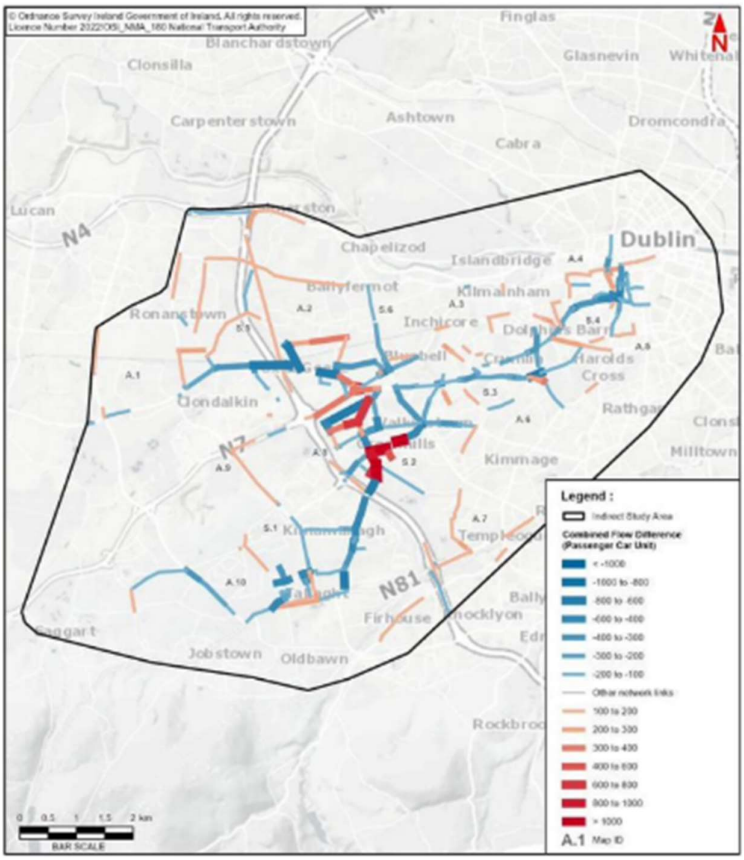


Figure 2.8.5.10: Extract from EIAR Chapter 6 Section 6.4.2.9.3 Flow Difference on Road Links (Do Minimum vs. Do Something), AM Peak Hour 2028 Opening Year (Image 6.40)

In summary for the AM Peak Hour traffic flows in the 2028 opening year, Section 6.4.6.2.9.3 notes the following:

"the scheme will generally reduce traffic levels along the corridor, with increases in traffic flow only predicted on four links, three of which relate to the closing off of a section of Greenhills Road, and redirection of traffic along Calmount Road via a new link along Ballymount Avenue. Most of this traffic will be transferred from the existing Greenhill Road."

The fourth link referred to above is the Nangor Road north of the N7 and R110.

Section 6.4.6.2.9.4 of Chapter 6 (Traffic & Transport) of Volume 2 of the EIAR notes the following:

"Direct Reductions in General Traffic Flows: The LAM indicates that during the 2028 Opening Year scenario, there are key reductions in general traffic noted along the Proposed Scheme during the PM Peak Hour, as illustrated by the blue lines in Diagram 6.41, which indicates where a reduction of at least -100 combined traffic flows occurs."

Figure 2.8.5.11 below extract from Section 6.4.6.2.9.4 shows a reduction in general traffic flow (blue lines) is predicted on all arms of Walkinstown Roundabout in the PM peak hour for opening year 2028.

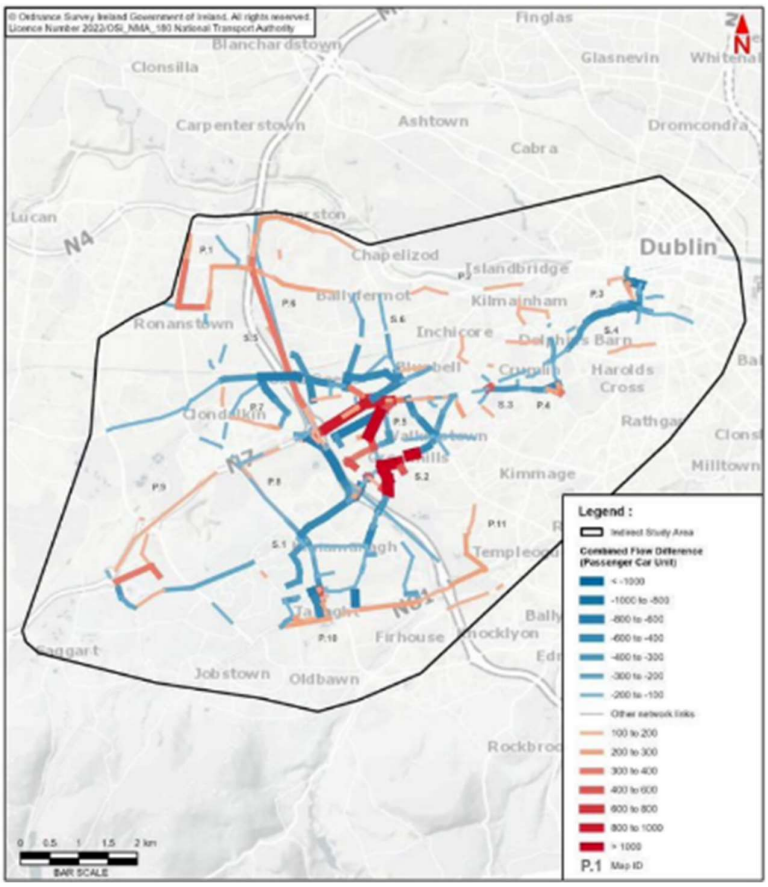


Figure 2.8.5.11: Extract from EIAR Chapter 6 Section 6.4.2.9.4 Flow Difference on Road Links (Do Minimum vs. Do Something), PM Peak Hour 2028 Opening Year (Image 6.41)

In summary for the PM Peak Hour traffic flows in the 2028 opening year, Section 6.4.6.2.9.3 notes the following:

"the scheme will generally reduce traffic levels along the corridor, with increases in traffic flow only predicted on four links, three of which relate to the closing off of a section of Greenhills Road, and redirection of traffic along Calmount Road via a new link along Ballymount Avenue. Most of this traffic will be transferred from the existing Greenhill Road."

The fourth link referred to above is the Nangor Road / Long Mile Road link.

The Junction Design Report (JDR), included as Appendix A6.3 of EIAR Volume 4 Appendices Part 2 of 4, provides the following additional information in respect of the junction design:

"Summary

The existing major six arm roundabout junction is to be upgraded as per the BusConnects Preliminary Design Guidance Booklet to enhance pedestrian, cyclist and bus priority infrastructure.

Pedestrian Infrastructure

It is proposed to introduce controlled crossings in the form of toucan crossings on all arms of the junction. The crossings are proposed to be offset from the junction by approximately 15-20m to enhance safety and visibility between motorists and pedestrians.

Furthermore the entry and exit lanes of the roundabout junction are proposed to be reduced in width, which will facilitate shorter crossings for pedestrians and cyclists. It is also proposed to raise the pedestrian and cyclist crossings to give greater priority to vulnerable road users.

Cyclists Infrastructure

As noted above, controlled cyclist crossings are proposed on all respective arms of the junction.

The proposed cycle track will travel along Greenhills Road on both sides of the carriageway, connecting onto Walkinstown Roundabout. At the roundabout, a two way cycle track is proposed to cater for cyclists crossing the respective arms of the junction. The cycle route is proposed to continue towards Dublin City Centre via Bunting Road along new proposed cycle tracks.

Bus Priority Infrastructure

It is proposed to provide a Junction Type 3, whereby the bus lane is curtailed prior to the stop line to facilitate left turning vehicles. A bus lane is proposed to be broken at approximately 20m prior to the stop line at the toucan crossing.

A junction type 1 was considered at this location, whereby the bus lane continued upto the stop line, however the proposed arrangement has been adopted as it was considered that this will facilitate greater people movement for all modes of transport."

The JDR goes on to state that in the 2028 AM peak hours the junction is forecast to have a Network Residual Capacity of 14% and a junction delay of 6.96 sec; and in the 2028 PM peak hour, it is forecast to have a Network Residual Capacity of 9% and a junction delay of 8.89 sec.

In summary, the entry and exit lanes of the roundabout junction are proposed to be reduced in width to 2 lanes to facilitate shorter crossings for pedestrians and cyclists. It is also proposed to raise the pedestrian and cyclist crossings to give greater priority to vulnerable road users. The Proposed Scheme at this location provides the optimum layout that balances the competing demands by enhancing bus priority, improving pedestrian and cyclist infrastructure whilst still retaining appropriate capacity for the forecast level of general traffic.

9. Carbon emissions

Section 8.5.1.1 of EIAR Chapter 8 describes the construction phase carbon calculations and quantifies the construction phase embedded carbon using the TII Carbon Tool (TII 2020), which has the ability to quantify carbon in infrastructure projects using Ireland-specific emission factors and data. Section 8.5.1.1 states: *"Detailed project information including tonnage of materials was used in the assessment of embodied carbon (refer to Appendix A8.1 Construction Phase Embodied Carbon in Volume 4 of this EIAR for inputs into the TII Carbon Tool). The Proposed Scheme is expected to have a Construction Phase of 36 months approximately. The predicted embodied carbon is averaged over the full Construction Phase to give the predicted annual emissions to allow for a direct comparison with annual emissions and targets. Construction Phase emissions have been compared against the total national GHG emissions in Ireland for 2020 (58,698 kt CO2eq) (EPA 2022b) and against Ireland's non-ETS 2020 target of 37,942.7 kt CO_2eq (as set out in Commission Decision 2017/1471 of 10 August 2017 and amending decision 2013/162/EU to revise Member States' annual emissions allocations for the period from 2017 to 2020) and the 2030 Transport Emission Ceiling.*

Construction Phase emissions have been compared against Ireland's non-ETS 2030 target of 33,381.3 kt CO2eq (as set out in Commission Implementing Decision (EU) 2020/2126 of 16 December 2020 on setting out the annual emission allocations of the Member States for the period from 2021 to 2030 pursuant to Regulation (EU) 2018/842 of the European Parliament and of the Council).

Based on the TII Carbon Tool, the breakdown of the activities between the different phases of the Proposed Scheme have been assessed. As shown in Table 8.11, the assessment indicates that the key phases of the GHG generation are the embodied carbon of the construction materials and the

construction activities, which when combined, account for 87% of all carbon emissions. Pre-construction together with construction waste is expected to account for 13% of all emissions.

The Proposed Scheme is estimated to result in total Construction Phase CO_2e emissions of 27,763 tonnes embodied CO_2eq for materials over a 36-month period. The IEMA Guidance (IEMA 2022) states that "Carbon budgets allow for continuing economic activity, including projects in the built environment, in a controlled manner". Thus, projects which have a carbon footprint are not necessarily significant provided that the projects are compatible with net zero by 2050, and the full range of mitigation measures are employed to minimize the carbon footprint. Given that the construction of the Proposed Schemes itself will lead to operational GHG emission reductions overall then the construction phase should be viewed as compatible with net zero emission targets. Thus, the assessment of significance for the construction phase of the Proposed Scheme is deemed to have a minor adverse impact given that the construction phase emissions are equivalent to an annualised total of 0.024% of Ireland's non-ETS 2020 target and 0.154% of the 2030 Transport Emission Ceiling. The potential impact to climate due to embodied carbon emissions during the Construction Phase, prior to mitigation, will be Negative, Minor Adverse and Short-Term.

In order to place the emissions due to the total Construction Phase in context, the CO_2e emissions are equivalent to the construction of approximately 555 three-bedroom houses using traditional construction methods (Monahan 2011)."

Section 8.8.1 of EIAR Chapter 8 describes the residual impacts of the construction phase and states that "*the Proposed Scheme is estimated to result in total Construction Phase GHG emissions of 27,763 tonnes embodied CO_2eq for materials over a 36-month period, equivalent to an annualised total of 0.024% of Ireland's non-ETS 2020 target and 0.154% of the 2030 Transport Emission Ceiling. The embodied carbon emissions associated with the Construction Phase of the Proposed Scheme will be short-term and temporary in nature Nevertheless, the impact on CO_2e emissions, after mitigation, as outlined in Table 8.23, due to the embodied carbon associated with the Construction Phase of the Proposed Scheme will be Negative, Minor and Short-Term. Although the impact rating post-mitigation is the same as pre-mitigation, the mitigation measures proposed will have the effect of reducing carbon emissions during the Construction Phase. A comparison between the Do Something and Do Minimum CO_2e traffic emissions in the Construction Year (2024) indicates that there is predicted to be an overall increase of 6.3kt in CO_2eq due to the Construction Phase of the Proposed Scheme. This is equivalent to a 0.40% increase in CO_2eq relative to the Construction Year (2024) Do Minimum estimates."*

Section 8.8.2 of Chapter 8 Climate of volume 2 of the EIAR states: "*The maintenance CO_{2e} emissions associated with the Operational Phase of the Proposed Scheme, after mitigation, is predicted to be Negligible and Permanent. The operational traffic CO2e emissions associated with the Operational Phase of the Proposed Scheme is predicted to be Negligible and Permanent. Overall, when the carbon emissions associated with the maintenance phase and the Operational Phase are combined, the net GHG emissions will be Negligible and Permanent. Thus, the residual impact from Operational Phase traffic as a result of the Proposed Scheme will be Negligible and Permanent.*

The Proposed Scheme will also support the delivery of government strategies outlined in the 2023 CAP (DCCAE 2022) and the 2021 Climate Act by enabling sustainable mobility and delivering a sustainable transport system. The Proposed Scheme will provide connectivity and integration with other public transport services leading to more people availing of public transport, helping to further reduce GHG emissions.

Based on the analysis outlined above, it is concluded that the Proposed Scheme achieves the project objectives in supporting the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets. The Proposed Scheme has the potential to reduce CO_{2e} emissions equivalent to the removal of approximately 18,420 and 44,230 car trips per weekday from the road network in 2028 and 2043 respectively. This represents a significant contribution towards the increased use of lower-carbon modes and reduction in the percentage of total journeys that are made by private car (modal share) from over 70% (today) to just over 50% in 2030 as outlined in the 2023 CAP (DCCAE 2022).

It is concluded that, the Proposed Scheme will make a significant contribution to reduction in carbon emissions."

2.8.6 40 - Dublin Cycling Campaign

2.8.6.1 Overview of submission

The submission raised the following points and issues:

1. Support for the Scheme

The introduction of the submission outlines that the Dublin Cycling Campaign supports the Proposed Scheme, with a number of reservations.

The submission sets out that the Dublin Cycling Campaign is a registered charity that advocates for better cycling conditions in Dublin. The submission notes that the Dublin Cycling Campaign has been

engaging with the NTA through all stages of the project including multiple rounds of public consultation, community forums, and through one to one meetings.

The submission expressed disappointment that there are still some major improvements required to assist the scheme through the communities it serves.

2. Cyclist comfort levels

The submission states that comfort levels for cyclists along the route will be lower as they will be exposed to noise from adjacent roadway. Recommend 600mm bio-diverse buffer between motorised traffic and cycling and pedestrian areas where possible.

3. Cycle tracks should be 2m wide minimum

Throughout the scheme a variation in cycle track widths was noted, the submission stated that all cycle tracks should be a minimum of 2.0m wide to allow overtaking of cycles and accommodate larger cycles. The submission also expressed the opinion that carriageway widths should be reduced in favour of cycle track width which has been compromised to provide 3.0m wide carriageway widths.

4. Continuous cycle tracks should be provided rather than short bus lane length

The submission observed gaps in cycle track provision on Crumlin Road to provide short sections of bus lanes, submission suggests providing continuous cycle tracks which would prioritise safety in this section of road rather than improving journey times.

5. Increase levels of filtered permeability

The submission welcomes the utilisation of filtered permeability in the Proposed Scheme in the Dublin 12 area but the outer parts of the scheme relies on signage and enforcement to prioritise sustainable modes.

6. Adopt CROW guidelines for Quiet Street treatment

The submission suggests where ‘Quiet Street’ measures are proposed the design should consider Dutch guidance (CROW) measures such as:

- Coloured surfacing
- No carriageway road marking
- Vehicle path width of 4.5m
- Safe and comfortable for cyclists
- Clarity for motorists that route is a cycle route.

Quiet street should have a distinct uniform surfacing where vehicle parking is limited with build-outs and chicanes.

7. Concern 50kph speed limit remains for Crumlin Road/Walkinstown Road/Kildare Road

The submission welcomes the 30 km/hr speed limit proposed within the scheme, however it noted that some major roads such as Crumlin Road, Walkinstown Road and Kildare Road remain with 50 km/hr speed limits. This is a concern in relation to enforcement and DMURS should be adhered to so as to engender a respect to speed limits through engineering design.

8. Naas Road junction

The submissions put forward the opinion that the Proposed Scheme design for this junction will not encourage more people to walk or cycle across this complex junction and proposes as an example an alternative design such as the Hovenring in Eindhoven.

9. Walkinstown Roundabout

The submission welcomes improvements on previous design for this roundabout, but the submission has reservations as the current design does not allow for more direct transit by bike and as such will discourage many cyclists form using the proposed design, instead cyclists may continue to use the main road with potential for incidents, collisions and perhaps fatalities.

10. Bus Stop Bypasses

The submission is disappointed that bus stop bypasses are not included where there appears to be adequate space and recommends greater introduction of bus stop bypasses in general.

11. Specific Junction Design

The submission has grave concerns about junctions on Crumlin Road, South Circular Road, Dolphins Barn, Cork Street, Patrick Street and Christchurch as minimal safe segregation is provided to cyclists at these junctions and no clear provision for right turning cyclists is provided.

12. Raised Table Extensions

The submission suggests that raised tables across junctions and side roads should be extended to accommodate the cycle lane and give right of way priority to cyclists and pedestrians.

13. Bike Parking

The submission recommends the introduction of secure cycle parking throughout the scheme.

2.8.6.2 Response to submission

1. Support for the Scheme

The NTA recognises the benefit that the continued engagement with the Dublin Cycling Campaign and other advocacy groups through the three rounds of non-statutory public consultation, community forums and one to one meetings, has had in developing the Proposed Scheme. The NTA notes that the Dublin Cycling Campaign are generally happy with the proposal, apart from certain elements, and welcomes the support from the charity for implementing the Proposed Scheme. Requests to modify particular detailed design aspects of the Proposed Scheme are noted and the NTA has provided responses to those requests as set out in the following sections. The NTA looks forward to the continuation of collaboration with the Dublin Cycling Campaign in achieving the Proposed Scheme objectives which have many synergies with the Dublin Cycling Campaign's vision for a vibrant city where people of all ages and abilities can choose to cycle as part of their everyday life.

2. Cyclist comfort levels

Due to the width constraints along the Proposed Scheme corridor, to provide planted buffer zones would involve major works that would not be justified in the context of the objectives of the BusConnects project. Where possible the Proposed Scheme has provided offline cycling facilities totalling approximately 3.9 km. These offline cycle tracks are located on the sustainable route through Parkview / Birchview Avenue /Treepark Road, at Walkinstown Roundabout, on the Naas Road and northbound on Walkinstown Avenue.

3. Cycle tracks should be 2m wide minimum

One of the main outcomes of the Proposed Scheme is safe, segregated cycling facilities which are accessible to all along the corridor. As set out in the PDGB and in accordance with the NCM width calculator, the desirable minimum width for a single-direction, with-flow, raised adjacent cycle track is 2.0m, to provide a high Quality of Service and allow for overtaking within the cycle track, as well as to cater for larger cycles. Notwithstanding this aspiration, it is acknowledged that the Proposed Scheme is to be delivered in constrained urban environments, and the delivery of a 2.0m+ wide cycle track may not always be practicable. As such, the cycle track widths have been reduced to typically 1.8m or 1.5m wide where the provision of 2.0m wide cycle tracks is not practicable.

Whilst cycles can come in a range of shapes and sizes (for example standard, tandem, recumbent, cargo, handcycle, wheelchair user tricycle, articulated bikes with additional child trailer or trailer

bikes), these cycles are typically less than 1m in width and will be accommodated by the Proposed Scheme.

Section 4.6.1 of Chapter 4 (Proposed Scheme Description) of Volume 2 of the EIAR notes the following in relation to traffic lane widths:

"Traffic lane widths (including bus lanes) will follow the guidance outlined in DMURS, with the preferred width of traffic lanes on the Proposed Scheme being:

- *3.0m in areas with a posted speed limit 60km/h.*
- *3.25m in areas with a posted speed limit >60km/h.*

Traffic lane widths of 2.75m is permissible but not desirable and should only be permitted on straight road sections with very low Heavy Goods Vehicles (HGV) percentage and where all desirable minimum widths for footpaths, cycle tracks, parking, bus lanes are not achievable without impact on third-party lands, if appropriate, taking all design factors into account in the context of the Proposed Scheme objectives."

4. Continuous cycle tracks should be provided rather than short bus lane length

The GDA Transport Strategy states that it is intended to provide continuous bus priority, as far as is practicable, along the core bus routes, with the objective of supporting a more efficient and reliable bus service with lower journey times, increasing the attractiveness of public transport in these areas and facilitating a shift to more sustainable modes of transport, to facilitate this scheme objective, bus priority signalling has been proposed along Crumlin Road between Raphoe Road and Brickfield Drive wherein general traffic will be managed by signals to facilitate bus priority along this constrained section of the Proposed Scheme.

At this constrained section of the Proposed Scheme along Crumlin Road where segregated cycle tracks could not be achieved, between Walkinstown Roundabout and Parnell Road (Grand Canal), a parallel alternative cycle route is provided along Bunting Road, Kildare Road and Clogher Road to link into the Grand Canal cycle route at Parnell Road.

5. Increase levels of filtered permeability

The proposed new bus lanes in each direction will be subject to enforcement and general traffic shall not be allowed make use of the bus lanes and cycle tracks will be segregated from general traffic with an upstand kerb where practicable.

The NTA acknowledges the comments raised in relation to enforcement. Enforcement of road traffic laws is a matter for An Garda Síochána.

Notwithstanding this, specific measures have been considered in the development of the Proposed Scheme that will help deter inappropriate and unlawful use of bus lanes and cycle tracks including advanced bus signal detection systems which will activate green signals at traffic lights for authorised vehicles only. Bus Gates are proposed at belgard Square West, Belgard Square East, Blessington Road (existing), Old Greenhills Road, Greenhills Road (Parkview) and Clogher Road to facilitate bus priority by removing general through traffic along the overall road where the bus gate is located.

6. Adopt CROW guidelines for Quiet Street

On Clogher Road, between Sundrive Road and Kildare Road, the narrow cross-section prevents the provision of dedicated cycle facilities therefore it is proposed to provide a bus/cycle gate at the junction of Clogher Road/ Sundrive Road to reduce the amount of traffic on this road and making it suitable for designation as a Quiet Street.

The low volume of general traffic as a result of the proposed bus gate deems this section of road suitable for cyclists sharing the roadway with the general traffic without the need to construct segregated cycle tracks or painted cycle lanes. The Quiet Street Treatment would involve appropriate advisory signage for both the general road users and cyclists.

Table 6.73 in Section 6.4.6.2.9.3 of Chapter 6 (Traffic & Transport) of Volume 2 of the EIAR notes that Clogher Road will experience a combined flow reduction of 610 PCUs (Passenger Car Unit) during the AM Peak Hour in the 2028 Opening Year, down from 641 PCUs in the Do Minimum Scenario to 31 PCUs in the Do Something scenario.

Table 6.78 in Section 6.4.6.2.9.4 of Chapter 6 (Traffic & Transport) 0f Volume 2 of the EIAR notes that Clogher Road will experience a combined flow reduction of 596 PCUs during the PM Peak Hour in the 2028 Opening Year, down from 639 PCUs in the Do Minimum scenario to 43 PCUs in the Do Something scenario.

The Bunting Road to Clogher Road route is proposed as a quiet cycle route in terms of traffic flows, with cycle tracks provided on both sides of the road and priority of junctions. This provides an alternative route for cyclists using Walkinstown Road, which is proposed to have shared bus and cycle facilities.

Figure 2.8.6.1 below extract from Table 6.36 of Chapter 6 of the EIAR shows the cycling qualitive assessment along Section 3 of the Proposed Scheme which includes Bunting Road, Kildare Road and Clogher Road, with reference to accompanying sensitivity for each section and resultant Significance of Impact.

Locations	Chainage (m)	Do Minimum LoS	Do Something LoS	Impact	Sensitivity of Environment	Significance of Effect
Walkinstown Roundabout to R110 Long Mile Road	A5970 – A6750	D	B	Medium	Medium	Positive Significant
R819 Walkinstown Road / Drimnagh Road to R110 Drimnagh Road / Kildare Road / St Mary's	A6750 – A7500	B	A	Low	High	Positive Moderate
Bunting Road to Clogher Road via Kildare Road	D0 - E2447	B	A	Low	Medium	Positive Moderate
Section Summary		**C**	**A**	**Medium**	**Medium**	**Positive Significant**

Figure 2.8.6.1: Extract from EIAR Chapter 6 Section 6.4.6.1.4.2 Cycling Impact during Operational Phase (Table 6.36)

7. Concern 50kph speed limit remains for Crumlin Road / Walkinstown Road / Kildare Road

The NTA acknowledges the comments raised in relation to enforcement. Enforcement of road traffic laws is a matter for An Garda Síochána.

There are a number of traffic calming measures that have been implemented in the Proposed Scheme that will reduce speeds including improved junction layouts with reduced corner radii, narrow carriageway lane widths, raised table crossings on side roads, proposed speed limit reduction on Crumlin Road between Cooley Road and Parnell Road from 60kmph to 50kmph, bus lanes on Walkinstown Road and speed humps on Bunting Road, Kildare Road and Clogher Road. The additional landscaping and enhanced pedestrian/ cyclist priority measures along the Proposed Scheme will also lend themselves to the principles of self-regulating streets as set out in DMURS to encourage lower driving speeds.

8. Naas Road junction

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.5.1 of Chapter 4 of Volume 2 of the EIAR, Proposed Scheme Description, at the New Nangor Road (R134) / Naas Road (R810) junction a new pedestrian and cycling bridge with accessible ramps and stairs on all approaches to the junction has been proposed to provide increased pedestrian and cycling safety, permeability and accessibility at this junction.

A proposed continuous inbound bus lane with dedicated left turn bypass facility will provide enhanced bus priority between the New Nangor Road (R134) and the Naas Road (R810). This will require land acquisition and boundary modifications including new retaining structures in conjunction with the new bridge access ramps and steps. A new bus lane is proposed within the junction for the outbound buses heading towards New Nangor Road (R134) to improve bus priority along the corridor. As a result, the general traffic lane allocation from the Long Mile Road (R110) will be revised to two straight ahead lanes towards the New Nangor Road (R134) and two left turn lanes towards the Naas Road (R810).

As outlined in the GDA Cycle Network Plan, this section of the corridor aligns with the proposed Primary Route 7B / N10 until cyclists re-join New Nangor Road beyond the M50 overbridge. The route also aligns with Secondary Route 8C2 along its extents.

The extract from the General Arrangement Drawings in the EIAR, Volume 3, Part 1 of 3, Chapter 4 Proposed Scheme Description showing Proposed Scheme at New Nangor Road / Naas Road / Long Mile Road junction is shown below in Figure 2.8.6.2

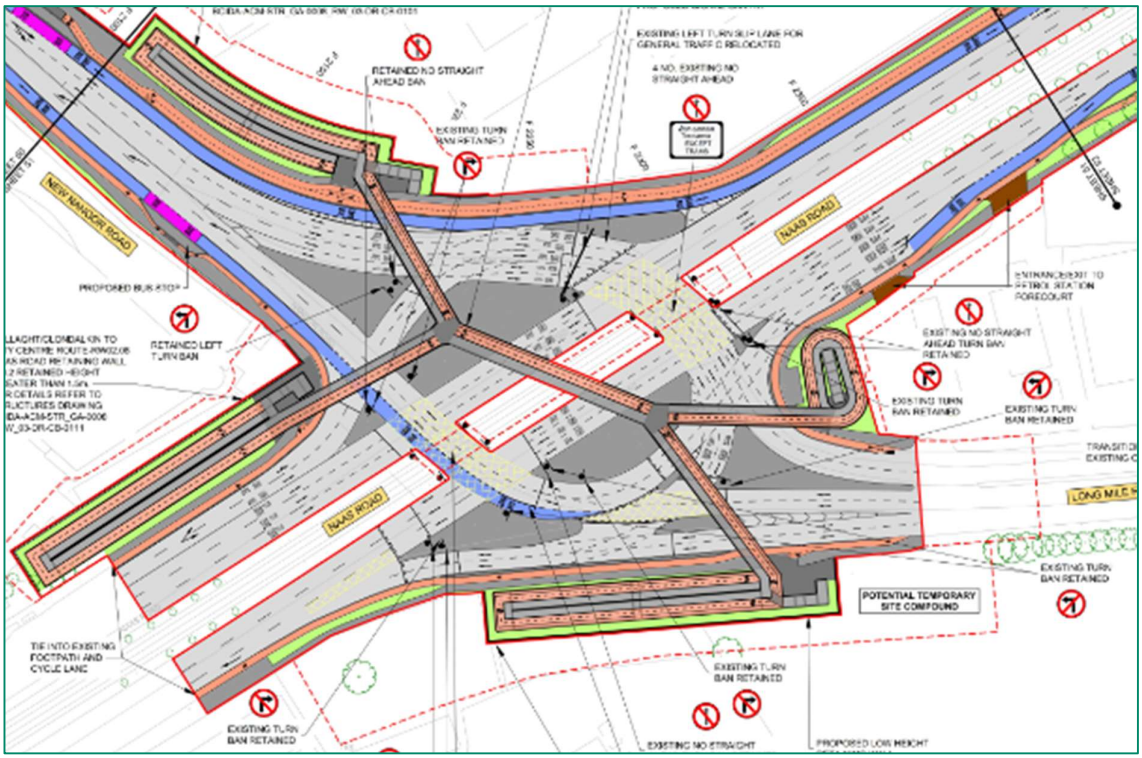


Figure 2.8.6.2: Extract from General Arrangement Drawings at New Nangor Road / Naas Road / Long Mile Road junction (Sheet 51)

The submission asserts that cyclists the design will not encourage more people to walk or cycle across this junction.

Section 3.4.1.2.1 of EIAR Chapter 3 Consideration of Reasonable Alternatives notes that the draft Preferred Route Option proposed an overbridge for pedestrians and cyclists at this location which would greatly reduce conflicts with traffic.

Section 4.4.2.1 of the Preferred Route Option (PRO) Report, provided as part of the Supplementary Information, provides details of the consideration of the option for the proposed overbridge. Section 4.2.2.1 states: "*The R134 New Nangor Road/R110 Long Mile Road/R810 Naas Road junction is a very large and complex traffic signal-controlled intersection, catering for large traffic flows and has the LUAS red line running through the middle of it. For pedestrians to cross the road at present they must use signal-controlled crossing, crossing one link at a time. At present it can take between 4 and 5 minutes to cross the R110 Long Mile Road using these signals, and the EPR Option (Figure 4-9) did not propose any changes to the facilities for pedestrians or cyclists. While the pedestrian and cycle flows are low at present this is likely to change in the years to come as the regeneration of the lands around the intersection gets underway. For this reason, consideration has been given to how pedestrians and cyclists can be better catered for at this location.*"

Section 4.4.2 of the PRO Report summarises the assessment of this alternative option ("Option 2") when compared to the EPR Option as follows:

"Overall, the alternative arrangement provides a more reliable and direct crossing facility for pedestrians and cyclists compared to the multiple toucan crossings in the EPR Option, each with a delay for users while they wait at each crossing.

When compared to the EPR Option, the alternative option improves significantly the safety of pedestrian and cyclists by removing the conflict with vehicular traffic.

Furthermore, the proposed improvements will make for a significantly more pleasant journey for pedestrians and cyclists using the junction as they will no longer be interacting with vehicular traffic.

Also, the alternative arrangement will improve the junction performance for general traffic due to no longer having to incorporate phases for pedestrians and cyclists, which offsets the additional capital costs of the proposed structures.

Although the alternative option requires increased land take than the EPR Option, it is noted that the alternative offers improved connection with lands zoned "to facilitate enterprise and/or residential led regeneration", as well as passing through an area designated a Key District Centre in the Naas Road Lands Local Area Plan. The alternative offers an improvement in encouraging/supporting planned development and in providing for economic opportunities. Thus, in terms of accessibility, social inclusion and integration the alternative proposal is considered to have some advantages over the EPR Option arrangement. There is no significant difference between the two alternatives in terms of impact on the environment."

Table 4.4 of the PRO Report provides the Assessment Summary, see Figure 2.8.6.3.

Table 4-4: Assessment Summary

Assessment Criteria	Option 1 (EPR)	Option 2 (Alt)
Economy		
Integration		
Accessibility & Social Inclusion		
Safety		
Environment		
Overall		

Figure 2.8.6.3: Table 4.4 of PRO Report

Section 4.4.2.2 of the PRO Report concludes that *"the Preferred Route Option for the pedestrian and cyclist facilities will be the provision of a grade separated bridge at the R134 New Nangor Road/R110 Long Mile Road/R810 Naas Road junction; as despite the high capital cost, there would be more advantages through improved traffic performance, integration, accessibility and particularly better safety in comparison to the at-grade crossings."*

As noted above, Section 4.4.2 of the PRO Report states that *"the alternative arrangement will improve the junction performance for general traffic due to no longer having to incorporate phases for pedestrians and cyclists."* This absence of at-grade pedestrian and cyclists in the Proposed Scheme is reflected in the design of the junction shown on the General Arrangement Drawings (see Figure 2.7.1) and on the junction design details provided in pages 33-36 of the Junction Design Report which forms Appendix A6.3 of Chapter 6 Traffic and Transport Appendices in EIAR Volume 4 Part 2 of 4. As such the at-grade crossing points referred to by the submission will not be available as option for pedestrians and cyclists, with the proposed ramps, steps and bridges providing the only available route.

9. Walkinstown Roundabout

The submission asserts that cyclists may not use the cycle tracks and crossings at Walkinstown Roundabout as it does not offer direct transit through the junction for cyclists.

Section 3.3.2.1.6 of EIAR Chapter 3 Consideration of Reasonable Alternatives provides an overview of the route options assessment undertaken for the Walkinstown Roundabout.

Full details of the Walkinstown Roundabout Options Assessment are outlined in Appendix I1 Feasibility and Options Assessment Report included in the Supplementary Information submitted with the application.

As noted in Page 9 of the Feasibility and Options Assessment Report: *"A number of traffic management and junction arrangement options for Walkinstown Roundabout were assessed as part*

of the options assessment process. The assessment built on some preliminary junction upgrade assessment work undertaken by Arup on behalf of South Dublin County Council and the NTA in 2013. Following the stage 1 sift of junction and traffic management options, the following scheme options were assessed in further detail (see Figure (vii)):"

Figure 2.8.6.4 Below is an extract from the Feasibility and Options Assessment Report showing the six options considered at this stage.

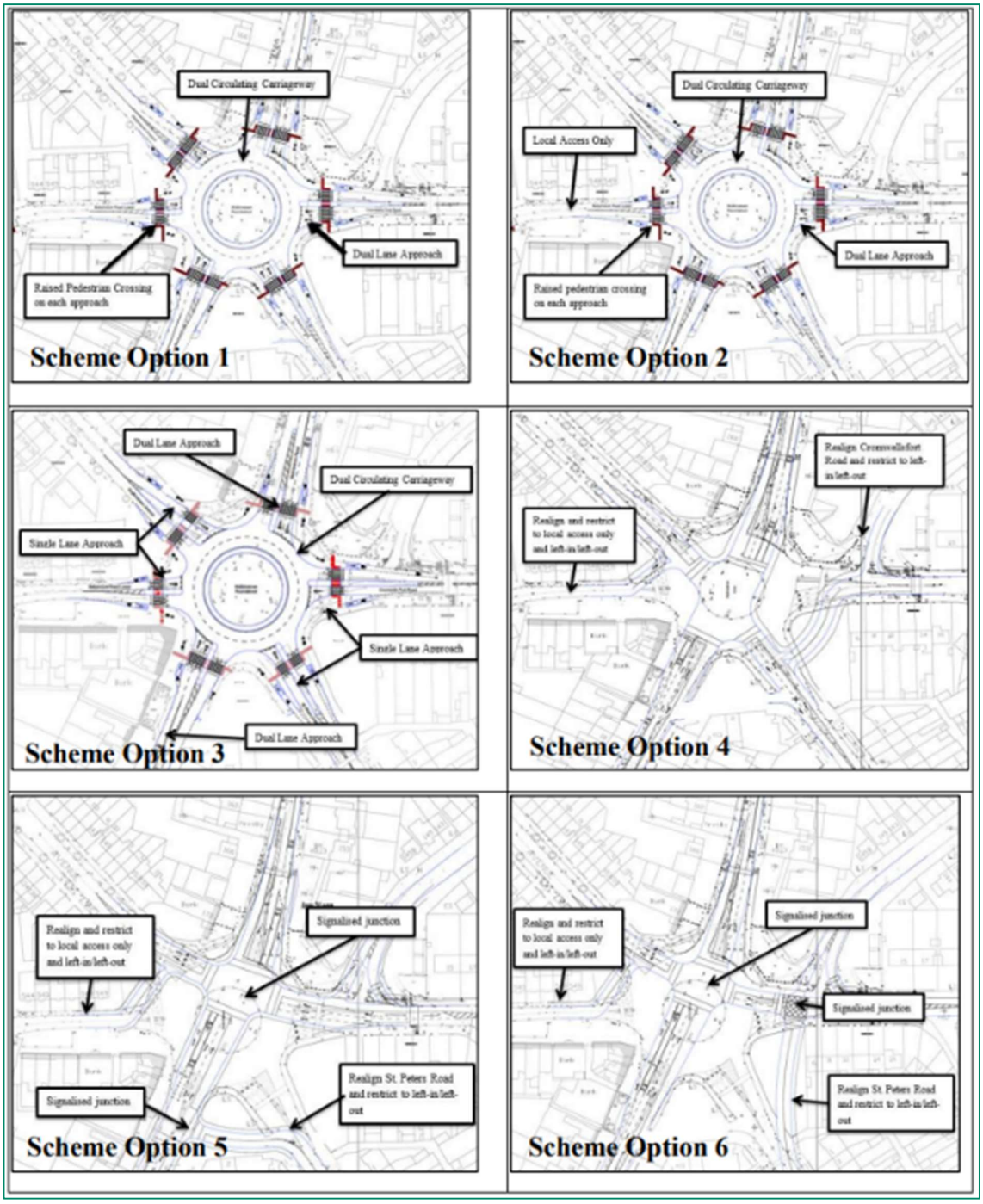


Figure 2.8.6.4: Figure (viii) of the Feasibility and Options Assessment Report

Section 6.3.6 Multi Criteria Analysis (MCA) summary of the assessment and relative ranking of these route options against the four main assessment criteria is shown below in Figure 2.8.6.5, Table 6.10 extract from the Feasibility and Options Assessment Report

Assessment Criteria	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Economy						
Integration						
Safety						
Environment						

Figure 2.8.6.5: Walkinstown Roundabout Options Assessment Summary (Main Criteria) (Table 6.10)

Section 6.3.6 of the Feasibility and Options Assessment Report summarises the MCA assessment as follows:

"As can be seen in Table 6.9 and Table 6.10, there is relatively little to distinguish between the junction arrangement options explored. While the signalised junction arrangement options appear to have a greater impact, particularly on traffic movements, further assessment is required at the next design stage to fully understand the impact of traffic diversions and signalisation, as these changes would likely offer better reliability for buses passing through the junction.

However, on the basis of this assessment, Option 1 (Dual Lane Roundabout) is considered to be the preferred roundabout option for Walkinstown Roundabout for the following reasons:

- *It allows good bus lane provision on both the northern and southern approaches to the junction, stopping only 35m in advance of the yield line to accommodate left turners;*
- *It negates the need for buses to switch lanes to pass through the roundabout (currently identified as a major issue for buses progressing through the 3 lane roundabout);*
- *It is considerably cheaper than options to signalise the junction;*
- *It provides improved facilities for cyclists and pedestrians;*
- *It requires no land take and would actually create some additional public space; and*
- *Although it reduces capacity for general traffic, all existing traffic movements are catered for."*

Section 3.4.1.1.1 of EIAR Chapter 3 Consideration of Reasonable Alternatives notes that the draft Preferred Route Option proposed for Section 2: Ballymount to Crumlin, proposed that Walkinstown Roundabout, where Walkinstown Roundabout maintained roundabout control at the junction with a reduction of the internal circulating carriageway from three lanes to two lanes, be altered to include a segregated two-way cycle track around the junction. This will reduce conflicts with pedestrians and allow the cyclists to take the shortest route around. Parallel signal-controlled pedestrian / cycle crossings on all arms of the roundabout are also provided.

Section 3.3.3.1 of the Preferred Route Option (PRO) Report, provided as part of the Supplementary Information, provides details of the consideration of the option for the proposed Walkinstown Roundabout junction options. Section 3.3.3.1 states: "*At Walkinstown Roundabout, an in-depth assessment of various junction options, taking into consideration multiple factors such as traffic movement counts, traffic management and junction operations and subsequent MCA, determined that the modified dual lane roundabout was the optimum solution for this location."*

Section 3.5.4 of the PRO Report states: *"The EPR design for Walkinstown Roundabout has been revised to improve cycle and pedestrian connectivity around this busy junction. A two-way segregated cycle track has been proposed around the junction to adopt the most direct route around the roundabout (i.e both directions) and to reduce interactions with motor vehicles. Parallel pedestrian/cyclist raised table crossings have been implemented on all arms to improve pedestrian and cyclist safety. City bound cyclists will be directed to the offline cycle route along Bunting Road and St. Mary's Road providing a more direct route linking Walkinstown Roundabout with Kildare Road."*

Section 4.5.2.1 of Chapter 4 of Volume 2 of the EIAR states:

"The layout of Walkinstown Roundabout has been designed to provide enhanced cycle and pedestrian connectivity around this busy junction as well as improving safety for pedestrians, cyclists, bus and general traffic. A two-way segregated cycle track has been proposed around the junction to allow cyclists to adopt the most direct route around the roundabout (i.e., both directions) and to reduce interactions with motor vehicles. Parallel pedestrian / cyclist raised table crossings have been implemented on all arms to improve pedestrian and cyclist safety. Set back crossings have been used on all arms to promote pedestrian / cyclist desire lines with consideration for vehicle exit lane storage off the roundabout. Cycle detection loops have also been implemented on the two-way segments on approach to the crossings to help promote cycling journey time efficiencies and minimise delays for cyclists crossing multiple arms of the junction. The number of general traffic entry lanes / flares, circulation lanes and angle of entry have been reconfigured to promote safer vehicle movements. Landscaping proposals and revised parking arrangements are also proposed to enhance the area. City bound cyclists will be directed to the offline cycle route along Bunting Road and St. Mary's Road, providing a more direct route linking Walkinstown Roundabout with Kildare Road."

Figure 2.8.6.6 below extract from the General Arrangement Drawings from Volume 3 Part 1 of 3 of the EIAR shows the Proposed Scheme Layout at Walkinstown Roundabout.

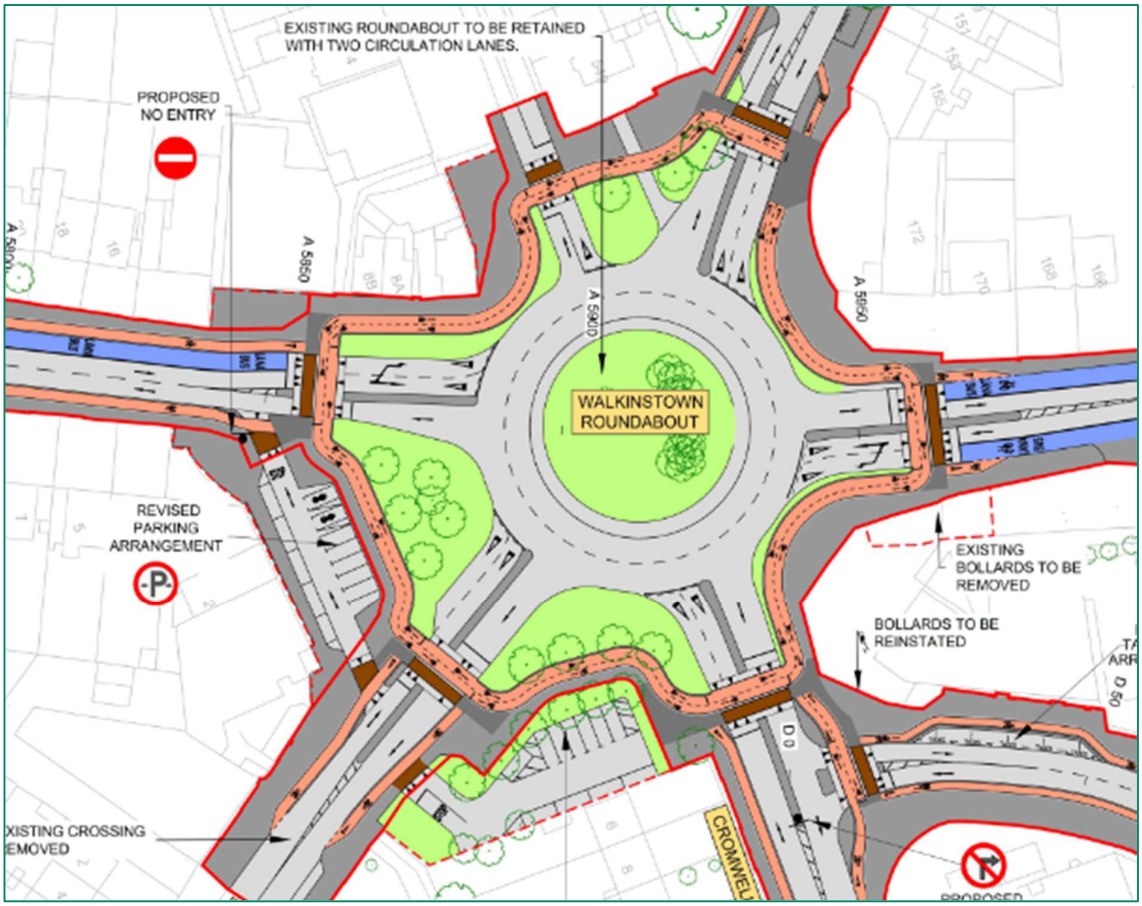


Figure 2.8.6.6: Extract from General Arrangement Drawings (Sheet 19)

10. Bus stop bypasses

The preferred bus stop arrangement for the Proposed Scheme is the island bus stop arrangement, where space constraints do not allow for an island bus stop, an option consisting of a shared bus stop landing zone was utilised.

On Kildare Road, and Clogher Road where space is limited with residential properties along these roads it was not possible to provide an island bus stop arrangement along these roads. Option 2 from the National Cycle Manual was utilised where such space constraints did not allow for island bus stops (without the bus lane on Kildare Road and Clogher Road).

Figure 2.8.6.7 below extract from the National Cycle Manual shown the layout for In-Line Bus Stop Option 2.

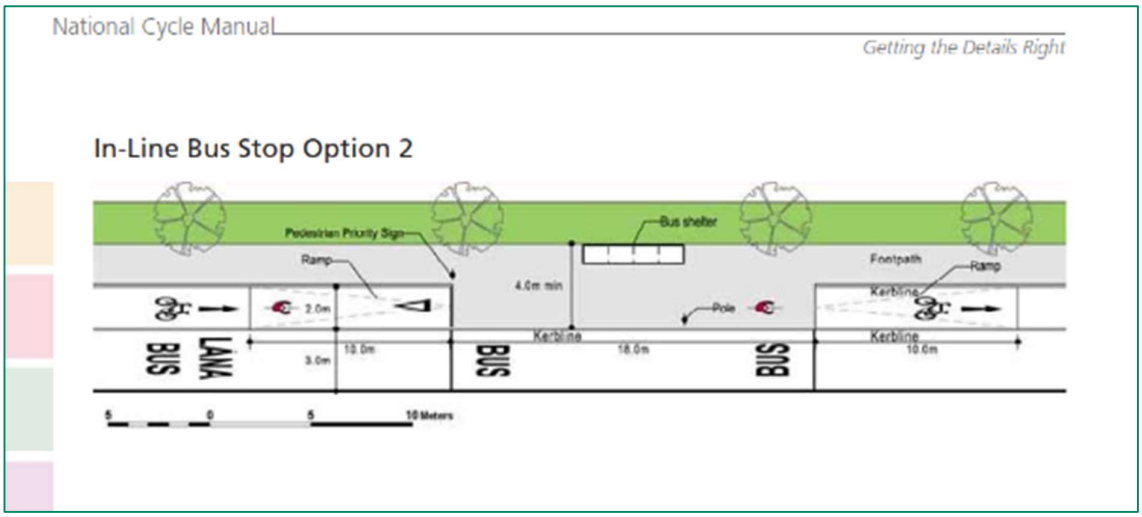


Figure 2.8.6.7: Extract from NTA National Cycle Manual

11. Specific junction design

The submission asserts that safe segregation is not provided to cyclists at these junctions and no clear provision for right turning cyclists is provided.

Crumlin Road / Sundrive Road junction

The Proposed Scheme provides cycle lanes through the junction and Toucan crossings on Crumlin Road to allow cyclists to turn right onto Herberton Road and onto Sundrive Road. Figure 2.8.6.8 below is an extract from Appendix 2 page 159 of the Junction Design Report of Chapter 6 of Volume 4 Part 2 of 4 of the EIAR showing the indicative method of Control for this junction where right turning cyclists can use the pedestrian crossing signal phase to complete these junction crossings.

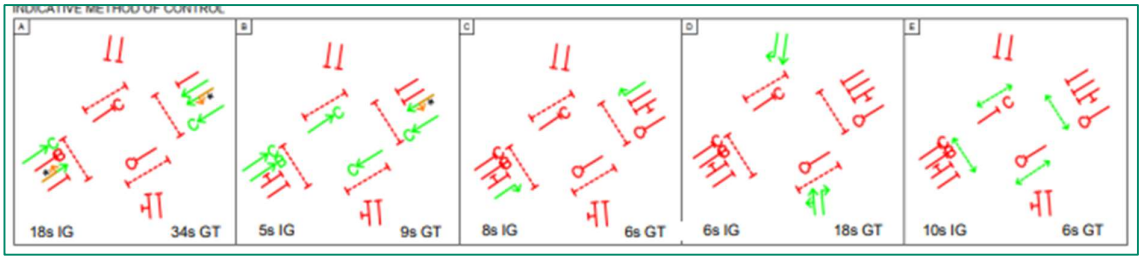


Figure 2.8.6.8: Extract from Junction Design Report Sundrive Road / Crumlin Road (Page 159)

Crumlin Road / Parnell Road junction

The Proposed Scheme provides cycle lanes through the junction and Toucan crossings on Crumlin Road / Dolphin's Barn to allow cyclists to turn right onto Dolphin Road and onto Parnell Road. Figure 2.8.6.9 below is an extract from Appendix 2 page 163 of the Junction Design Report of Chapter 6 of Volume 4 Part 2 of 4 of the EIAR showing the indicative method of Control for this junction where right turning cyclists on Crumlin Road / Dolphin's Barn cross the junction on this green phase and await the green phase for Dolphin Road and Parnell Road to complete right turn movement under flashing amber for general traffic in this phase.

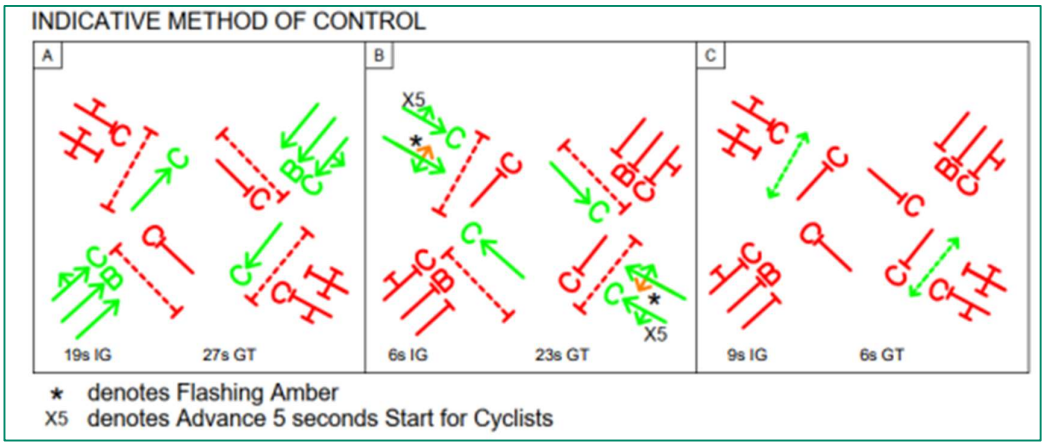


Figure 2.8.6.9: Extract from Junction Design Report Parnell Road / Crumlin Road (Page 164)

South Circular Road / Dolphin's Barn

The proposed South Circular Road junction design takes into account the Dolphins Barn Public Realm improvement plan that is being implemented by DCC.

Cycle tracks are proposed along Dolphins Barn and along South Circular Road. It is proposed to introduce ASLs (Advanced Stop Lines) road markings on the side roads to assist cyclists entering the junction.

Figure 2.8.6.10 below is an extract from DCC Dolphins Barn Village Improvement Scheme Site Plan (Part 006)

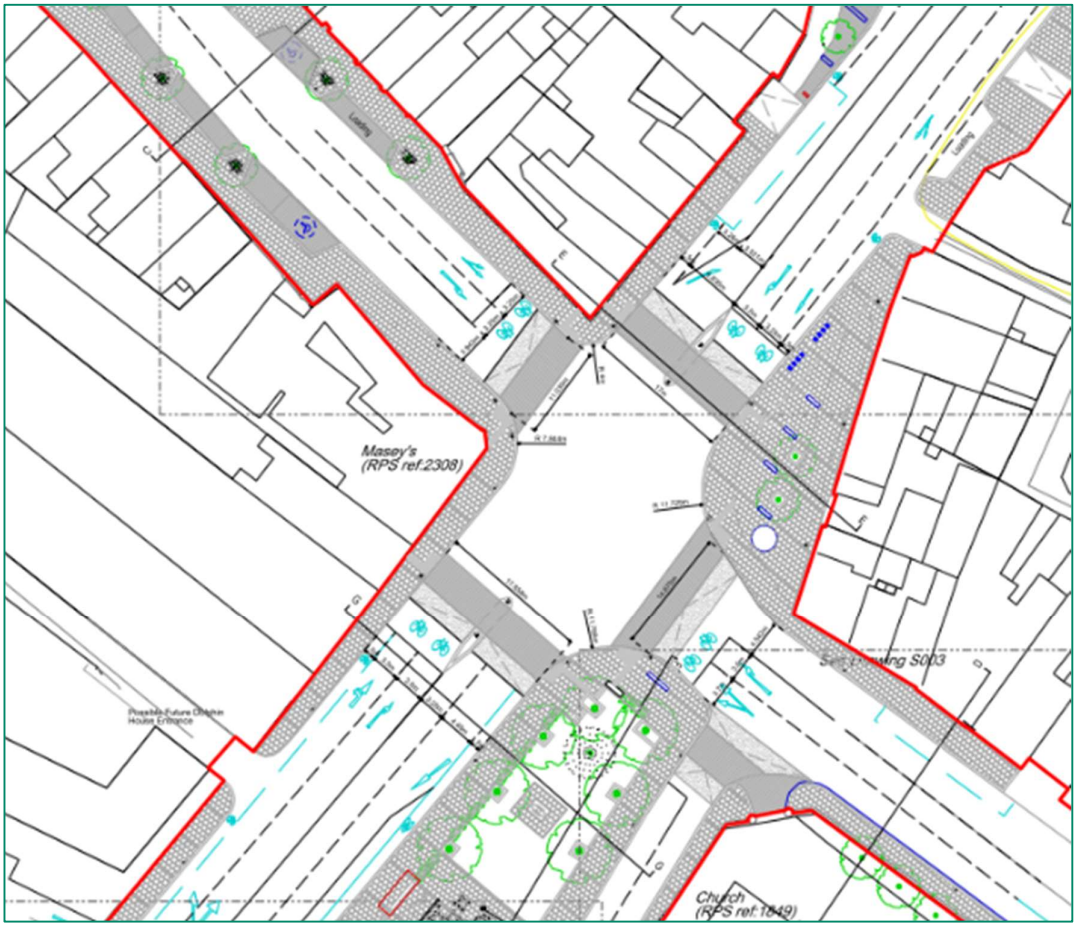


Figure 2.8.6.10: Extract from Dolphins Barn Village Improvement Scheme Site Plan (Part 006)

Patrick Street / Dean Street

The existing cycle Advanced Stop Lines are proposed to be omitted. The proposal is to upgrade the junction to cater for cycle tracks on all arms entering and exiting the junction. Dedicated cycle crossings are proposed across the junction. Physical build outs are proposed to offer cyclists greater protection.

Figure 2.8.6.11 below is an extract from Appendix 2 page 183 of the Junction Design Report of Chapter 6 of Volume 4 Part 2 of 4 of the EIAR showing the indicative method of Control for this junction where east – west right turning cyclists proceed across the junction on this green phase under flashing amber for general right turning traffic and await the green phase for north – south movements to complete right turn movement. South bound right turning cyclists proceed under 3 second advance green phase from Patrick Street to Dean Street.

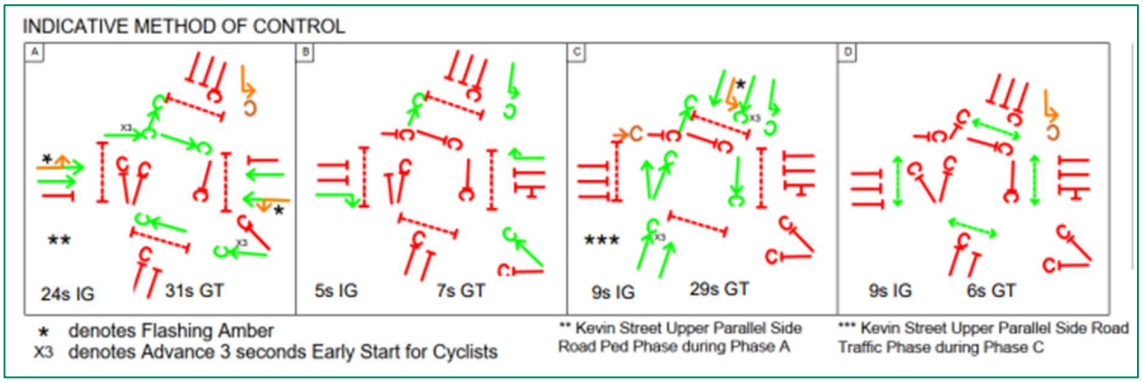


Figure 2.8.6.11: Extract from Junction Design Report Patrick Street / Dean Street (Page 183)

Christchurch junction

The proposal is to upgrade the junction to cater for cycle tracks on all arms entering and exiting the junction. Dedicated cycle crossings have been proposed across the junction. A direct cyclist crossing is also proposed to cater for movements from High Street to Nicholas Street to cater for the cyclist desire line. Were feasible, physical build outs are proposed to offer cyclists greater protection.

Figure 2.8.6.12 below is an extract from Appendix 2 page 191 of the Junction Design Report of Chapter 6 of Volume 4 Part 2 of 4 of the EIAR showing the indicative method of Control for this junction where eastbound right turning cyclists proceed across the junction on this green phase under late start for general straight ahead and left turning traffic from Nicholas Street. Southbound right turning cyclists proceed under late start for general straight ahead and left turning traffic from High Street. Northbound right turning cyclists proceed west through the junction to await green phase for northbound cycle lane to complete right-turn movement.

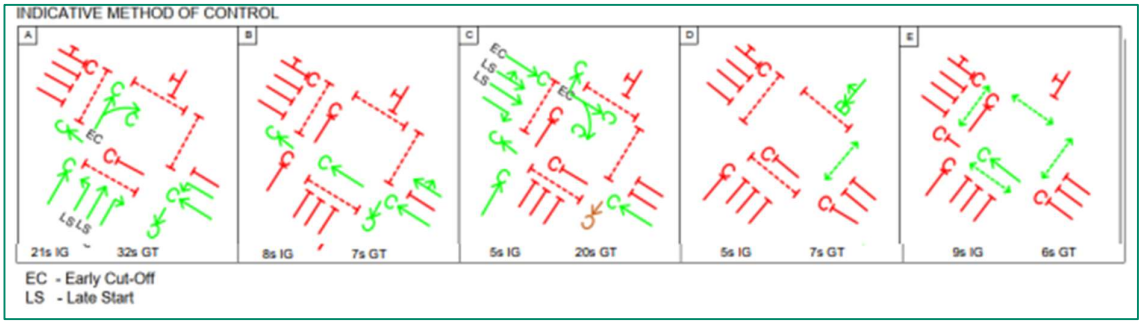


Figure 2.8.6.12: Extract from Junction Design Report Christchurch Junction (Page 191)

12. Raised Table Extensions

The design of the raised table treatments for priority junctions has been undertaken in accordance with Section 8.1 of the Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors as provided in Appendix A4.1 of EIAR Volume 4 Part 1 of 4.

13. Bike parking

As noted in Section 4.6.3 of Chapter 4 of Volume 2 of the EIAR, bike racks will generally be provided, where practicable, at Bus Stops and key additional locations as noted in the Landscaping General Arrangement drawings in Chapter 4 of Volume 3 Part 1 of 3 of this EIAR and in accordance with the cycle parking provision shown in the bus stop arrangements shown in Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridors of Volume 4 Part 1 of 4 of the EIAR.

However, the provision of secure bicycle parking is not part of the scope of the Proposed Scheme planning application.

2.8.7 41 - Senator Mary Seery Kearney

2.8.7.1 Overview of submission

The submission raised the following points and issues:

1. Period allowed for submission insufficient

Submission states that an eight-week window to make a submission on a planning application that exceeds 5,000 pages is not sufficient for ordinary people and does not believe that public consultation is sufficient and is in fact prejudicial.

2. No extra buses provided.

Submission expresses the opinion that no extra buses are provided on this corridor.

3. Crumlin community access to public transport curtailed.

Submission expresses the opinion that the Crumlin community will lose connectivity and access to public transport under these plans.

4. Gain in journey time reduction / cost benefit disproportionate.

Submission expresses the opinion that the proposed scheme will only reduce journey time by a small amount which is a disproportionate benefit when compared to cost.

5. Disagree enhanced public transport system provided.

Submission does not agree that an enhanced public transport system is being provided but does concede that cycling infrastructure appears to be greatly enhanced.

6. Traffic modelling inadequate.

Submission expresses the opinion that modelling only caters for peak hours and not the entirety of usage and that traffic modelling across various corridors is inconsistent and unreliable.

7. Cumulative corridor assessment required.

Submission expresses astonishment at the inadequacy of traffic modelling carried out to demonstrate the traffic flow impacts for confluence of corridors.

8. Adherence to Aarhus should not be undermined.

Submission expresses the opinion that inadequate traffic modelling may undermine adherence to Aarhus.

9. Query suitability of local roads for traffic.

Submission queries the suitability of roads such as Dromore Road in Drimnagh, Balfe Road and Harty Avenue to cater for significant increases in traffic during morning peak hours.

10. Query environmental impact.

Submission queries the environmental impact of additional car traffic on roads for noise and carbon emissions impacts and for pedestrian safety.

11. No cross-community bus service.

Submission expresses the opinion that the proposed scheme plan is based on the premise that all journeys are going to the city centre without considering cross journeys and there are no cross-community bus services are provided.

12. No consideration to individuals reliant upon cars due to mobility issues.

Submission expresses the opinion that buses planned to be introduced will have limited capacity for wheelchair users and others with limited mobility.

2.8.7.2 Response to submission

1. Period allowed for submission insufficient

The application as submitted to An Bord Pleanála on 28 April 2023 was complete and fully in accordance with the requirements of section 51 of the Roads Act 1993 (as amended) and the

Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014.
Section 51(3)(a)(iii) requires that a period of not less than 6 weeks be provided for public consultation in relation to a proposed road development such as this. For the Proposed Scheme a period of public consultation of 8 weeks was provided from 9 May 2023 to 4 July 2023.

In May 2017 the NTA launched the BusConnects Programme and then in June 2018 published the Core Bus Corridors Project Report. The report was a discussion document outlining proposals for the delivery of Core Bus Corridor Routes across Dublin.

Since the commencement of the non-statutory period of the CBC Infrastructure Works, there has been a total of three rounds of non-statutory public consultation.

First Round of Non-Statutory Public Consultation - The first round of non-statutory public consultation on the Emerging Preferred Route Options was from November 2018 until May 2019 divided into three phases. The reason it was divided into three phases was primarily due to the fact that the BusConnects Infrastructure team carried out all aspects of the first round without external design service providers having been appointed at that stage. Moreover, the BusConnects Infrastructure team sought to gain maximum engagement from the public from the commencement of the CBC Infrastructure Works to raise awareness, establish relationships and gain immediate insight and knowledge of the issues at an early stage.

It was also important that at the start of the non-statutory consultation that considerable time and resources were dedicated by the BusConnects Infrastructure team to initiate contact with potential impacted properties. Each of the potentially impacted property owners were offered the opportunity to meet with members of the BusConnects Infrastructure team on a one-to-one basis which meant a significant amount of resources had to be dedicated to this process.

Second Round of Non-Statutory Public Consultation – The non-statutory public consultation for the Preferred Route Options ran from March 2020 to April 2020 as Ireland entered the first lockdown due to the Covid-19 pandemic. The consultation continued in deference to the number of online submissions received during this period. A number of public facing elements of the consultation were cancelled in line with Government health guidelines, however, all other elements of the consultation including online versions of the brochures, supporting documentation were available. Other communication tools including the Freephone, email and digital aspects remained active for submissions to be received.

Third Round of Non-Statutory Public Consultation – This round of non-statutory public consultation for the Preferred Route Options from November 2020 to December 2020 was added due to the disruption caused to the second-round consultation process. It was important that further engagement was facilitated to communicate design development changes prior to concluding the determination of the Preferred Route Options. Methods had emerged whereby traditional public information events could be replaced by virtual online alternatives to offset the restrictions that continued associated with the Covid-19 Pandemic. Accordingly, all elements of the public consultation and stakeholder engagement were conducted virtually or online in line with the Government health guidelines.

2. No extra buses provided

Section 2.2.1.5 of Chapter 2 (Need for the Proposed Scheme) of Volume 2 of the EIAR notes the following:

“To inform the preparation of the GDA Transport Strategy 2016 - 2035, the NTA prepared the Core Bus Network Report (NTA 2015) for the Dublin Metropolitan Area, which identified those routes upon which there needed to be a focus on high capacity, high frequency and reliable bus services, and where investment in bus infrastructure should be prioritised and concentrated. The Core Bus Network is defined as a set of primary orbital and radial bus corridors which operate between the larger

settlement centres in the Dublin Metropolitan Area. The development and implementation of priority infrastructure on the Core Bus Network is to ensure that delays are minimised, reliability is improved through peak and off-peak periods and mode shift from the private car is made more attractive. The reason for focussing on the Core Bus Network is to maximise the return on future investment in bus infrastructure and to facilitate efficient operation of bus services, thereby improving the attractiveness of public transport for a large proportion of the population of the Dublin Metropolitan Area and beyond. The Core Bus Network Report focused on the overall existing bus service network and identified locations where the bus network is operating sub-optimally. The network is dominated by a radial network to / from Dublin City Centre, supplemented by low frequency orbital and local bus routes serving larger destinations outside of the City Centre core.

….. There are two main bus corridors in the south west Dublin area, linking Tallaght / Clondalkin to the City Centre. One runs along the R137 through Terenure, and the other runs along the R819 / R110 through Walkinstown and Crumlin, with a spur to Clondalkin via the R134. While there are significant sections of bus lanes in both directions, there are long sections with little or no bus lanes provided. For example, on the Greenhills Road Corridor there is a 4km section with no bus lanes in either direction. As a result, reliability of journey times is poor in this area. The Core Bus network study included a recommended route from Tallaght and Clondalkin to the City Centre on the basis of the need to serve significant demand along this entire corridor and the need to address service deficits (lack of bus priority and associated journey time reliability) for a high level of scheduled bus services already operating along this corridor."

As stated in Section 2.1 of Chapter 2 of the EIAR, the Proposed Scheme aims to meet growth demand by:

"enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of 'People Movement'. People Movement is the concept of the optimization of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed Scheme. The aim is to reduce journey times for modes of transport with higher person carrying capacity (bus, walking and cycling), which in turn provides significant efficiencies and benefits to users of the transport network and the environment."

Section 2.2.2 notes the following:

"The Proposed Scheme will enhance interchange between the various modes of public transport operating in the city and wider metropolitan area. The CBC Infrastructure Works, including the Proposed Scheme, are developed to provide improved existing or new interchange opportunities with other existing and planned transport services, including:

- *DART stations;*
- *Existing Dublin Bus and other bus services;*
- *The Greater Dublin Area (GDA) Cycle Network Plan;*
- *Future public transport proposals such as the DART + Programme and MetroLink; and*
- *Supporting the Dublin Bus Network Re-design.*

…. As part of the BusConnects revised bus network proposals, the Proposed Scheme will serve the D-Spine bus services. Image 2.9 is an extract from BusConnects Network Redesign maps and shows the different interfaces along the corridor from Tallaght / Clondalkin into the City Centre. Demand for travel by bus is anticipated to continue to grow in this corridor into the future, in line with population growth. The bus priority measures forming part of the Proposed Scheme are required to accommodate this growth in travel demand and to facilitate the revised bus network (D-Spine) by providing journey time and reliability savings for passengers. This will ensure that the projected growth in passenger demand is facilitated and protected from increasing congestion, providing resilience which can in the future cater for additional bus service provision."

Section 2.4 notes the following:

"The Proposed Scheme has been designed to facilitate improved efficiency of the transport network through the improvement of the infrastructure for active (walking and cycling) and public transport

modes making them attractive alternatives to car-based journeys. Central to the design is the optimisation of roadway space with a focus on the movement of people rather than vehicles along the route and through the junctions. A typical doubledeck bus takes up the same road space as three standard cars but typically carries 50-100 times the number of passengers per vehicle. On average, a typical double-deck bus carries approximately 60-70 passengers making the bus typically 20 times more efficient in providing people movement capacity within the equivalent spatial area of three cars. These efficiency gains can provide a significant reduction in road network congestion where the equivalent car capacity would require 50 or more vehicles based on average occupancy levels. Consequently, by prioritising the movement of bus over cars, significantly more people can be transported along the limited road space available. Similarly, cyclists and pedestrians require significantly less roadway space than general traffic users to move safely and efficiently along the route. Making space for improved pedestrian and cycle infrastructure can significantly benefit these sustainable modes and encourage greater use of these modes.

The Proposed Scheme design involves the prioritisation of people movement, focusing on maximising the throughput of sustainable modes (i.e., walking, cycling and bus modes). A quantitative people-movement assessment, as part of the transport impact assessment, facilitates a comparison of the Do Minimum and Do Something peak-hour scenarios for the forecast years (2028 and 2043). The benefits resulting from the 2028 AM Peak Hour people-movement assessment shows that there is projected to be an increase of 145% in the number of people travelling by bus, an increase of 45% in the number of people walking or cycling, and a reduction of 33% in the number of people travelling by car along the route of the Proposed Scheme.

The transport modelling also presents demand outputs for people movement by bus in terms of passenger loadings along the corridor. The results indicate that the improvements in bus priority infrastructure with the Proposed Scheme in place show a substantial increase in bus patronage during the peak hours."

3. Crumlin community access to public transport curtailed

Section 6.3.2.1.7.3 of Appendix A6.1 (Traffic Impact Assessment) of Volume 4 Part 2 of 4 of the EIAR notes the following in relation to Bus Infrastructure in Section 3 (Crumlin to Grand Canal):

"It is proposed that there will be a total of 36 bus stops along Section 3 with seven fewer inbound and three fewer outbound, than in the Do Minimum.

There are currently 46 bus stops along Section 3 of the Proposed Scheme.

… The layout of new bus stops is considered to better serve the existing and future catchment and be closer to existing and new pedestrian crossing facilities for improved convenience.

… All stops along this section will be inline, meaning that buses will not incur delay when setting off after picking up passengers. Improvements in the provision of real-time information, shelters, seating and accessible kerbs at the bus stops throughout Section 3 of the Proposed Scheme are assessed as providing an overall positive impact for bus passengers. All proposed facilities have been designed in accordance with BusConnects Preliminary Design Guidance which has been developed with cognisance to the relevant accessibility guidance. The Proposed Scheme improves the quality of existing bus infrastructure along Section 3 of the Proposed Scheme, which will provide long-term benefits for bus users and aligns with the overarching aim to provide enhanced bus infrastructure on the corridor. The impact for this section of the Proposed Scheme is Medium Positive."

4. Gain in journey time reduction / cost benefit disproportionate

Section 6.4.6.3 of Chapter 6 (Traffic & Transport) of Volume 2 of the EIAR notes the following Operational Phase Summary:

"Bus Network Performance Indicators: A micro-simulation modelling assessment has been developed and network performance indicators of the bus operations along the 'end to end' corridor. A micro-simulation modelling assessment has been developed and network performance indicators of the bus

operations along the 'end to end' corridor. The results of the assessment demonstrate that the total bus journey times on all modelled bus services will improve by between 8% and 12% during the AM and PM Peak hours of the 2028 Opening Year and 2043 Design Year. The Proposed Scheme will reduce total bus journey times along the Proposed Scheme by up to 12% in 2028 and 12% in 2043. Based on the AM and PM peak hours alone, this equates to 7.6 hours of savings in 2028 and 7.2 hours in 2043 combined across all buses when compared to the Do Minimum. On an annual basis this equates to approximately 5,750 hours of bus vehicle savings in 2028 and 5,450 hours in 2043, when considering weekday peak periods only. Journey time variation and reliability are shown to improve in all Do Something scenarios compared to the Do Minimum. Overall, it is anticipated that the improvements in journey times and reliability for bus users along the Proposed Scheme will have a Positive, Very Significant and Long-term effect."

5. Disagree enhanced public transport system provided

Section 6.4.6.2.2 of Chapter 6 (Traffic & Transport) of Volume 2 of the EIAR notes the following:

"To determine the impact that the Proposed Scheme has on modal share in the direct study area as a result of its implementation, the weighted average number of people moved by each mode (Car, Bus, Active Modes) has been extracted from the ERM / LAM. The analysis compares the Do Minimum and Do Something scenarios both in the inbound and outbound direction in the AM and PM peak hours (8-9am, 5-6pm) for each forecast year (2028, 2043).

As outlined previously, the same demographic assumptions (population, employment levels) are included in both the Do Minimum and Do Something scenarios. The bus network and frequency assumptions are also the same in both scenarios and are in line with the BusConnects bus network proposals. It is acknowledged, therefore, that the assessment is conservative in terms of the level of people movement that is predicted in the Do Something scenario. The Do Something scenario will facilitate opportunities to increase bus network capacity operating along the corridor due to the extensive priority provided. In addition to this, the significant segregation and safety improvements to walking and cycling infrastructure that is a key feature of the Proposed Scheme will further maximise the movement of people travelling sustainably along the corridor and will therefore cater for higher levels of future population and employment growth. In the absence of the delivery of the Proposed Scheme, growth along this key corridor would continue to contribute to increased congestion and operational issues on the road network. The Proposed scheme delivers a reliable alternative to car-based travel that can support future sustainable growth and provide a positive contribution towards reducing carbon emissions."

Section 6.4.6.2.2.1 of Chapter 6 notes:

"As indicated in Diagram 6.6, there is a reduction of 33% in the number of people travelling via car, an increase of 145% in the number of people travelling via bus and an increase of 45% in the number of people walking or cycling along the Proposed Scheme during the AM Peak Hour. It should be noted that the model predicts limited change in total walking trips between each scenario. This is due to the fact that walking trips in the Do Minimum scenario are also transferring to public transport and cycling due to the improved provision with any new walkers transferring from car replacing these trips.

The Proposed Scheme will facilitate a step change in the level of segregated cycling provision in comparison with existing conditions along the entire length of the corridor. The transport modelling undertaken, is therefore conservative in terms of the predicted cycling mode share. The Proposed Scheme has been designed to cater for much higher levels of cycling uptake and this will provide the opportunity for a significant increase in the movement of people travelling sustainably along the corridor, which would otherwise not be achieved in the absence of the Proposed Scheme."

Figure 2.8.7.1 below is an extract from Section 6.4.6.2.2.2 showing people movement by mode travelling along the Proposed Scheme during 2028 AM Peak Hour.

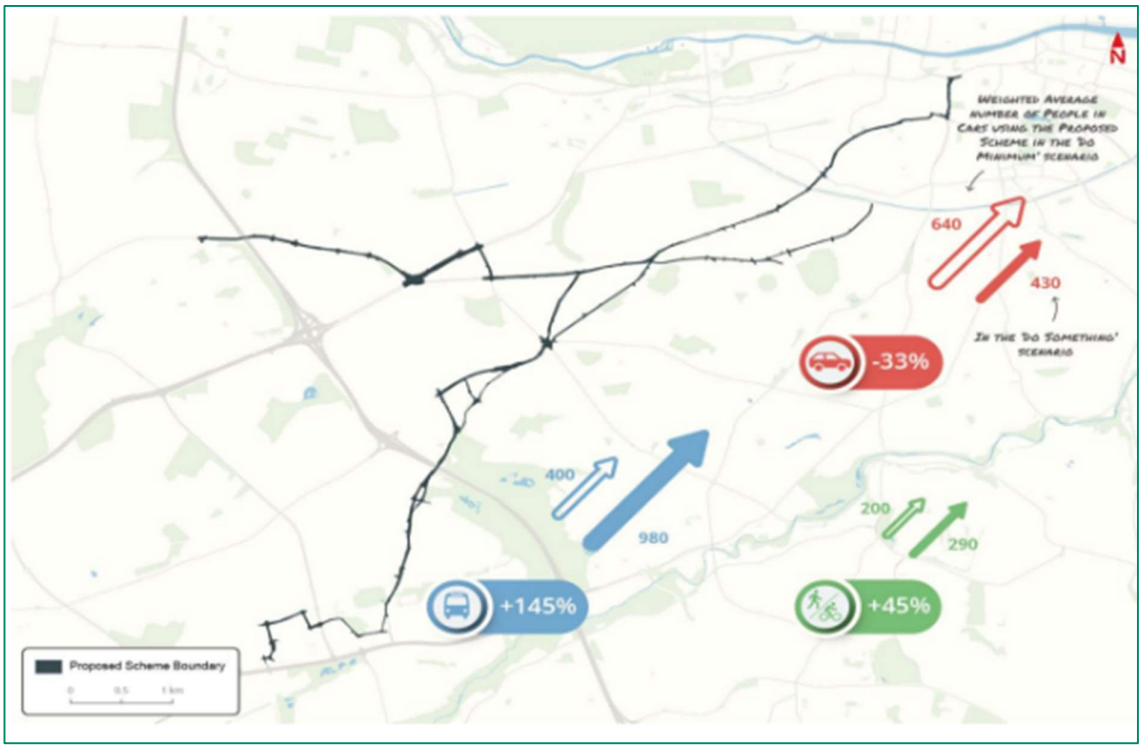


Figure 2.8.7.1: Extract from EIAR Chapter 6 people Movement by Mode travelling along the Proposed Scheme during 2028 AM Peak Hour (Diagram 6.6)

Section 6.4.6.2.2.2 of Chapter 6 notes:

"As indicated in Diagram 6.7, there is a reduction of 38% in the number of people travelling via car, an increase of 123% in the number of people travelling via bus and an increase in 41% in the number of people walking or cycling along the Proposed Scheme during the PM Peak Hour."

Figure 2.8.7.2 below is an extract from Section 6.4.6.2.2.2 showing people movement by mode travelling along the Proposed Scheme during 2028 AM Peak Hour.

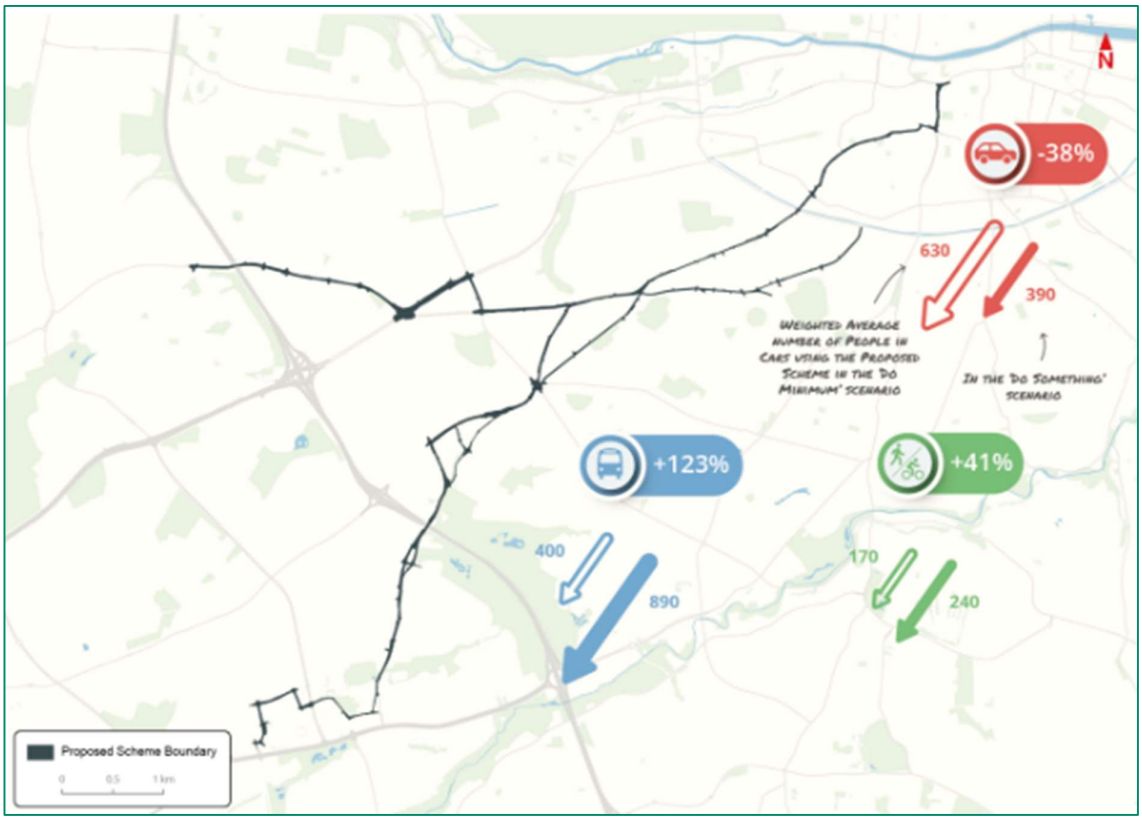


Figure 2.8.7.2: Extract from EIAR Chapter 6 people Movement by Mode travelling along the Proposed Scheme during 2028 PM Peak Hour (Diagram 6.7)

Section 6.4.6.2.4 People Movement – Significance of Impact notes:

"The significance of impact for the movement of People Movement by sustainable modes with the Proposed Scheme in place has been appraised qualitatively, taking into account the changes in mode share, demand changes by mode along the Proposed Scheme as well as bus usage presented above. The Proposed Scheme has been adjudged to deliver a Positive, Very Significant and Long-term impact in terms of People Movement by sustainable modes. The Proposed Scheme can be shown to deliver significant improvements in people movement by sustainable modes along the Proposed Scheme corridor, particularly by bus, with reductions in car mode share due to the enhanced sustainable mode provision.

The findings of the People Movement assessment demonstrate that the Proposed Scheme aligns fully with the aims and objectives of the CBC Infrastructure Works, to 'provide enhanced walking, cycling and bus infrastructure on this key access corridor in the Dublin region, which will enable and deliver efficient, safe, and integrated sustainable transport movement along the corridor'."

6. Traffic modelling inadequate

Section 3.2.1 of Appendix A6.2 Traffic Modelling Report sets out the multi-tiered transport modelling approach that has been adopted. It explains that there are four tiers of transport modelling which have been used to assess the Proposed Scheme.

- *"Tier 1 (Strategic Level): The NTA's East Regional Model (ERM) is the primary tool which has been used to undertake the strategic modelling of the Proposed Scheme and has provided the strategic multi-modal demand outputs for the proposed forecast years;*
- *Tier 2 (Local Level): A Local Area Model (LAM) has been developed to provide a more detailed understanding of traffic movement at a local level. The LAM is a subset model created from the ERM and contains a more refined road network model used to provide consistent road-based outputs to inform the TIA, EIA and junction design models. This includes information such as road network speed data and traffic redistribution impacts for the Operational Phase. The LAM also provides traffic flow information for the micro-simulation*

model and junction design models and has been used to support junction design and traffic management plan testing;

- *Tier 3 (Corridor Level): A micro-simulation model of the full 'end to end' corridor has been developed for the Proposed Scheme. The primary role of the micro-simulation model has been to support the ongoing development of junction designs and traffic signal control strategies and to provide bus journey time information for the determination of benefits of the Proposed Scheme; and*
- *Tier 4 (Junction Level): Local junction models have been developed, for each junction along the Proposed Scheme to support local junction design development. These models are informed by the outputs from the above modelling tiers, as well as the junction designs which are, as discussed above, based on people movement prioritisation."*

Section 3.2.4 of Appendix A6.2 provides details of the Proposed Scheme micro-simulation model and Section 3.2.5 states that: *"The Proposed Scheme micro-simulation model has provided key information on end-to-end bus and car journey times along the Proposed Scheme. The Proposed Scheme micro-simulation model is supplied traffic flow information from the LAM and uses consistent information from the junction design models, in terms of signal plans, green times, staging, phasing and offsets. 3D Visualisations of sections of the Proposed Scheme have been developed based on the 2D models to help visualise and demonstrate the benefits and impacts of the scheme to stakeholders.*

Overall, the Proposed Scheme micro-simulation model has provided key transport metric inputs to the TIA in terms of operational features, vehicle interaction, person level delay and bus journey time and reliability performance."

Section 4.3 of Appendix A6.1 provides details of the modelled time periods and notes that:

"The transport models developed for the Proposed Scheme cover all time periods across a typical average weekday. The ERM demand model covers the following time periods with the road and public transport models assigning a representative 1-hour within each of the 3-hr demand periods:

- *AM Peak period covering the period between 07.00-10.00;*
- *Morning Inter-Peak covering the period between 10.00-13.00;*
- *Afternoon Inter-Peak covering the period between 13.00-16.00;*
- *PM Peak period covering the period between 16.00-19.00; and*
- *Off-Peak covering the period between 19.00-07.00.*

The LAM covers the 4 peak hour time periods outlined below:

- *AM Peak hour covering the period between 08.00-09.00;*
- *Morning Inter-Peak hour covering the period between 12.00-13.00;*
- *Afternoon Inter-Peak hour covering the period between 15.00-16.00; and*
- *PM Peak hour covering the period between 17.00-18.00.*

The Proposed Scheme Microsimulation Model covers the following periods:

- *Weekday AM peak between 07:00 and 10:00; and*
- *Weekday PM peak between 16:00 and 19:00."*

7. Cumulative corridor assessment required

Section 21.2.7 of EIAR Chapter 21 Cumulative Impacts Environmental Interactions considers the cumulative traffic impacts for the operation scenario and states: *"For operational cumulative effects including the Proposed Scheme, the assessment has been undertaken based on a scenario where all the other 11 Core Bus Corridor schemes are also operational."*

Section 21.3.2.1 of Chapter 21 summaries the detailed assessment of cumulative impacts on Traffic and Transport, which is set out in Appendix A6.1 in Volume 4 of the EIAR (Traffic Impact Assessment Report), as follows:

*"**Traffic Related Cumulative Effects***

To examine the potential cumulative traffic effects that the Proposed Scheme may have in combination with any of the other Core Bus Corridor schemes, an area of influence for each scheme was determined to understand the scale of traffic displacement and its interactions with other schemes. The 'area of influence' is the area in which traffic flows are likely to change as a result of the Proposed Scheme measures as indicated by the transport modelling. The outcome of this assessment revealed that the Proposed Scheme has direct and indirect interface with the proposed Kimmage, Liffey Valley and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes.

In terms of direct interfaces, the Kimmage to City Centre Core Bus Corridor Scheme proceeds along New Street South and interacts with the proposed implementation of traffic management measures for the Proposed Scheme at the Kevin Street Upper junction. Works proposed to the junction include the introduction of kerblines realignment, cyclist protection islands build-outs, footway paving, pedestrian crossings, cycle tracks and landscaping at Kevin Street Upper / New Street South / Patrick Street junction. The traffic management measures to be implemented by the Proposed Scheme are located at Kevin Street Upper / New Street South / Dean Street / Patrick Street junction as shown on General Arrangement drawing BCIDA-ACM-GEO_GA-0809_XX_00-DR-CR-0033 in Volume 3 of this EIAR.

The Liffey Valley to City Centre Core Bus Corridor Scheme proceeds along Cornmarket and High Street and interacts with proposed implementation of traffic management measures for the Proposed Scheme at the Nicholas Street / Christchurch Place junction. Works proposed to the junction include the introduction of kerblines realignment, cyclist protection islands build-outs, footway paving, pedestrian crossings, cycle tracks and landscaping at High Street / Nicholas Street / Christchurch Place / Winetavern Street junction. The traffic management measures to be implemented by the Proposed Scheme are located at High Street / Nicholas Street / Christchurch Place / Winetavern Street junction as shown on General Arrangement drawing BCIDA-ACM-GEO_GA-0809_XX_00-DR-CR-0034 in Volume 3 of this EIAR.

The BusConnects Infrastructure team have coordinated the respective scheme designs to provide flexibility in the proposals such that implementation of physical works can be coordinated or delivered in sequence should both schemes be consented. Once in place, both Core Bus Corridor Schemes will provide increased capacity, faster journey times and improved reliability for buses which should lead to considerable mode shift from car transport to public transport, which will reduce traffic levels generally across the road network in and around both corridors.

In terms of indirect effects, modelling has indicated that both the Proposed Scheme and the Kimmage and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes have overlapping traffic ZoI e.g., each scheme results in traffic displacement effecting the other corridor.

When all three schemes are operational (as well as all other proposed Core Bus Corridor schemes), this has the effect of constraining the opportunity for traffic to displace onto adjoining / adjacent roads when compared to the effect when only one of the Core Bus Corridor schemes is operational. In addition to this, with all the Core Bus Corridor schemes operational, there is predicted to be a higher modal shift from private car trips to sustainable modes of travel compared to the singular scheme scenario. This is due to the combined effect of all Core Bus Corridor schemes being operational and the journey time savings and reliability for bus travel and the interchange opportunities that this provides to travel around Dublin in combination with the BusConnects network re-design proposals. In addition, the Core Bus Corridor schemes will facilitate a step change in the level of segregated cycling provision in comparison with existing conditions along the entire length of the corridors resulting in more people cycling.

The result of the above is that the cumulative effect of all Core Bus Corridors in operation and in tandem with the roll out of the wider Greater Dublin Area Transport Strategy measures, future growth in overall travel demand is catered for by sustainable modes. No significant negative effects over and above those considered in the standalone assessments for the Operational Phase were predicted in the cumulative impact assessment and therefore no additional mitigation measures are considered necessary."

In summary, the cumulative impact of the Tallaght/Clondalkin scheme and the Kimmage bus corridor scheme on Stannaway Road has been assessed and concluded that the two schemes have the effect of constraining the opportunity for traffic to displace onto adjoining / adjacent roads when compared to the effect when only one of the Core Bus Corridor schemes is operational. In addition to this, with all the Core Bus Corridor schemes operational, there is predicted to be a higher modal shift from private car trips to sustainable modes of travel compared to the singular scheme scenario.

8. Adherence to Aarhus

Ireland ratified the Aarhus Convention in June 2012 and it entered into force in Ireland in September 2012. Prior to that ratification, Ireland had to ensure that all the provisions of the Convention were implemented in national law, which took a number of years, and involved over 60 pieces of legislation.

Accordingly, Ireland's obligations under the Aarhus Convention have been fully incorporated into Irish legislation and include rights of access to information on the environment, rights of participation in planning determinations, rights of access to adequate review procedures and various other rights.

These are now statutory provisions, which are binding on all applicable parties.

In relation to transport infrastructure projects, the applicable statutory provisions are set out in the relevant planning and transport legislation, which include requiring major projects to seek planning consent from An Bord Pleanála. Those application processes for large infrastructure schemes provide for a statutory process requiring the making available for public review all of the applicable information set out in the legislation and permitting the making of submissions in relation to the proposals to the determining body, being An Bord Pleanála.

Thereafter, the legislation provides for the holding of an Oral Hearing, enabling direct public engagement and participation in the decision making process.

As part of the scheme development stage, various non-statutory public consultation processes have been undertaken. These processes are in excess of the requirements of the Aarhus Convention, whose obligations are already enshrined in Irish legislation including "statutory public consultations" which is the stage that the project has now reached.

The NTA notes the comment regarding the technical nature and volume of the documents presenting a potential barrier to the general public seeking access to information relating to the scheme. Given the nature of such infrastructure schemes as BusConnects Core Bus Corridors, there is invariably a substantial amount of technical information which needs to be provided, so as to ensure that the consent application is comprehensive in nature to meet legislative requirements and provide the competent authority with the necessary information to allow them to reach a decision. Volume 1 of the EIAR comprises the Non-Technical Summary of the EIAR for the Proposed Scheme. Chapter 1 in Volume 2 of the EIAR contains information on the content and structure of the EIAR. Section 1.5.6 of Chapter 1 sets out the information which must be contained in the EIAR. The NTA has sought to make the information as concise as possible, while ensuring that the necessary information has been provided. Section 1.5.7 of Chapter 1 sets out the structure of the EIAR. It is considered that the structure of the EIAR does provide the necessary legibility for those interested parties (both lay persons and technical specialists) to find the information of relevance to them. While the EIAR has been prepared in compliance with the EIA Directive, it has also been written to make it accessible to a wider, non-specialist audience in so far as possible.

In May 2017 the NTA launched the BusConnects Programme and then in June 2018 published the Core Bus Corridors Project Report. The report was a discussion document outlining proposals for the delivery of Core Bus Corridor Routes across Dublin.

Since the commencement of the non-statutory period of the CBC Infrastructure Works, there has been a total of three rounds of non-statutory public consultation.

First Round of Non-Statutory Public Consultation - The first round of non-statutory public consultation on the Emerging Preferred Route Options was from November 2018 until May 2019 divided into three phases. The reason it was divided into three phases was primarily due to the fact that the BusConnects Infrastructure team carried out all aspects of the first round without external design service providers having been appointed at that stage. Moreover, the BusConnects Infrastructure team sought to gain maximum engagement from the public from the commencement of the CBC Infrastructure Works to raise awareness, establish relationships and gain immediate insight and knowledge of the issues at an early stage.

It was also important that at the start of the non-statutory consultation that considerable time and resources were dedicated by the BusConnects Infrastructure team to initiate contact with potential

impacted properties. Each of the potentially impacted property owners were offered the opportunity to meet with members of the BusConnects Infrastructure team on a one-to-one basis which meant a significant amount of resources had to be dedicated to this process.

Second Round of Non-Statutory Public Consultation – The non-statutory public consultation for the Preferred Route Options ran from March 2020 to April 2020 as Ireland entered the first lockdown due to the Covid-19 pandemic. The consultation continued in deference to the number of online submissions received during this period. A number of public facing elements of the consultation were cancelled in line with Government health guidelines, however, all other elements of the consultation including online versions of the brochures, supporting documentation were available. Other communication tools including the Freephone, email and digital aspects remained active for submissions to be received.

Third Round of Non-Statutory Public Consultation – This round of non-statutory public consultation for the Preferred Route Options from November 2020 to December 2020 was added due to the disruption caused to the second-round consultation process. It was important that further engagement was facilitated to communicate design development changes prior to concluding the determination of the Preferred Route Options. Methods had emerged whereby traditional public information events could be replaced by virtual online alternatives to offset the restrictions that continued associated with the Covid-19 Pandemic. Accordingly, all elements of the public consultation and stakeholder engagement were conducted virtually or online in line with the Government health guidelines.

9. Suitability of local roads for traffic

Section 6.4.6.2.9.5 of Chapter 6 Traffic & Transport notes the results of the general Traffic Assessment and notes the following in relation to the Indirect Study Area AM Peak Hour:

"The results of the junction analysis illustrated in Table 6.85 demonstrate that of the total of 190 junctions assessed, 157 junctions are operating with a maximum V / C ratio of below 85% in the Do Something scenarios in the AM Peak Hour in the 2028 Opening Year. A further 26 junctions are operating with a maximum V / C ratio of between 85% - 100%. Therefore, the majority of junctions continue to operate well within capacity with the Proposed Scheme in place.

Overall, the Proposed Scheme is considered to have a ***Not Significant or Imperceptible and Long-term effect*** *at 176 junctions within the indirect study area. Five of the 190 junctions assessed are shown to have a significance of effect of* ***Negative, Slight and Long-term****, and four are shown to have* ***Negative, Moderate and Long-term*** *effects. Five junctions were assessed to have a* ***Positive, Moderate and Long-term effect****.*

Capacity issues are noted at the following seven junctions (i.e. they are predicted to operate with a V / C ratio of above 100% in the Do Something scenario):

- *Station Road / Ninth Lock Road (252361);*
- *Killeen Road / Park West Road (14214);*
- *Chapelizod Bypass / Kennelsfort Road Lower (22106);*
- *Spawell Roundabout (9148);*
- *Templeogue Road / Cypress Grove Road (9178);*
- *Citywest Road / Garter Avenue (24298); and*
- *Tallaght Bypass / Whitestown Way / Cookstown Way (24129).*

Six out of seven junctions operate with a maximum V / C ratio of above 100% in both the Do Minimum and Do Something scenarios, therefore, the significance of effect is considered to be ***Negative, Moderate and Longterm****, at worst. Spawell Roundabout operates with a V / C ratio of 85-100% in*

the Do Something, however, the sensitivity of this road link is deemed to be 'negligible', therefore, the significance of effect is ***Not Significant*** *and* ***Long-term*** *overall.*

The results demonstrate that no junctions are predicted to have a significance of effect of significant or higher, therefore, no further assessment of the AM Peak Hour in the 2028 Opening Year is required."

Section 6.4.6.2.9.5 of Chapter 6 Traffic & Transport notes the results of the general Traffic Assessment and notes the following in relation to the Indirect Study Area PM Peak Hour:

"The results of the junction analysis illustrate that, of a total of 164 junctions assessed, 133 junctions are operating with a maximum V / C ratio of below 85% in the Do Something scenarios in the PM Peak Hour in the 2028 Opening Year. A further 22 junctions are operating with a maximum V / C ratio of between 85% - 100%.

Overall, as a result of redistributed general traffic associated with the Proposed Scheme, the effect at 161 out of 164 junctions assessed is predicted to be Not Significant and Long-term and Imperceptible and Long-term within the Indirect Study Area. Two are shown to have Negative, Moderate and Long-term effects in the 2028 Opening Year PM Peak Hour.

Capacity issues are noted at the following 9 junctions:

- *Chapelizod Bypass / Kennelsfort Road Lower (22106);*
- *Chapelizod Bypass / The Oval (22117);*
- *Memorial Road / Con Colbert Road (14124);*
- *Ballymount Road Lower / Ballymount Retail Centre (16166);*
- *Walkinstown Avenue / Long Mile Road (8196);*
- *Naas Road / Turnpike Road (16113);*
- *M50 Northbound / J9 Off-slip (16190);*
- *M50 J10 NB off slip to Naas Road (16183); and*
- *Glenview Roundabout / Tallaght Bypass (24103).*

Six out of 9 junctions operate with a maximum V / C ratio of above 100% in both the Do Minimum and Do Something scenarios, therefore, the significance of effect is considered to be ***Not Significant and Long-term****. At the remaining three junctions, the sensitivity of the road links is considered to be 'negligible', therefore, the overall significance of effect is* ***Not Significant and Long-Term****. One junction was assessed to have a* ***Positive, Moderate and Long-term effect****.*

The results demonstrate that no junctions are predicted to have a significance of effect of significant of higher, therefore, no further assessment of the PM Peak Hour in the 2028 Opening Year is required."

Section 6.4.6.2.9.6 of Chapter 6 Traffic and Transport of Volume 2 of the EIAR states that:

"2028 and 2043 Local / Regional Roads Assessment: The majority of assessed junctions have V / C ratios of below 85%, i.e. they are operating within capacity for all assessed years in the Do Minimum and Do Something scenarios. This indicates that these junctions will be able to accommodate the additional general traffic volumes redistributed, as a result of the Proposed Scheme and the effect is deemed ***Imperceptible / Not Significant and Long-term****.*

A small number of junctions are predicted to operate over capacity (>100% V / C ratio) in the Do Something scenario, however, it is concluded that, in the majority of cases the performance of the junction is similar with and without the Proposed Scheme, or the sensitivity of the road link determines that the overall effect will not be significant.

The results demonstrate that no junctions are predicted to have a significance of effect of significant of higher, therefore, no further assessment is required.

Overall Summary: Overall, it has been determined that the potential impact of the reduction in general traffic flows along the Proposed Scheme will be ***Positive, Moderate and Long-term*** *whilst the potential impact of the redistributed general traffic along the surrounding road network will be* ***Negative, Sight and Long-term****.*

It should be noted that effects will be short-lived and localised. Section 5.4.2 of DMURS (2019) recognises that a certain level of traffic congestion is an inevitable feature within urban networks and that junctions may have to operate at saturation levels for short periods of time during the peak hours of the day.

10. Environmental impact

Air Quality

Chapter 7 Air Quality of the EIAR sets out the methodology adopted to assess the impact on air quality of the Proposed Scheme. Table 7.1 identifies the air quality receptors within the study area from Tallaght to Ballymount.

Construction phase air quality

For the Construction Phase Section 7.4.2.2.3 of Chapter 7 identifies the significance of the changes in the concentration of each of the ambient receptors in the context of the TII significance criteria (TII 2011). Table 7.27 of Chapter 7 provides a list of the most impacted receptor locations, which does not include locations AQ45 at Parkview and AQ46 at Temple Court on Greenhills Road. Along with the majority of modelled receptors, AQ45 and AQ46 are assessed as experiencing a negligible impact due to the Proposed Scheme in terms of the annual mean NO_2 concentration.

As shown in Table 7.27 and Figure 7.7 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of annual mean PM_{10} concentrations, with all receptors experiencing a negligible impact.

As shown in Table 7.27 and Figure 7.8 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of the annual mean $PM_{2.5}$ concentration with all receptors experiencing a negligible impact.

In accordance with the EPA Guidelines (EPA 2022), the impacts associated with the Construction Phase traffic emissions pre-mitigation are overall neutral and long-term.

Section 7.6.1 Construction Phase notes the following: *"When the dust minimisation measures detailed in the mitigation section of this Chapter are implemented, fugitive emissions of dust from the site will be insignificant and pose no nuisance at nearby receptors. Thus, there will be no significant residual Construction Phase dust impacts.*

The air dispersion modelling assessment of Construction Phase traffic emissions has found that the Proposed Scheme will be neutral overall in the study area. There are no substantial or moderate adverse effects expected as a result of the Construction Phase of the Proposed Scheme.

Therefore, overall, it is considered that the residual effects as a result of the Proposed Scheme's construction are Neutral and Short-term. No significant residual impacts have been identified during the Construction Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."

Operational phase air quality

For the Operational Phase Section 7.4.3.3 of Chapter 7 identifies the significance of the changes in the concentration of each of the ambient receptors in the context of the TII significance criteria (TII 2011). Table 7.33 of Chapter 7 provides a list of the most impacted receptor locations, which includes locations AQ45 at Parkview and AQ46 at Temple Court on Greenhills Road. AQ45 is assessed as experiencing a negligible impact (slight beneficial) due to the Proposed Scheme in terms of the annual mean NO_2 concentration, AQ46 is assessed as experiencing a slight adverse impact due to the Proposed Scheme in terms of the annual mean NO_2 concentration.

As shown in Table 7.33 and Figure 7.4 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of annual mean PM_{10} concentrations, with all receptors experiencing a negligible impact.

As shown in Table 7.33 and Figure 7.5 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of the annual mean $PM_{2.5}$ concentration with all receptors experiencing a negligible impact.

In accordance with the EPA Guidelines (EPA 2022), the impacts associated with the Operational Phase traffic emissions pre-mitigation are overall neutral and long-term.

Section 7.4.3.3 goes on to note that the predictions reported are based on conservative assumptions regarding background pollutant concentrations and the improvement in vehicle emission rates. 2019 background pollutant concentrations have been used to represent 2028 and are likely be lower by the opening year than in 2019. Older fleet projections were used in the absence of a fleet that incorporates the effects of 2023 Climate Action Plan measures – a larger proportion of electric vehicles is planned by the opening year than has been modelled. In reality, total concentrations (and magnitude of change) are likely to be lower than those reported in the EIAR.

Section 7.6.2 describes the residual impacts for the Operational Phase: *"The air dispersion modelling assessment has found that the Proposed Scheme will be neutral overall in the study area. The number of receptors where an exceedance of the NO_2 limit value is predicted reduces from 24 in the Do Minimum scenario to 12 as a result of the Proposed Scheme. In 2043, all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the Do Something (and Do Minimum) scenario. There are no substantial or moderate adverse effects expected as a result of the Operational Phase of the Proposed Scheme. Therefore, overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are Neutral and Long-term. No significant residual impacts have been identified during the Operational Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."*

Section 7.6.2 Operational Phase notes the following: *"The air dispersion modelling assessment has found that the Proposed Scheme will be neutral overall in the study area. The number of receptors where an exceedance of the NO2 limit value is predicted reduces from 24 in the Do Minimum scenario to 12 as a result of the Proposed Scheme. In 2043, all receptors are expected to have ambient air quality in compliance with the ambient air quality standards for the Do Something (and Do Minimum) scenario. There are no substantial or moderate adverse effects expected as a result of the Operational Phase of the Proposed Scheme.*

Therefore, overall, it is considered that the residual effects as a result of the Proposed Scheme's operation are Neutral and Long-term. No significant residual impacts have been identified during the Operational Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."

In summary, the EIAR demonstrates that there will be no significant impact on air quality as a result of the operation of the Proposed Scheme.

Noise & Vibration

The potential Noise and Vibration impacts, as a result of the Proposed Scheme has been assessed in the EIAR. The process of assessment and the results have been described in Chapter 9 (Noise & Vibration) in Volume 2 of the EIAR.

Construction phase noise

Section 9.4.3.2 of Chapter 9 considers construction noise and Table 9.34 provides the predicted noise levels for Road Widening, Road Construction, Road Upgrade and Utility Diversion Construction Noise Calculations at Nearest NSLs. The total predicted cumulative CNL for these works at the nearest Residential NSL's to the west and east of greenfield site between Treepark Road and R819 Greenhills Road (<10m) and at the Residential NSL's at Parkview Estate (10m) are 83 dB LAeq,1hr in the absence of any noise mitigation. Making reference to the CNLs in Table 9.34 the potential noise impacts at the closest NSLs are assessed to range between Negative, Not Significant to Very Significant, and Temporary during the daytime evening and weekend periods in the absence of noise mitigation.

The calculations are based on six plant items with an average noise level of 75 dB LAeq,T at 10m operating simultaneously, in the absence of any noise mitigation, along a given section of road. The average plant noise level has been calculated on the basis that plant will be operating at varying distances from a NSL at any one time. Reference to Table 9.30 indicates that highest noise levels will occur when breaking, excavators and road planers are operating at the closest distance to NSLs. During specific periods when these activities are operating outside NSL's, higher noise levels will occur compared to those discussed in Table 9.34. These activities will occur, however, for intermittent periods of time at any one location over the course of a working day."

The EIAR contains a comprehensive set of mitigation measures to minimise construction phase impacts, including noise impacts. Construction noise mitigation measures are set out in Chapter 9 in Volume 2 of the EIAR (and are also summarised in Appendix A5.1 Construction Environmental Management Plan in Volume 4 of the EIAR).

Section 9.5.1.1 of the EIAR Chapter 9 states the following:

"The appointed contractor will be required to take specific noise abatement measures to the extent required and comply with the recommendations of BS 5228–1 (BSI 2014a) and S.I. No. 241/2006 - European Communities (Noise Emissions by Equipment for Use Outdoors) (Amendment) Regulations 2006. The mitigation measures outlined below for the Construction Phase have also been included in the Construction and Environmental Management Plan (CEMP) in Appendix A5.1 in Volume 4 of this EIAR.

These measures will ensure that:

- *During the Construction Phase, the appointed contractor will be required to manage the works to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228–1 (BSI 2014a); and*
- *The best means practicable, including proper maintenance of plant and equipment, will be employed to minimise the noise produced by on site operations.*

BS 5228–1 includes guidance on several aspects of construction site practices, which include, but are not limited to:

- *Selection of quiet plant;*
- *Control of noise sources;*
- *Screening;*
- *Hours of work;*
- *Liaison with the public; and*
- *Monitoring.*

…….The appointed contractor will put in place the most appropriate noise control measures depending on the level of noise reduction required at individual working areas (i.e. based on the construction threshold values for noise and vibration set out in Table 9.11 and Table 9.14). Reference to Table 9.50 indicates that intrusive works occurring within 75m of NSLs with a direct line of sight to work will need specific noise control measures to reduce impacts depending on time period over which they will occur (i.e., daytime or evening)."

Section 9.5.1.1.4 od Chapter 9 sets out the proposed working hours and states:

"It is envisaged that generally construction working hours will be between 07:00hrs and 23:00hrs on weekdays, and between 08:00hrs and 16.30hrs on Saturdays. Night-time and Sunday working will be required during certain periods to facilitate street works that cannot be undertaken under daytime / evening time conditions. The planning of such works will take consideration of sensitive receptors, in particular any nearby residential areas.

Construction activities will be scheduled in a manner that reflects the location of the site and the nature of neighbouring properties. Construction activities / plant items will be considered with respect to their potential to exceed construction noise thresholds at NSLs and will be scheduled according to

their noise level, proximity to sensitive locations and possible options for noise control. In situations where an activity with potential for exceedance of construction noise thresholds is scheduled (e.g., road widening and utility diversions or activities with similar noise levels identified in Table 9.50), other construction activities will be scheduled to not result in significant cumulative noise levels."

In summary the NTA is satisfied that the noise abatement measures set out in the EIAR that the appointed contractor will be required to put in place to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228-1 will result in appropriate and adequate mitigation measures in respect of construction noise impact at this location.

Operational phase noise

Specifically, Section 9.4.4.1.1.6 New Sustainable Transport Link Road mentions:
"In Section 1 of the Proposed Scheme (Tallaght to Ballymount), it is proposed to reconfigure the local road network between Mayberry Road and Tymon Lane. A new approximately 620m long sustainable link road will run parallel to Birchview Avenue and Treepark Road as part of this re-configuration. A previous version of this new road section received Part 8 Planning Approval in 2007 which involved a more substantial cross section to accommodate a full carriageway for private and public vehicles. The Proposed Scheme seeks to align with the principles of the Part 8 scheme, but with a significantly reduced cross section that caters for sustainable modes only (i.e. bus / cycling / pedestrian) to minimise impacts on the adjacent properties and surrounding environment. The total volume of buses travelling along the new road is up to 245 over a 24 hour period in the year of opening 2028 and in the Design Year (2043). The design speed along the road link is 50 km/hr.

Traffic noise levels have been calculated at the nearest properties along Birchview Avenue and Treepark Road for the Do Minimum and Do Something scenarios for the Opening Year 2028 to determine the potential change in traffic noise levels at these properties. The calculations take account of traffic along the existing Greenhills Road, Treepark Road, Castletymon Road and Mayberry Road during both scenarios, in addition to existing walls along properties boundaries, where they provide screening from the road, where relevant. Table 9.53 presents the calculated noise impact at the most affected properties along Treepark Road, Parkview and Birchview Avenue"

Extract from Section 9.4.1.1.6 Table 9.53 of Chapter 9 Noise & Vibration of Volume 2 of the EIAR Summary of Traffic Noise Impacts along Sustainable Link Road is shown in Figure 2.8.7.3.

Road	Do Minimum, dB $L_{Aeq,16hr}$	Do Minimum, dB L_{den}	Do Something, dB $L_{Aeq,16hr}$	Do Something, dB $L_{Aeq,Lden}$	Traffic Noise increase, dB	Potential Impact
Treepark Road	56	58	57	60	+2	Direct, Negative, Slight, Short-Long-term
24 Parkview	55	57	55	58	+1	Direct, Negative, Not Significant, Short-Long-term
10A Parkview (upper floor level)	53	56	54	56	+1	Direct, Negative, Not Significant, Short-Long-term
15 Birchview Avenue	54	57	55	58	+1	Indirect, Negative, Slight, Long-term

Figure 2.8.7.3: Extract from the EIAR Section 9.4.1.1.6 Table 9.53: Summary of Traffic Noise Impacts along Sustainable Link Road

Section 9.4.4.1.1.6 in summary notes: *"The resultant traffic noise levels associated with the reconfigured sustainable link road is determined to be Not Significant to Slight at the closest NSLs (i.e. properties along Treepark Road, Parkview, and Birchview Avenue) when added to the surrounding traffic noise. The resultant impact is determined to be Direct, Negative, Not Significant to*

Slight and Short to Long term. The small increase is due to the low traffic volumes along the new link road, the screening provided by existing property boundaries and the existing traffic noise levels from the surrounding road network."

In relation to proposed new bus stops at Parkview, Section 9.4.4.3 Bus Stops notes the following:

"As discussed in Section 9.4.4.1.1.4, during the proposed year of opening, 2028, the NTA forecast for 94% of the city bus fleet to be electric vehicles (EVs) or hybrid electric vehicles (HEVs). For the Design Year 2043, the city bus fleet is forecast to be 100% electric. The operation of electric and hybrid buses eliminates ICE [Internal Combustion Engine] *noise from buses accelerating, decelerating and idling at bus stops which is the dominant noise source. In addition, the characteristic of noise from electric vehicles is subjectively less intrusive compared to those with ICE's and is masked to a much greater extent by surrounding road traffic……*

The closest noise sensitive locations (residential dwellings) to the new bus stop locations along the Proposed Scheme are close to the existing road edge and are exposed to road traffic noise levels typically between 65 and 69dB LAeq,16hr, which will dominate noise levels at these locations. As noted above, the forecast for an electric bus fleet will result in a reduction in noise emissions from buses accelerating, decelerating and idling at bus stops which is the dominant noise source.

It is noted that the bus stops along the Proposed Scheme will be used by other bus operators which may not transition to EV and HEVs over the same period as the city bus fleet. The volume of these buses along the Proposed Scheme will, however, be significantly less than the city bus fleet and hence, noise levels associated with these areas will not generate significant noise levels over the prevailing noise environment. Taking into consideration the location of NSL [Noise Sensitive Locations] *relevant to the proposed bus stops in addition to the lower noise emissions from the proposed future bus fleet, the overall impact is determined to be Negative, Not Significant and Long Term"*

Operational phase vibration

Section 9.4.4.2 Operational Vibration Impact Assessment mentions:

"Once operational, buses will use the dedicated bus lanes for the Proposed Scheme. Analysis of traffic data for the Proposed Scheme, however, indicates a reduction in overall AADT [Annual Average Daily Traffic] *traffic flows along the core bus corridor.*

Reference to the monitoring results in Table 9.28 and Table 9.29 confirms that vibration levels associated with passing buses and other vehicular traffic at distances of 2.5 to 10m from the road edge are negligible in terms of human perception and building response. Vibration levels associated with a passing bus were recorded at 0.1mm/s PPV [Peak Particle Velocity] *or less under the monitored scenarios. These values are below the normal range of perceptible human response to vibration and would not pose any significant impact.*

A review of the traffic data for the Proposed Scheme indicates that the maximum number of buses travelling inbound or outbound is 545 over the 16hr daytime period along the Drimnagh Road. Using this number and the highest VDV [Vibration Dose Value] *event measured during a bus pass at a reference distance of 5m from the road edge (0.0033 m/s1.75), the daytime VDV,b,day value is calculated as 0.016 m/s1.75. Reference to Table 9.20 confirms this value is orders of magnitude below those associated with a low probability of adverse comment. The overall impact is neutral, negligible and long term."*

In relation to the Proposed Scheme residual impacts for the Operational Phase Section 9.6.2 notes the following: *"There are no significant residual Operational Phase noise or vibration impacts associated with the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."*

Construction phase vibration

Section 9.4.3.3 notes the following:

"The potential for elevated levels of vibration at sensitive locations during construction activities associated with the Proposed Scheme is typically associated with surface breaking activities used for road widening and utility diversions. Depending on the method and equipment used, there is the potential for minor vibration levels relating to piling operations……

…vibration impacts during ground-breaking activities using heavy breakers have the potential to generate a negative, slight to moderate, temporary effects at distances of 10m from the activity. Beyond 50m from this type of activity, impacts are reduced to not significant to slight and temporary. For all other works, vibration impacts will be below those associated with perceptible vibration and will be imperceptible to not significant and temporary. All construction works are orders of magnitude below limits values associated with any form or cosmetic or structural damage for structurally sound or protected or historical buildings or structures referred to in Table 9.14 even at closer distances to the source. Notwithstanding the above, any construction activities undertaken on the site will be required to operate below the recommended vibration criteria set out in Table 9.14. No vibration sensitive processes have been identified along the Proposed Scheme."

Extract from Section 9.2.4.1.3.1 Table 9.14 of Chapter 9 Noise & Vibration of Volume 2 of the EIAR Recommended Construction Vibration Thresholds for Buildings Figure 2.8.7.4.

Vibration Limits for Buildings (PPV) at the Closest Part of the Building to the Source of Vibration, at a Frequency of 4Hz

Building Type	Transient Vibration	Continuous Vibration
Reinforced or framed structures. Industrial and heavy commercial buildings	50 mm/s	25 mm/s
Unreinforced or light framed structures. Residential or light commercial-type buildings	15 mm/s	7.5 mm/s
Protected and Historic Buildings *Note 1	6 mm/s – 15 mm/s	3 mm/s – 7 mm/s
Identified Potentially Vulnerable Structures and Buildings with Low Vibration Threshold	3 mm/s	

Note 1: The relevant threshold value to be determined on a case by case basis. Where sufficient structural information is unavailable at the time of assessment, the lower values within the range will be used, depending on the specific vibration frequency.

Figure 2.8.7.4: Extract from the EIAR Section 9.2.4.1.3.1 Table 9.14: Recommended Construction Vibration Thresholds for Buildings

Residual impacts

In relation to the Proposed Scheme residual impacts for the Construction Phase Section 9.6.1 notes the following: *"The assessment has indicated that the use of standard construction activities can operate comfortably within the recommended vibration limits for standard residential and other light-framed buildings. With the adoption of best practice methodologies, vibration impacts at the most sensitive premises can be adequately mitigated to within acceptable levels relating to disturbance, whilst meeting the scheme objectives set out in Chapter 1 (Introduction)."*

Carbon

Section 8.5.1.1 of EIAR Chapter 8 describes the construction phase carbon calculations and quantifies the construction phase embedded carbon using the TII Carbon Tool (TII 2020), which has the ability to quantify carbon in infrastructure projects using Ireland-specific emission factors and data.

Section 8.5.1.1 sates: *"Detailed project information including tonnage of materials was used in the assessment of embodied carbon (refer to Appendix A8.1 Construction Phase Embodied Carbon in Volume 4 of this EIAR for inputs into the TII Carbon Tool). The Proposed Scheme is expected to have a Construction Phase of 36 months approximately. The predicted embodied carbon is averaged over the full Construction Phase to give the predicted annual emissions to allow for a direct comparison with annual emissions and targets. Construction Phase emissions have been compared against the total national GHG emissions in Ireland for 2020 (58,698 kt CO2eq) (EPA 2022b) and against Ireland's non-ETS 2020 target of 37,942.7 kt CO_2eq (as set out in Commission Decision 2017/1471 of 10 August 2017 and amending decision 2013/162/EU to revise Member States' annual emissions allocations for the period from 2017 to 2020) and the 2030 Transport Emission Ceiling.*

Construction Phase emissions have been compared against Ireland's non-ETS 2030 target of 33,381.3 kt CO2eq (as set out in Commission Implementing Decision (EU) 2020/2126 of 16

December 2020 on setting out the annual emission allocations of the Member States for the period from 2021 to 2030 pursuant to Regulation (EU) 2018/842 of the European Parliament and of the Council).

Based on the TII Carbon Tool, the breakdown of the activities between the different phases of the Proposed Scheme have been assessed. As shown in Table 8.11, the assessment indicates that the key phases of the GHG generation are the embodied carbon of the construction materials and the construction activities, which when combined, account for 87% of all carbon emissions. Pre-construction together with construction waste is expected to account for 13% of all emissions.

The Proposed Scheme is estimated to result in total Construction Phase CO_2e emissions of 27,763 tonnes embodied CO_2eq for materials over a 36-month period. The IEMA Guidance (IEMA 2022) states that "Carbon budgets allow for continuing economic activity, including projects in the built environment, in a controlled manner". Thus, projects which have a carbon footprint are not necessarily significant provided that the projects are compatible with net zero by 2050, and the full range of mitigation measures are employed to minimize the carbon footprint. Given that the construction of the Proposed Schemes itself will lead to operational GHG emission reductions overall then the construction phase should be viewed as compatible with net zero emission targets. Thus, the assessment of significance for the construction phase of the Proposed Scheme is deemed to have a minor adverse impact given that the construction phase emissions are equivalent to an annualised total of 0.024% of Ireland's non-ETS 2020 target and 0.154% of the 2030 Transport Emission Ceiling. The potential impact to climate due to embodied carbon emissions during the Construction Phase, prior to mitigation, will be Negative, Minor Adverse and Short-Term.

In order to place the emissions due to the total Construction Phase in context, the CO_2e emissions are equivalent to the construction of approximately 555 three-bedroom houses using traditional construction methods (Monahan 2011)."

Section 8.8.1 of EIAR Chapter 8 describes the residual impacts of the construction phase and states that *"the Proposed Scheme is estimated to result in total Construction Phase GHG emissions of 27,763 tonnes embodied CO_2eq for materials over a 36-month period, equivalent to an annualised total of 0.024% of Ireland's non-ETS 2020 target and 0.154% of the 2030 Transport Emission Ceiling. The embodied carbon emissions associated with the Construction Phase of the Proposed Scheme will be short-term and temporary in nature Nevertheless, the impact on CO_2e emissions, after mitigation, as outlined in Table 8.23, due to the embodied carbon associated with the Construction Phase of the Proposed Scheme will be Negative, Minor and Short-Term. Although the impact rating post-mitigation is the same as pre-mitigation, the mitigation measures proposed will have the effect of reducing carbon emissions during the Construction Phase. A comparison between the Do Something and Do Minimum CO_2e traffic emissions in the Construction Year (2024) indicates that there is predicted to be an overall increase of 6.3kt in CO_2eq due to the Construction Phase of the Proposed Scheme. This is equivalent to a 0.40% increase in CO_2eq relative to the Construction Year (2024) Do Minimum estimates."*

Section 8.8.2 of Chapter 8 Climate of volume 2 of the EIAR states: *"The maintenance CO_{2e} emissions associated with the Operational Phase of the Proposed Scheme, after mitigation, is predicted to be Negligible and Permanent. The operational traffic CO2e emissions associated with the Operational Phase of the Proposed Scheme is predicted to be Negligible and Permanent. Overall, when the carbon emissions associated with the maintenance phase and the Operational Phase are combined, the net GHG emissions will be Negligible and Permanent. Thus, the residual impact from Operational Phase traffic as a result of the Proposed Scheme will be Negligible and Permanent.*

The Proposed Scheme will also support the delivery of government strategies outlined in the 2023 CAP (DCCAE 2022) and the 2021 Climate Act by enabling sustainable mobility and delivering a sustainable transport system. The Proposed Scheme will provide connectivity and integration with other public transport services leading to more people availing of public transport, helping to further reduce GHG emissions.

Based on the analysis outlined above, it is concluded that the Proposed Scheme achieves the project objectives in supporting the delivery of an efficient, low carbon and climate resilient public transport service, which supports the achievement of Ireland's emission reduction targets. The Proposed Scheme has the potential to reduce CO_{2e} emissions equivalent to the removal of approximately 18,420 and 44,230 car trips per weekday from the road network in 2028 and 2043 respectively. This represents a significant contribution towards the increased use of lower-carbon modes and reduction

in the percentage of total journeys that are made by private car (modal share) from over 70% (today) to just over 50% in 2030 as outlined in the 2023 CAP (DCCAE 2022).

It is concluded that, the Proposed Scheme will make a significant contribution to reduction in carbon emissions."

11. No cross-community bus service

In this regard it is important to consider the future bus services network within which the Proposed Scheme will be located.

Section 3.2.3.3 of the Preferred Route Option Report included in the Supplementary Information for the application notes the following:

"BusConnects Dublin will introduce a redesigned, higher capacity bus network which is more coherently planned and more understandable, delivery a better overall bus system for Dublin and the surrounding areas. Figure 3-3 indicates the final output from this study and illustrates that the D-Spine (D1, D2, D3, D4, D5) runs from the City Centre to the South West, serving areas along the Greenhills Corridor (Tallaght to City Centre Section).

The following is a list of the different Spines & Branches, Orbital Routes, Radial Routes and Local Routes that interact with the Proposed Scheme:

- *Spines and Branches*
  - *D-SPINE Malahide Rd – City Centre – Crumlin;*
  - *D1 Clongriffin – City Centre – Grange Castle;*
  - *D2 Clare Hall – City Centre – Citywest;*
  - *D3 Clongriffin – City Centre – Clondalkin;*
  - *D4 Swords Road – City Centre – Killinarden; and*
  - *D5 Edenmore – City Centre – Tallaght*
- *Orbital Routes*
  - *S2 Heuston – Kimmage – Ballsbridge – Poolbeg*
  - *S4 Liffey Valley – Ballyfermot – Crumlin – Milltown – UCD;*
  - *S6 Tallaght – Dundrum – UCD – Blackrock;*
  - *S8 Tallaght – Sandyford – Dún Laoghaire;*
  - *W2 Liffey Valley – Clondalkin – Tallaght;*
  - *W4 Blanch. SC – Liffey Valley – Grange Castle Rd. – Tallaght; and*
  - *W6 Maynooth – Celbridge – Citywest - Tallaght.*
- *Radial Routes*
  - *71 Tallaght – Ballymount – Warrenmount – East Wall;*
  - *72 Drimnagh – Warrenmount – East Wall;*
  - *73 Marino – City Centre – Walkinstown;*
  - *74 Dundrum – Whitechurch – Crumlin – City Centre;*
  - *80 Liffey Valley – City Centre – Ballinteer*
  - *82 Killinarden – Crumlin – Ringsend; and*
  - *85 Tallaght – Ballyboden – Harold's Cross – Parnell Square.*
- *Local Routes*
  - *L44 Ballymore Eustace – Blessington – Tallaght*
  - *X47 Kiltipper – Seskin View – Tymon North – City Centre; and*
  - *P43 Ballynockan – Blessington – City Centre"*

Figure 2.8.7.5 below provides an extract from the BusConnects Proposed Bus Services Network in this area.

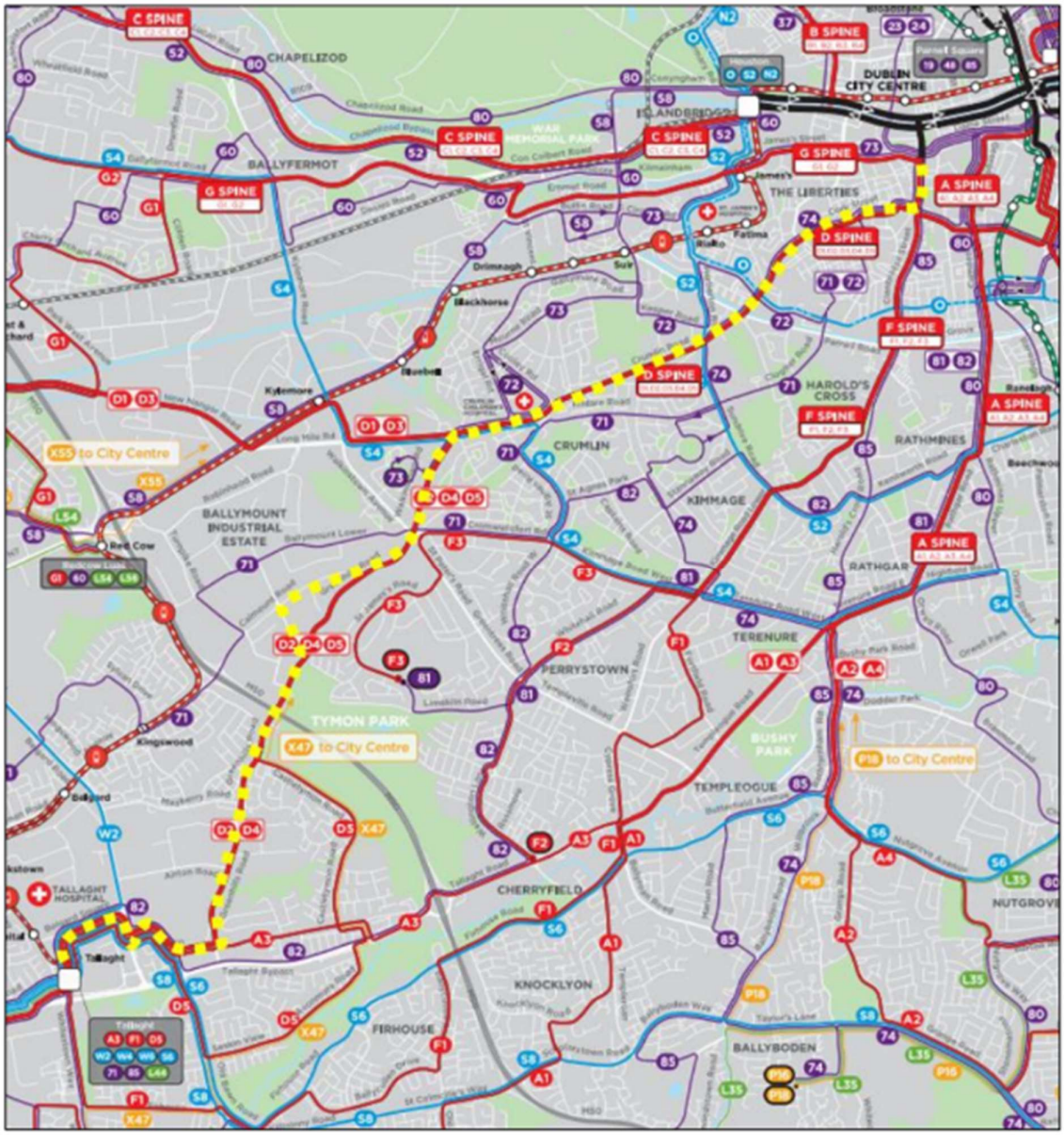


Figure 2.8.7.5: Extract from Preferred Route Option Report Revised Bus Network – South West Quadrant (Figure 3-3)

12. No consideration for individuals reliant on car use

In Chapter 10 (Population), the assessment has had cognisance of vulnerable groups such as people with disabilities. In Section 10.2.4.1.2.1 addressing landtake, a high sensitivity has been applied to residential properties which; "….ensures that all populations are considered in the assessment including vulnerable groups such as young children, elderly, and people with disabilities….."

Section 11.3.2 in Chapter 11 (Human Health) addresses deprivation, disability and health inequalities. Table 11.4 sets out the population, disability and relative deprivation within the study area. The data in Table 11.4 shows that approximately 3.9% of people within the study area have at least one disability. This is a substantially lower proportion of the population than average for Dublin (14.9%) but nevertheless equates to 4,144 people. An analysis of 2016 Census data by Disability Federation

Ireland (DFI) identified that 44% of people in Dublin City and 21% of people in South Dublin who have a disability do not have access to a car, compared to 31% of the general population.

Section 11.4.4.6 addresses impacts on health inequalities. It states in the Section: *"…An accessibility audit identified several issues with the existing urban environment and the audit report sets out recommendations for the Proposed Scheme to address these issues. The recommendations include issues such as accessible parking, accessible routes (including use of tactile paving), appropriate changes in levels, appropriate surface materials, use of street furniture and management of shared spaces. Assuming these design measures are correctly installed the urban environment will be easier and safer for a wider variety of pedestrians including visually impaired, wheelchair users and people with mobility difficulties, parents with young children and pushchair users..."*

Section 11.6.2 in Chapter 11 sets out the predicted operational phase residual impacts. It states that: *"…The Proposed Scheme is expected to have a significantly positive contribution to health outcomes related to increased physical activity, equitable access to services and improved safety for vulnerable road users…".*

Providing accessibility for mobility impaired users is a core element of the Proposed Scheme and the potential impact on people with disabilities has been appropriately considered in both the scheme design and the impact assessment.

2.8.8 44 – Transport Infrastructure Ireland

2.8.8.1 Overview of submission

The submission expressed support for the Proposed Scheme, identified the interactions of the Proposed Scheme with the national road and light rail networks, sets out potential impacts arising and identifies suggested treatment / mitigation in order for the Proposed Scheme to proceed complimentary to, and integrated with, the national road and light rail networks.

The submission is structured in three parts:

i. Summary of potential interactions
ii. National Roads
- interactions;
- mitigations requirements; and
- recommendations.

iii. Light Rail
- interactions;
- mitigations requirements, and
- recommendations.

2.8.8.2 Response to submission

2.8.8.2.1 Support for the Proposed Scheme

Transport Infrastructure Ireland (TII) expressed their support for the BusConnects project in playing a key part of the Government's policy to improve public transport and address climate change in Dublin.

The NTA welcome TII's support for the scheme. The NTA is grateful for the positive and constructive liaison that has occurred with TII throughout the design and planning process to date regarding the progression of the Proposed Scheme, which has been achieved through a number of briefings to the TII representatives and direct liaison with the various sections of TII.

The NTA will continue the very positive and constructive liaison with TII throughout the procurement and construction process and respond below to the points included in their submission.

2.8.8.2.2 Summary of potential interactions

Overview of points included in the submission

This submission tabulates the summary of interactions the national road and light rail networks and makes the following points:

a) TII consider that mitigation of potential impacts for the protection of the national and light rail networks should have been included in Chapter 22 Summary of Mitigation and Monitoring Measures

b) TII submit that while mitigation (traffic management provisions) for the light rail network are included in Appendix A5.1 no such mitigation is recorded in relation to the maintenance and protection of the national road network

Response

As outlined in Section 22.1 of Chapter 22 of the EIAR (Summary of Mitigation & Monitoring Measures) the design of the Proposed Scheme has been progressed taking account of environmental constraints and considerations that have been identified in assessments. These constraints and considerations include national and light rail networks insofar as the Proposed Scheme interacts with these networks. Chapter 22 notes that the contents of the chapter should be read in conjunction with the Construction Environmental Management Plan (CEMP), included as Appendix A5.1 to the EIAR, which provides

more detail on construction-phase management and mitigation, and specifically addresses traffic management provisions for the light rail network in Table 5.4. The reader is also directed to the CEMP in Table 22.2 of Chapter 22.

Section 6.4.5.3 of EIAR Chapter 6 Traffic and Transport describes the envisaged dedicated construction vehicle routes, and notes that "*construction vehicles will be directed to access work sections via the Proposed Scheme and dedicated routes on the National and Regional Road Network where practicable, to minimise use of the local road network*."

Section 6.4.5.3 goes on to state that *"The haulage of material on site is anticipated to be minimal. There will however be the removal of excavated material and the delivery of construction materials to site. It is anticipated that the exporting and delivery of materials will be executed as efficiently as possible using dedicated Construction Access Routes. Construction vehicles will be directed to access work sections via the Proposed Scheme and dedicated routes on the National and Regional Road Network where practicable, to minimise use of the local road network."* It goes on to list the N7, M50 and N81 as the national roads that are envisaged to form dedicated Construction Access Routes for construction vehicles to travel to and from the construction works.

Section 6.4.5.4.6.2 of Chapter 6 discusses construction traffic generation, and quantifies traffic arising from site operatives and heavy goods vehicles. It notes that the *"CTMP will control vehicular movement along the construction route, including restrictions on the number of HGVs accessing and egressing the construction works throughout the day to mitigate the impacts to general traffic on the surrounding road network.*

Based on construction activities associated with the Proposed Scheme, the maximum number of HGVs expected to be in operation across the Proposed Scheme during peak haulage activities is 28 vehicles.

In a typical hour during peak haulage activity of the Proposed Scheme, 40% of lorries are anticipated to be in operation on the public road network which equates to approximately 11 lorries. A total of 11 two-way lorry movements are therefore expected in a typical hour during peak haulage activity of the Proposed Scheme."

Section 6.4.5.4.6.2 concludes as follows: *"Given that the above impacts are minimal and comfortably below the thresholds set out in TII's Guidelines for Transport Assessments, it is considered appropriate to define the general traffic impacts of the Construction Phase to have a Negative, Slight and Short-term effect. Therefore, no further analysis is required for the purpose of this assessment."*

a) The maintenance and protection of all roads (including the national road network) is addressed in the Construction Environmental Management Plan (CEMP), included as Appendix A5.1 to the EIAR. Section 5.2.3.14 of the CEMP includes details of the measures to be taken by the appointed contractor where practicable, as follows:

    - *"Loads of materials leaving each works area will be evaluated and covered if considered necessary to minimise potential dust impacts during transportation;*
    - *Take all reasonable measures while transporting waste or any other materials likely to cause fugitive losses from a vehicle during transportation to and from the works areas, including but not limited to:*
        - *Covering of all waste or material with suitably secured tarpaulin / covers to prevent loss; and*
        - *Utilisation of enclosed units to prevent loss.*
    - *Undertake pavement condition surveys along roads forming part of the Construction Access Route, based on consultation with the NTA and professional judgement regarding the condition of the route, pre-construction. These surveys will record the baseline structural condition of the road being surveyed immediately prior to construction; and*

- *Throughout the course of construction of the Proposed Scheme, undertake on-going visual inspections and monitoring of the Construction Access Routes to ensure any damage caused by construction traffic is recorded. Arrangements can then be made to repair any such damage to an appropriate standard in a timely manner such that any disruption is minimised.*

Upon completion of construction of the Proposed Scheme, the surveys carried out pre-construction shall be repeated, and a comparison of the pre-construction and post-construction surveys will be carried out."

2.8.8.2.3 National Roads

Overview of submission

Interactions

The submission notes the following interactions:

1. R134 New Nangor Road under the M50
2. R819 Greenhills Road bridge over the M50
3. Construction traffic on the national road network

Mitigations requirements

TII considers that Chapter 5 and Chapter 6 and the CEMP do not appear to fully identify specific methods for mitigation for works traversing or in proximity to the national road network

Recommendations

TII make 5 suggested recommended conditions.

Response to submission

Interactions

1 R134 New Nangor Road

The submission notes that it does not appear that any alteration in the existing R134 Nangor Road elevation, and therefore bridge clearances, is proposed and no alteration is indicated to the bridge. The submission suggests that notwithstanding this, it is appropriate that all works proposed under and in the vicinity of the bridge undergo detailed design and execution in accordance with TII publications.

As set out in Section 4.5.5.1 of EIAR Chapter 4 Proposed Scheme Description, *"It is proposed to widen the existing R134 carriageway at the M50 bridge to provide a three-lane arrangement. A continuous inbound bus lane has been proposed to mitigate against any potential queuing that may occur from the upgraded Riverview Business Park junction. Bus priority on the outbound bus lane is facilitated by a bus priority signal on the approach to the M50 overbridge. The inbound footway on the New Nangor Road (R134) is re-introduced on the approach to the Nangor Road Business Park junction with a new pedestrian and cycle link connection to the Grand Canal Greenway to the east of the M50 overbridge."*

The relevant extract from the General Arrangement drawings provided in EIAR Volume Part 1 of 3 proposed arrangement is shown in Figure 2.8.8.1.

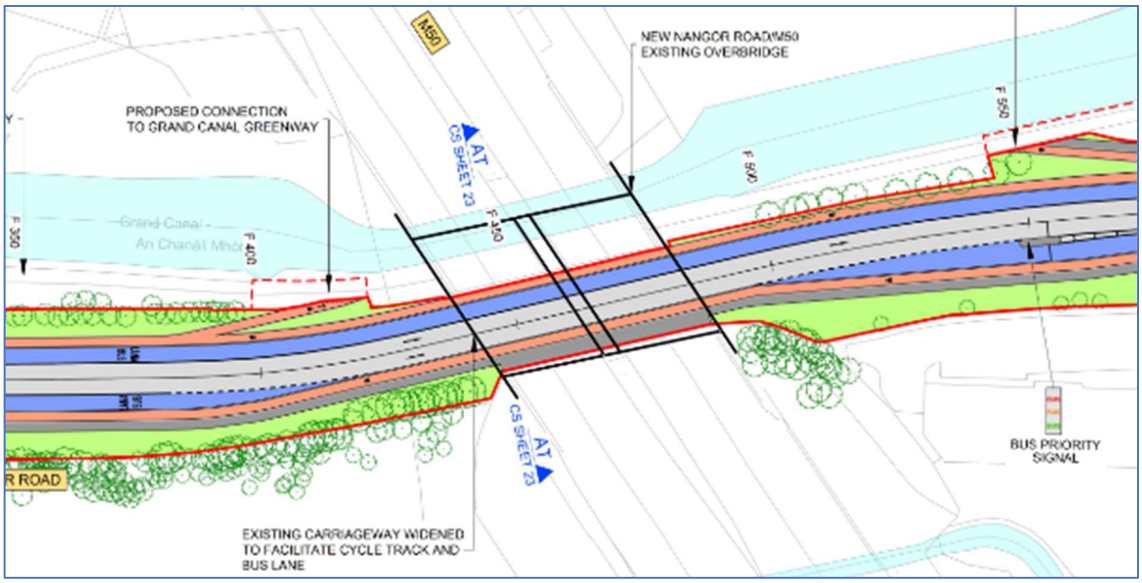


Figure 2.8.8.1 Extract of General Arrangement Drawings at R134 New Nangor Road interface with M50 overbridge (Sheet 46)

The existing road cross section at this location is shown in Figure 2.8.8.2.



Figure 2.8.8.2 Existing Cross Section at R134 New Nangor Road interface with M50 overbridge

The proposed cross section at this location is shown in the relevant extract from the Typical Cross Section drawings provided in EIAR Volume Part 1 of 3 proposed arrangement is shown in Figure 2.8.8.3.

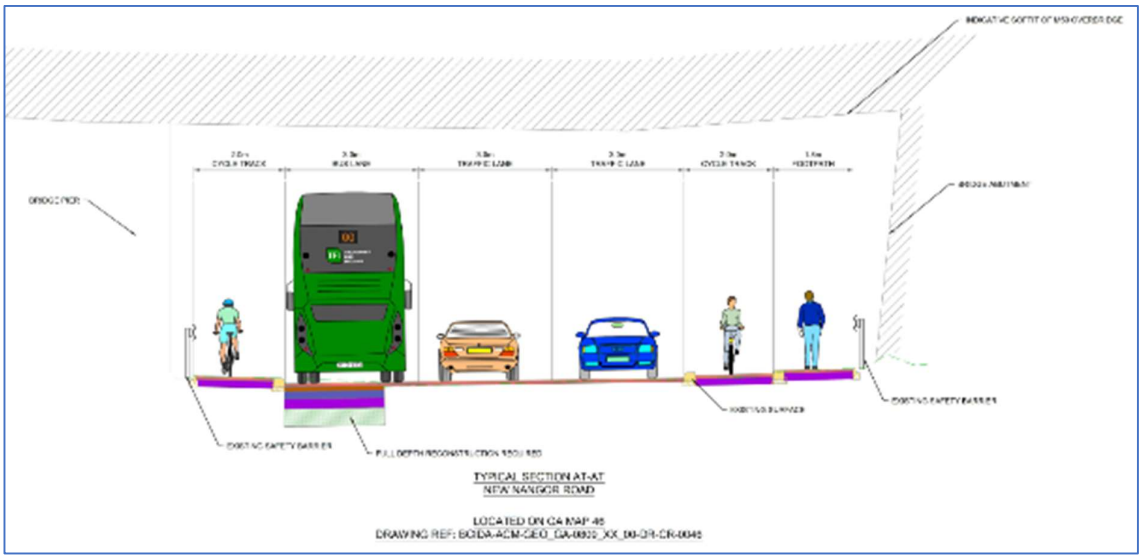


Figure 2.8.8.3 Typical Cross Section at R134 New Nangor Road interface with M50 overbridge

As shown in Figure 2.8.8.3, road widening is proposed under the bridge to provide a three-lane arrangement with a continuous inbound bus lane. As noted by the submission, no alteration is proposed in the existing R134 Nangor Road elevation, and therefore the existing bridge clearances will remain unchanged. In addition, no alteration is proposed to the bridge itself.

It is the intention of the NTA that all works proposed under and in the vicinity of the bridge will undergo detailed design and execution in accordance with TII and other relevant publications.

2 R819 Greenhills Road M50 Bridge

The submission notes that the Proposed Scheme includes two new single span pedestrian / cycle bridges immediately parallel to the Greenhills Road bridge over the M50. The submission suggests that all works proposed under and in the vicinity of the existing bridge undergo detailed design and execution in accordance with TII publications and that the applicant should continue to follow TII technical approvals as required under TII publication DN-STR-03001. The submission also suggests that the works must follow the maintenance contractor's third party access protocol in advance of carrying out any works.

As set out in Section 4.5.2.1 of EIAR Chapter 4 Proposed Scheme Description, *"The existing M50 bridge crossing will be retained. Two new single span pedestrian / cycle bridges are proposed to be located adjacent to the existing bridge to maintain priority for buses on the existing bridge and to provide high quality cycle / pedestrian facilities over the M50 in both directions. The pedestrian / cycle bridges will be steel warren truss type structures and will be positioned immediately parallel to the existing structure. Additional land acquisition on both sides of the M50 will be required to facilitate the construction of the pedestrian / cycle bridges."*

The relevant extracts from the Bridges and Major Retaining Structures drawings provided in EIAR Volume Part 2 of 3 proposed arrangement is shown in Figure 2.8.8.4 and Figure 2.8.8.5.

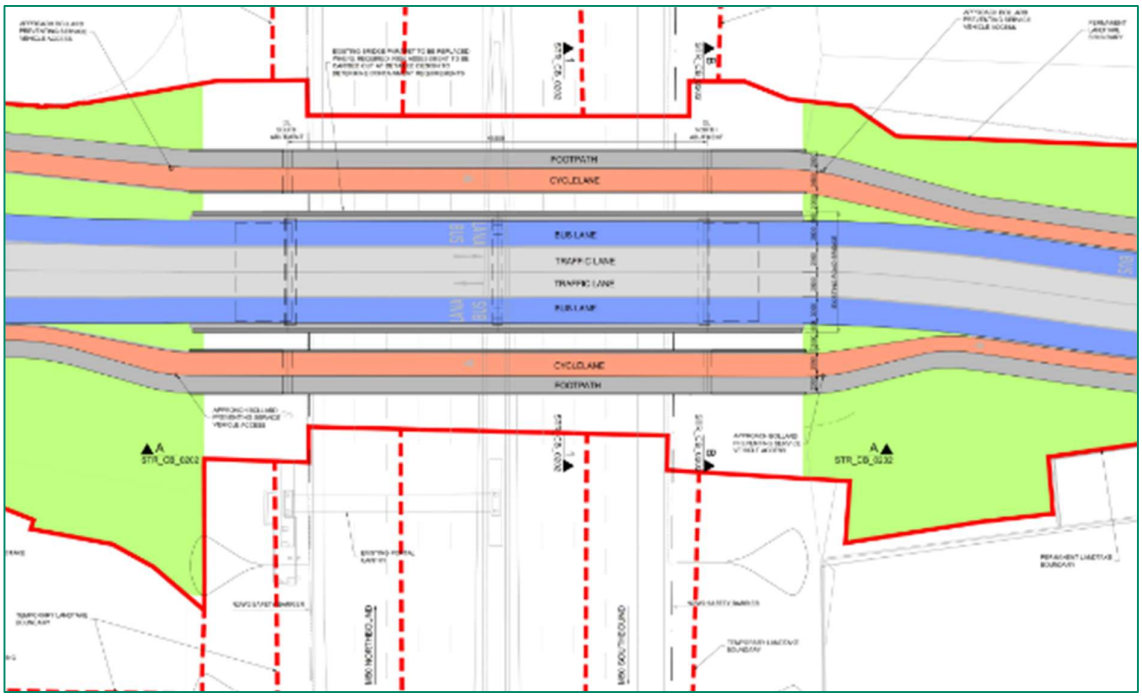


Figure 2.8.8.4 Extract of Bridges and Major Retaining Structures Drawings at R819 Greenhills Road interface with M50 – Plan View

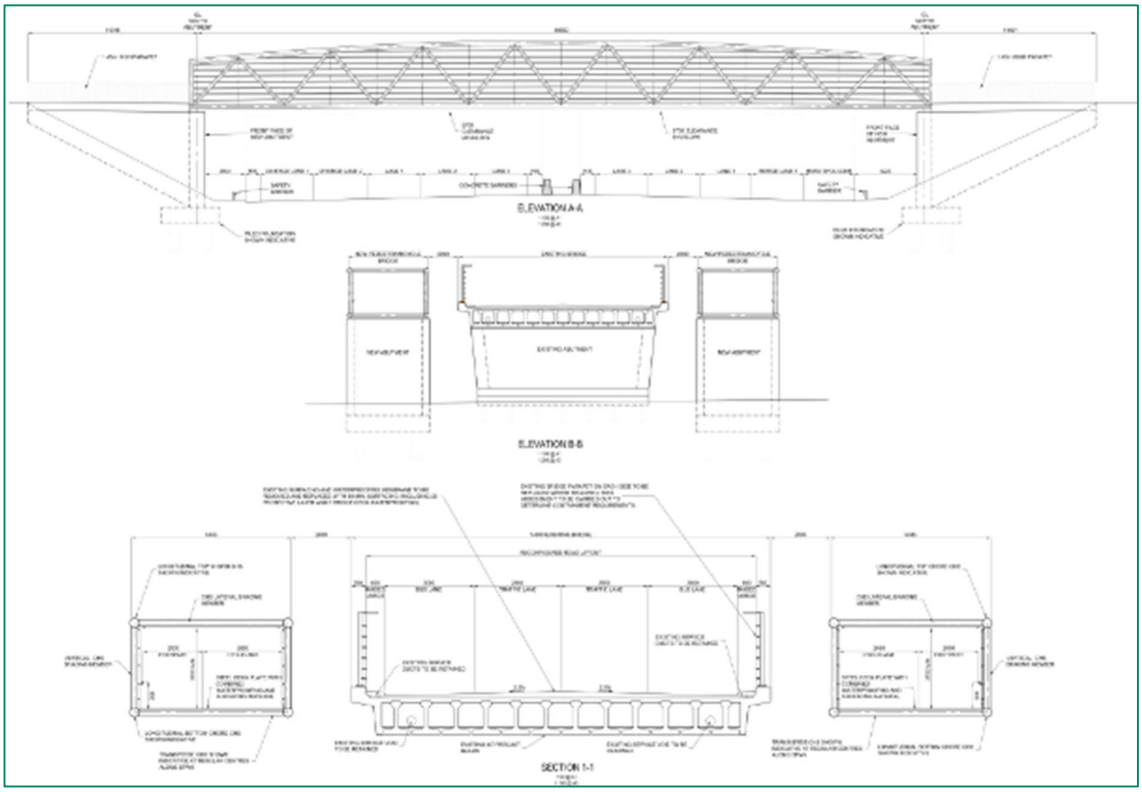
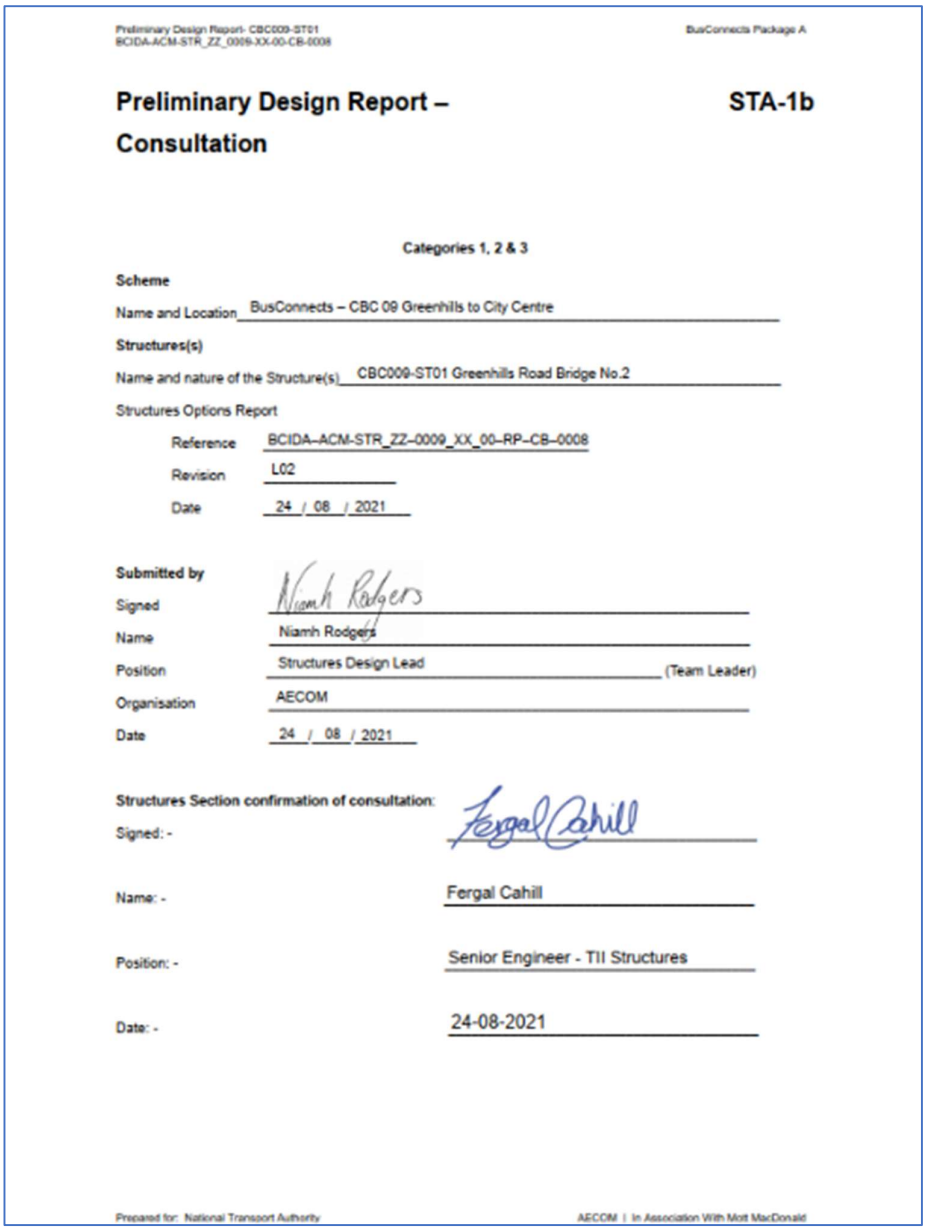


Figure 2.8.8.5 Extract of Bridges and Major Retaining Structures Drawings at R819 Greenhills Road interface with M50 – Elevation and Section

Appendix J1 of the Preliminary Design Report (PDR), provided as part of the Supplementary Information, is the Preliminary Design Report for Bridge ST01 – Greenhills Road Pedestrian and Cycle Bridges. The design of these bridges has been developed in accordance with TII publication

DN-STR-03001 and has included liaison and consultation with TII. This is evidenced at the front of this report by the Preliminary Design Report Consultation Certificate STA-1b, which has been signed off by the relevant signatory in TII Structures team, as shown in Figure 2.8.8.6.



Preliminary Design Report- CBC009-ST01
BCIDA-ACM-STR_ZZ_0009-XX-00-CB-0008

BusConnects Package A

Preliminary Design Report – Consultation **STA-1b**

Categories 1, 2 & 3

Scheme

Name and Location BusConnects – CBC 09 Greenhills to City Centre

Structures(s)

Name and nature of the Structure(s) CBC009-ST01 Greenhills Road Bridge No.2

Structures Options Report

Reference BCIDA–ACM-STR_ZZ–0009_XX_00–RP–CB–0008

Revision L02

Date 24 / 08 / 2021

Submitted by

Signed Niamh Rodgers

Name Niamh Rodgers

Position Structures Design Lead (Team Leader)

Organisation AECOM

Date 24 / 08 / 2021

Structures Section confirmation of consultation:

Signed: - Fergal Cahill

Name: - Fergal Cahill

Position: - Senior Engineer - TII Structures

Date: - 24-08-2021

Prepared for: National Transport Authority

AECOM | In Association With Mott MacDonald

Figure 2.8.8.6 Extract from PDR Appendix J1 - TII Consultation Certificate

It is the intention of the NTA that all works proposed under and in the vicinity of the existing bridge will undergo detailed design and execution in accordance with TII and other relevant publications, that the detailed design will continue to follow TII technical approvals as required under TII publication DN-STR-03001, and that the works will follow the maintenance contractor's third party access protocol in advance of carrying out any works.

3 Construction Traffic

The submission notes that Construction Compounds TC1, TC5 and TC6 are either within national road network maintained areas or in the vicinity of that network, suggesting that construction traffic must be specifically managed to avoid impact on the safe and efficient operation of the national road network.

Section 5.8 of EIAR Chapter 5 Construction describes the management of traffic during construction and notes that a Construction Traffic Management Plan (CTMP) *"has been prepared to facilitate the assessment of the potential impacts on traffic and transport along the Proposed Scheme. The CTMP includes details of the temporary traffic management measures that will be implemented during the construction of the Proposed Scheme.*

The staging of construction and associated temporary traffic management measures has considered the receiving environment when developing the schedule of works. The CTMP has given due consideration to facilitate the maximum practicable movement of people during the Construction Phase through implementing the following hierarchy of transport mode users:

- *Pedestrians;*
- *Cyclists;*
- *Public Transport; and*
- *General Traffic.*

Access will be maintained for emergency vehicles along the Proposed Scheme, throughout the Construction Phase. The construction traffic management measures have been developed in accordance with the Traffic Signs Manual (Department of Transport, Tourism and Sport 2019). Construction traffic management measures are summarised in Section 5.8.1 to Section 5.8.3, with further details (such as routing of construction vehicles, timings of material deliveries, etc.) included in the CTMP in Appendix A5.1 CEMP in Volume 4 of this EIAR."

Section 5.2.3 of Appendix A5.1 describes how *"the appointed contractor shall be responsible for developing a CTMP to effectively manage traffic and transport during the Construction Phase of the Proposed Scheme."* It goes on to provide a list of aspects that the appointed contractor shall address during the preparation of the CTMP.

Section 6.4.5.3 of EIAR Chapter 6 Traffic and Transport describes the envisaged dedicated construction vehicle routes, and notes that "*construction vehicles will be directed to access work sections via the Proposed Scheme and dedicated routes on the National and Regional Road Network where practicable, to minimise use of the local road network*."

Section 6.4.5.3 goes on to state that *"The haulage of material on site is anticipated to be minimal. There will however be the removal of excavated material and the delivery of construction materials to site. It is anticipated that the exporting and delivery of materials will be executed as efficiently as possible using dedicated Construction Access Routes. Construction vehicles will be directed to access work sections via the Proposed Scheme and dedicated routes on the National and Regional Road Network where practicable, to minimise use of the local road network."* It goes on to list the N7, M50 and N81 as the national roads that are envisaged to form dedicated Construction Access Routes for construction vehicles to travel to and from the construction works.

Section 6.4.5.4.6.1 of Chapter 6 describes the predicted general traffic redistribution arising from the construction of the Proposed Scheme and notes that *"Significant impacts due to general traffic redistribution away from the direct study area are not anticipated during the Construction Phase based on the intended nature of the progressive works along the corridor whereby traffic flows, in general, are to be maintained in both directions. There may be a requirement for some localised temporary lane closures during the day, which will involve consultation between the appointed contractor and relevant authorities. Access for general traffic to existing residential and commercial units immediately adjacent to the Proposed Scheme is to be accommodated throughout the Construction Phase.*

It is noted that a full night-time closure of the M50 mainline in both directions is required to install a pedestrian and cycle bridge between New Nangor Road, Naas Road, and the Long Mile Road. (Structure Reference: ST-02). The NTA and the appointed contractor will liaise with Transport Infrastructure Ireland (TII) in advance of the works taking place. It is expected that each bridge structure will be lifted into place over one night. During the temporary night-time road closure, traffic will be diverted at Junctions 10 and 11 via the N81, R113 and R838. Analysis of TII Traffic monitoring Unit (TMU) data between these junctions indicates that this period (10pm-6am) represents

approximately 5-6% of total 24hr demand with on average approximately 1,000 vehicles per hour would be required to divert during this period. This period represents the least trafficked time on the M50 and a single night-time closure is considered acceptable to facilitate the bridge construction.

The appointed contractor will develop a CTMP that gives due consideration to provision of local access requirements and designates appropriate diversion routes in the case where localised temporary closures are required. Overall, for these reasons, the impact on general traffic redistribution is anticipated to be ***Negative, Moderate and Short Term*** *due to the temporary nature of any restrictions."*

In summary, the EIAR has considered the impact of construction traffic on the road network, including the national road network. The CTMP included in Appendix A5.1 (CEMP), together with the appointed contractor developing a CTMP to effectively manage traffic and transport during the Construction Phase of the Proposed Scheme, will satisfactorily manage any impact on the safe and efficient operation of the national road network.

Mitigations requirements

The submission expresses the view that Chapter 5, Chapter 6 and the CEMP do not appear to fully identify specific methods or techniques proposed for mitigation of potential impact for works traversing or in proximity to the national road network. The submission goes on to assert that because the national road network will be utilised for construction haul routes and for construction undertakings there is a need for mitigation of potential construction stage impacts to protect the safe and efficient operation of the national road network.

Section 6.4.5.3 of EIAR Chapter 6 Traffic and Transport describes the envisaged dedicated construction vehicle routes, and notes that "*construction vehicles will be directed to access work sections via the Proposed Scheme and dedicated routes on the National and Regional Road Network where practicable, to minimise use of the local road network*."

Section 6.4.5.3 goes on to state that *"The haulage of material on site is anticipated to be minimal. There will however be the removal of excavated material and the delivery of construction materials to site. It is anticipated that the exporting and delivery of materials will be executed as efficiently as possible using dedicated Construction Access Routes. Construction vehicles will be directed to access work sections via the Proposed Scheme and dedicated routes on the National and Regional Road Network where practicable, to minimise use of the local road network."* It goes on to list the N7, M50 and N81 as the national roads that are envisaged to form dedicated Construction Access Routes for construction vehicles to travel to and from the construction works.

Section 6.4.5.4.6.2 of Chapter 6 discusses construction traffic generation, and quantifies traffic arising from site operatives and heavy goods vehicles. It notes that the *"CTMP will control vehicular movement along the construction route, including restrictions on the number of HGVs accessing and egressing the construction works throughout the day to mitigate the impacts to general traffic on the surrounding road network.*

Based on construction activities associated with the Proposed Scheme, the maximum number of HGVs expected to be in operation across the Proposed Scheme during peak haulage activities is 28 vehicles.

In a typical hour during peak haulage activity of the Proposed Scheme, 40% of lorries are anticipated to be in operation on the public road network which equates to approximately 11 lorries. A total of 11 two-way lorry movements are therefore expected in a typical hour during peak haulage activity of the Proposed Scheme.

Overall Peak Hour Impacts: The contents of Table 6.17 outline the anticipated maximum construction traffic generation by site operatives and HGVs during the AM and PM Peak Hours."

Table 6.17 Anticipated Maximum Construction Traffic Generation during Construction Phase

Peak Hour	Arrivals		Departures		Total Two-Way Traffic Flows (pcu)
	Car / Van (1 pcu)	HGV (2.3 pcu)	Car / Van (1 pcu)	HGV (2.3 pcu)	
AM Peak Hour	10	26	0	26	62
PM Peak Hour	0	26	10	26	62

Figure 2.8.8.7 Table 6.17 of EIAR Chapter 6

Section 6.4.5.4.6.2 concludes as follows: *"Given that the above impacts are minimal and comfortably below the thresholds set out in TII's Guidelines for Transport Assessments, it is considered appropriate to define the general traffic impacts of the Construction Phase to have a Negative, Slight and Short-term effect. Therefore, no further analysis is required for the purpose of this assessment.*

It should be noted that further detail on the restrictions to construction vehicle movements during the peak periods of the day will be contained within the appointed contractor's CTMP prior to construction."

In summary, it is considered that the construction of the Proposed Scheme will not impact the safe and efficient operation of the national road network.

Recommendations

Proposed Condition 1

Development shall be undertaken in accordance with TII publications. Prior to commencement of development, plans and details of works on, or in the vicinity of the national road network under TII Publications shall be submitted for the written agreement of the planning authority in consultation with TII.

The NTA acknowledges the close liaison with TII that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within TII. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of TII and taking their requirements into consideration, where aligned with and consistent with the EIAR. The NTA is satisfied that these are matters that can be successfully addressed between TII and the NTA, in the absence of any approval condition.

Proposed Condition 2

The long term maintenance of permanent elements of the proposed development, within areas currently managed by the Motorway Maintenance and renewal Contracts (MMaRC) or the M50 PPP Contractor shall be agreed between the relevant local authority / NTA and TII.

• This proposed condition seeks the enactment of an agreement between the relevant local authority, TII and the NTA, subsequent to the completion of the construction of the Proposed Scheme, addressing issues related to maintenance costs.

The Proposed Scheme upon its completion reverts to the status of a public road under the management of the relevant local authority, in this case South Dublin County Council (SDCC). The funding of costs associated with the maintenance of public roads can involve a number of parties depending on the status of the road – for instance, in the case of a national road Transport Infrastructure Ireland would have an involvement. As the Proposed Scheme does not encompass any section of national road, its components constitute regional and/or local roads only. Funding of

regional and local roads fall under the ambit of the relevant local authority and the Department of Transport.

The Exchequer does not currently provide the NTA with funds for dispersal to local authorities for maintenance activities and the NTA does not have a role in overseeing or organising general public road maintenance activities. However, the NTA does retain responsibility for bus fleet, bus stops and bus shelters, and maintenance of these elements falls within its remit.

The NTA will continue its collaboration with TII, and SDCC, to ensure the delivery of an appropriate maintenance regime. As part of this collaboration, the NTA will support the provision of the necessary funding by the relevant parties to ensure that the benefits of the Proposed Scheme are not inappropriately eroded. The NTA is satisfied that these are matters that can be successfully addressed between TII, SDCC and the NTA, in the absence of any approval condition.

Proposed Condition 3

Where relevant, Design reports for any works on, over or within the motorway reservation will be required to be prepared and submitted as a Departure Application in accordance with TII publication GE-GEN-01005 and PE-PMG-02041. Works to structure forming part of the national road network requires TT Technical Acceptance in accordance with TII publication DN-STR-03001.

The NTA acknowledges the close liaison with TII that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within TII. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

Specifically, in respect of the proposed pedestrian and cyclist bridges over the M50 on the Greenhills Road as described above the design of these bridges has been developed in accordance with TII publication DN-STR-03001 and has included liaison and consultation with TII. This is evidenced at the front of this report by the Preliminary Design Report Consultation Certificate STA-1b, which has been signed off by the relevant signatory in TII Structures team.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of TII and taking their requirements into consideration, where aligned with and consistent with the EIAR. The NTA is satisfied that these are matters that can be successfully addressed between TII and the NTA, in the absence of any approval condition.

Proposed Condition 4

Prior to the commencement of development, the Construction Environmental Management Plan (CEMP) shall be submitted for the written agreement of the planning authorities subject to the written agreement of TII for national road elements. The CEMP will include mitigation and monitoring for the national road network.

The NTA acknowledges the close liaison with TII that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within TII. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of TII and taking their requirements into consideration, where aligned with and consistent with the EIAR. The NTA is satisfied that these are matters that can be successfully addressed between TII and the NTA, in the absence of any approval condition.

Proposed Condition 5

Prior to the commencement of development, the construction traffic management plan including access to services, shall be submitted for the written agreement of the planning authorities subject to the written agreement of TII and shall:

a) demonstrate consultation with the relevant MMaRC and PPP Contractors, via TII and the relevant road authorities,

b) demonstrate contact with thirdpartyworks@tii.ie in advance, as a works specific Deeds of Indemnity will be required by TII where temporary works within any MMaRC Contract Boundary are required to facilitate construction haulage, and

c) include detailed information on traffic management, including signage (static and VMS) to ensure the strategic function of the national road network is protected.

The NTA acknowledges the close liaison with TII that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within TII. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of TII and taking their requirements into consideration, where aligned with and consistent with the EIAR. The NTA is satisfied that these are matters that can be successfully addressed between TII and the NTA, in the absence of any approval condition.

2.8.8.2.3 Light Rail

Overview of submission

Interactions

The submission notes the following interactions:

1.Luas Red line alongside Blessington Road

2.Luas Red line along the Naas Road

3.Construction traffic on the Luas Red Line

Mitigations requirements

TII considers that Chapter 5 and Chapter 6 and the CEMP do not appear to fully identify specific methods or techniques for mitigation of potential impact on Luas infrastructure or service.

Recommendations

TII make 8 suggested recommended conditions.

Response to submission

Interactions

1 Luas Red line alongside Old Blessington Road

The submission comments that potential road closures, and under and overground works for the Proposed Scheme have the potential to impact Luas infrastructure, as well as Luas services and passenger access. The submission suggests that the proposed works will require commensurate specific construction methodology approach, co-ordinated with TII and the Luas Operator to ensure protection of the asset and minimal Luas service disruption during construction and operation phases

of the scheme, in line with TII's *'Code of practice of engineering practice for works on, near, or adjacent the Luas light rail system'*.

As set out in Section 4.5.5.1 of EIAR Chapter 4 Proposed Scheme Description, *"The Proposed Scheme commences at the junction of Old Blessington Road / Cookstown Way to facilitate access to the proposed Bus Interchange on Belgard Square West. General traffic will also be permitted to access the Square Shopping Centre from this junction via Belgard Square South due to Belgard Square West being restricted to buses, cyclists and other authorised vehicles. Bus traffic across Old Blessington Road will be controlled by signal-controlled priority maintaining a similar arrangement to the existing scenario for orbital services heading towards the bus interchange.*

It is proposed to change the existing Belgard Square South roundabout to a fully signalised junction with improved pedestrian facilities. The section of Belgard Square West from Belgard South to Old Blessington Road and immediately north of Old Blessington Road is proposed to be a bus only route and will no longer be a through route for general traffic. A Bus Interchange will be developed on Belgard Square West which will allow for interchange with the red line Luas and serve as the terminus for several buses including the A3, F1, D5 spine routes, W2, W4, W6, S6 orbital routes and 71, 85, L44 local routes. This will also act as the focal point for other through bus routes in the area. Access to Tallaght Cross West / Broadfield Hall and neighbouring developments will still be permitted from via Belgard Square North and the northern section of Belgard Square West."

The relevant extract from the General Arrangement drawings provided in EIAR Volume Part 1 of 3 proposed arrangement is shown in Figure 2.8.8.8.

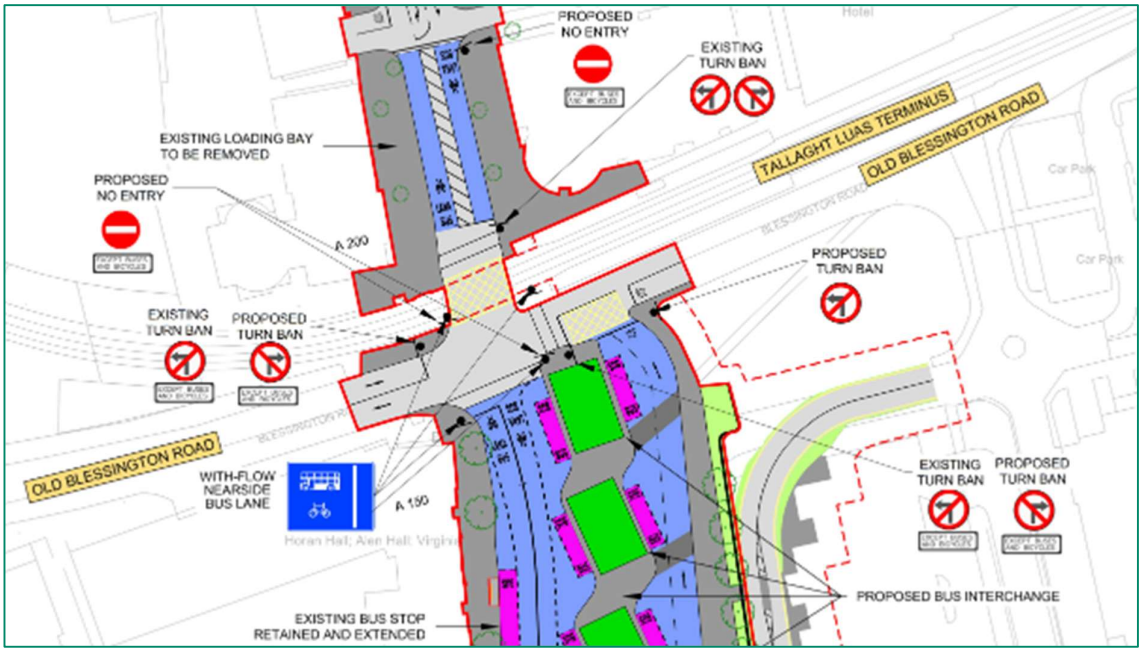


Figure 2.8.8.8 Extract of General Arrangement Drawings at Luas Red line / Old Blessington Road

The existing arrangement at Luas Red line / Old Blessington Road is shown in Figure 2.8.8.9.



Figure 2.8.8.9 Existing arrangement at Luas Red line / Old Blessington Road

Figure 2.8.8.10 shows the relevant extract from the Pavement Treatment drawings provided in EIAR Volume Part 1 of 3 proposed arrangement. This shows that no amendments to the existing kerblines are proposed on the northern side of Old Blessington Road adjacent to the Red Luas line at this location. No alterations to the Luas infrastructure and associated services are proposed as part of the Proposed Scheme at this location.

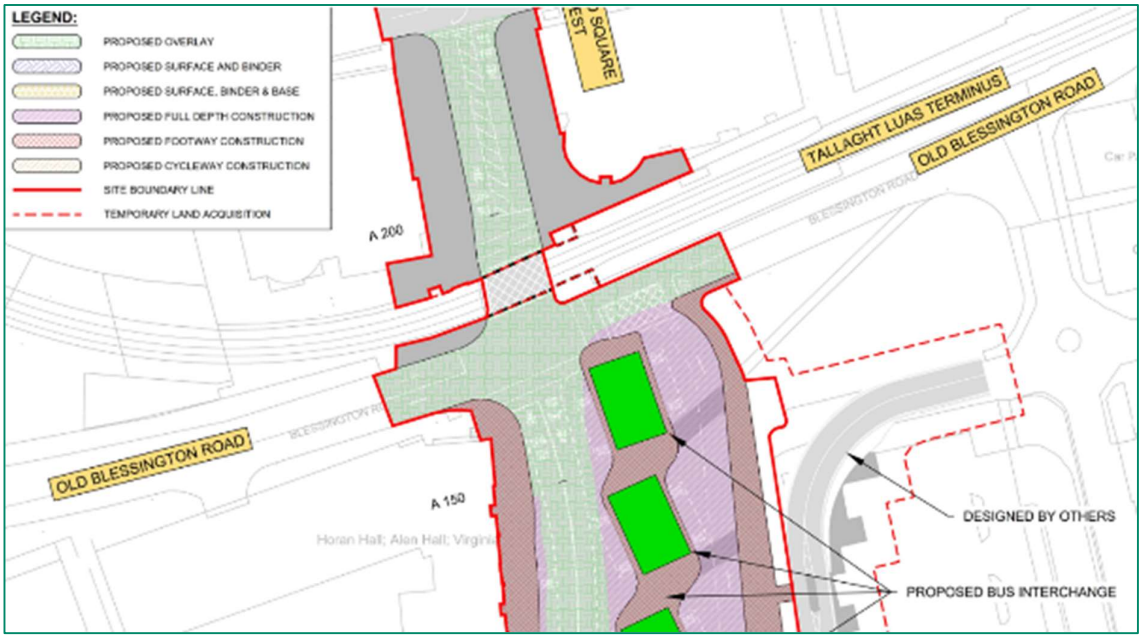


Figure 2.8.8.10 Extract of Pavement Treatment Drawings at Luas Red line / Old Blessington Road

Section 5.3.1.3 of EIAR Chapter 5 Construction describes the works required for Section 1c of the Proposed Scheme which encompasses a length of approximately 60m (metres) along Old Blessington Road. *"The construction activities at Section 1c will comprise pavement reconstruction and resurfacing of the roads and footways. New kerbs will also be provided following the realignment of the existing kerb lines. New pavement and footway construction will be required in the vicinity of the new Tallaght Bus Interchange. Construction activities will also consist of the installation of additional signage, new road markings, new and amended traffic signal infrastructure, new street furniture and*

landscaping works. Some trees will be removed. However, new trees will be planted as part of the landscaping works. Utility (telecommunications infrastructure) diversions and / or protections will be required. The expected construction duration will be approximately one month."

For this section of the Proposed Scheme, as set out in Table 5.8 of EIAR Chapter 5 no temporary road closures are envisaged for Section 1c and it is not anticipated that there will be any impact on Luas Red line services, with access to the Luas Tram stop maintained at all times.

In terms of operation, as described in Section 4.5.5.1 of EIAR Chapter 4 Proposed Scheme Description, the section of Belgard Square West from Belgard South to Old Blessington Road and immediately north of Old Blessington Road is proposed to be a bus only route and will no longer be a through route for general traffic. The benefits to the Luas services of the removal of general traffic from Belgard Square West where it crosses the Luas Red line will be offset to some extent by the additional demands associated with high volumes of buses. The potential impact that this could have to Luas services at this location has been considered and the traffic modelling of the junction has assumed that the existing level of priority afforded to Luas services at this signalised junction will be maintained, thus avoiding any negative impact to the Luas services.

The NTA will co-ordinate the proposed works with TII and the Luas Operator in line with TII's *'Code of practice of engineering practice for works on, near, or adjacent the Luas light rail system'*.

2 Luas Line along the Naas Road

The submission notes that the Proposed Scheme includes significant works adjacent to, crossing and over-sailing the Luas Red line along a section of the Naas Road between the junction with the New Nangor Road / Long Mile Road and the junction with Kylemore Road / Walkinstown Avenue, which includes the Kylemore Tram stop. The submission notes that this section of the Luas is a highly trafficked multi-modal area and states that a reduction in the level of signal priority appears to be proposed which it is concerned would significantly negatively impact Luas services.

The submission is concerned that TII's *'Code of practice of engineering practice for works on, near, or adjacent the Luas light rail system, and Light Rail Environment – Technical Guidelines for Development, TII Publication no PE-PDV-00001',* as well as the physical interfaces, including electromagnetic interference (EMI), with Luas during the construction and operation phases of the overbridge do not appear to have been evaluated in the EIAR.

The submission also notes that the Proposed Scheme includes a new pedestrian / cycleway crossing of the New Nangor Road / Naas Road / Long Mile Road junction and raises a concern about the potential for the new bus stops in the vicinity of the Kylemore Tram stop to negatively impact pedestrian behaviour and movement which may impact the Luas in an area with a current pedestrian trespass issue.

As described in Section 4.5.5.1 of EIAR Chapter 4 Proposed Scheme Description, *"at the New Nangor Road (R134) / Naas Road (R810) junction a new pedestrian and cycling bridge with accessible ramps and stairs on all approaches to the junction has been proposed to provide increased pedestrian and cycling safety, permeability and accessibility at this junction. This will require land acquisition and boundary treatment on the periphery of the existing road boundary to accommodate the proposed bridge and ancillary ramp structures. A proposed continuous inbound bus lane with dedicated left turn bypass facility will provide enhanced bus priority."*

Section 4.5.6.1 of Chapter 4 describes that east of the New Nangor Road junction, along the Naas Road (R810 the existing lane provision is maintained with one bus lane and two traffic lanes in each direction. The existing left turn slip lane towards the Kylemore Road (R112) is to be removed and the inbound left turn movement will be banned, with traffic diverted via Old Naas Road / John F Kennedy Drive in order to access Kylemore Road (R112). This arrangement allows for improved bus facilities and passenger interchange with the Kylemore Luas Stop. Right turning buses from Naas Road (R810) towards Walkinstown Avenue (R112) will have a layby bus stop with a bus priority signal to complete the right turn movement through the junction. Through services / coaches along the Naas Road (R810) will have a layby bus stop adjacent to the Old Naas Road junction. The junction of Naas

Road (R810) / Walkinstown Avenue (R112) is being reconfigured to provide enhanced pedestrian and cyclist facilities. Existing pedestrian routes are maintained along Naas Road with raised table crossings at key entrances along this section of the corridor to improve pedestrian priority.

The relevant extract from the General Arrangement drawings provided in EIAR Volume Part 1 of 3 proposed arrangement is shown in Figure 2.8.8.11, Figure 2.8.8.12 and Figure 2.8.8.13.

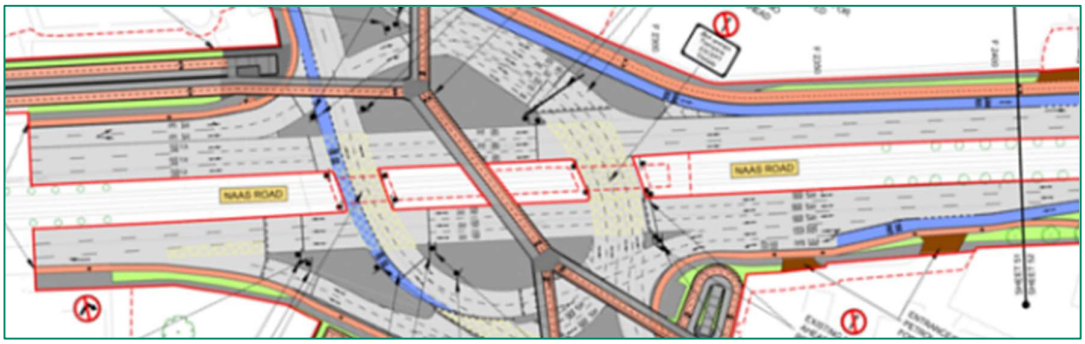


Figure 2.8.8.11 Interface with Red Luas Line at Naas Road / New Nangor Road junction



Figure 2.8.8.12 Interface with Red Luas Line along Naas Road

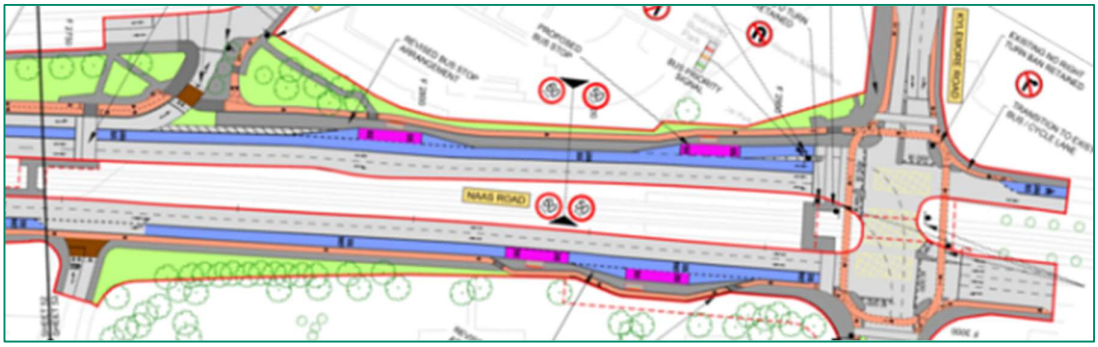


Figure 2.8.8.13 Interface with Red Luas Line at Naas Road / Kylemore Road junction

No alterations to the Luas infrastructure and associated services are proposed as part of the Proposed Scheme along this section of the route.

Luas Signal Priority

As described in Section 4.5.5.1 of EIAR Chapter 4 *at the New Nangor Road (R134) / Naas Road (R810) junction a new pedestrian and cycling bridge with accessible ramps and stairs on all approaches to the junction has been proposed to provide increased pedestrian and cycling safety, permeability and accessibility at this junction.*

The removal of all at-grade pedestrian and cyclist crossing points at this busy junction which also crosses the Luas Red line will allow the cycle time of the signalised junction to be optimised to maximise the benefits to both bus and Luas services. The potential impact that this could have to Luas services at this location has been considered and the traffic modelling of the junction has

assumed that the existing level of priority afforded to Luas services at this signalised junction will be maintained, thus avoiding any negative impact to the Luas services.

No alterations to the Luas infrastructure and associated services are proposed as part of the Proposed Scheme along this section of the route.

'Code of practice of engineering practice for works on, near, or adjacent the Luas light rail system

The NTA note TII's concern that *'Code of practice of engineering practice for works on, near, or adjacent the Luas light rail system, and Light Rail Environment – Technical Guidelines for Development, TII Publication no PE-PDV-00001',* as well as the physical interfaces, including electromagnetic interference (EMI), with Luas during the construction and operation phases of the overbridge do not appear to have been evaluated in the EIAR.

Section 19.2.3 of EIAR Chapter 19 Material Assets discusses data collection and collation and notes that: *"All major infrastructure and utilities which may be impacted by the Proposed Scheme have been assessed, including:*

- *The Luas Red Line;*
- *The M50 Motorway;*
- *The Grand Canal;*
- *Electricity;*
- *Water / Wastewater;*
- *Surface Water Drainage;*
- *Gas; and*
- *Telecommunications."*

Section 19.3.1 of Chapter 19 discusses major infrastructure and existing utilities and notes that *"The Proposed Scheme will interact with a number of pieces of major infrastructure, including the Luas Red Line at two locations, the M50 motorway at two locations and the Grand Canal. The Proposed Scheme will interact with the Luas Red Line in two different locations along its route. Along the Tallaght Section of the Proposed Scheme, it will cross the Luas Red Line at grade adjacent to the Tallaght Luas Stop where it follows Belgard Square West and crosses the Old Blessington Road. The existing junction is signal controlled. The Tallaght stop is the terminal stop on the Red Line spur to Tallaght. The frequency of the Luas at this stop can be as high as every three minutes at peak times. The Clondalkin Section of the Proposed Scheme will run along and cross the Luas Red Line on the Naas Road between the Long Mile Road / Nangor Road Junction and the Kylemore Luas Stop at the Kylemore Road / Walkinstown Avenue Junction. As with the Tallaght Luas Stop the Luas frequency in this area can be as high as every three minutes at peak time in both directions."*

Section 19.4.3.1.1 of Chapter 19 discusses the construction phase impact on major infrastructure and notes that *"The Proposed Scheme will interact with the Luas Red Line both in Tallaght and on the Naas Road. During the Construction Phase, there will be no impact on the operation of the Luas, and access to both Tallaght and Kylemore Luas Stops will be maintained. Therefore, there are no significant impacts anticipated on this infrastructure."*

The design of the Proposed Scheme has had regard to the relevant TII guidance for both construction and operation, including guidance for works on, near or adjacent to LUAS light rail systems, as outlined in detail below. Compliance with this TII guidance addresses the potential issues relating to physical and electromagnetic interfaces between the Proposed Scheme and TII assets, and consequently no significant residual effects in this regard are noted in the EIAR.

Section 19.4.4.1.1 of Chapter 19 discusses the operational phase impact on major infrastructure and notes that *"Upon completion of the Construction Phase, there will be no interaction between the operation of the Proposed Scheme and the M50 Motorway or the Grand Canal. The Proposed Scheme will interface with the Luas Red Line in Tallaght and on the Naas Road, including a number of crossings of the tramline. All of these crossings are, and will continue to be, signal controlled to maintain operation of both the Proposed Scheme and the Luas. Therefore, there is no significant Operational Phase impact anticipated on major infrastructure as a result of the Proposed Scheme."*

Table 20.4 of Chapter 20 Risk of Major Accidents provides a rating of major accidents and disasters in the absence of mitigation. Risk ID L relates to the risk of accidents due to the interface of construction works with the Luas, which is categorised as low, as shown in Figure 2.8.8.14.

Risk ID	Event	Proposed Scheme Element	Likelihood	Rating	Consequence	Rating	Resulting Risk Category
J	Ground Collapse / Instability - Risk of excavation works leading to subsidence of land, or encountering unstable ground during construction	Throughout	Unlikely	3	Serious Predominantly shallow excavations required Areas of deeper excavation (pedestrian / cycle bridges, retaining walls, drainage). unstable heritage stone walls	3	Medium
K	Transport Accident-Major Road traffic accident resulting from a collision between construction traffic and public traffic i.e., cars, buses, Heavy Goods Vehicles (HGVs), in addition to pedestrians and cyclists using the road or footpaths	Throughout	Unlikely	3	Serious Potential fatalities and injuries Potential to lead to fire and associated effects Potential to discharge deleterious material (e.g., fuel) to watercourses Potential for damage to transport infrastructure and disruption to transport services	3	Medium
L	Transport Accident - Risk of accidents due to interface of construction works with other public transport infrastructure (Luas at Belgard Square West and Naas Road)	Belgard Square West and Naas Road	Very Unlikely	2	Serious Potential for a significant number of fatalities and injuries Potential to lead to fire and associated effects Potential for significant damage to transport infrastructure and disruption to services	3	Low

Figure 2.8.8.14 Extract of Table 20.4 Rating of Major Accidents and Disasters in the Absence of Mitigation

Appendix J2 of the Preliminary Design Report (PDR), provided as part of the Supplementary Information, is the Preliminary Design Report for Bridge ST02 – Naas Road Pedestrian/Cycle Bridge (PDR ST02), which has been developed in accordance with the TII Technical Acceptance of Road Structures on Motorways and notes that the design of these bridges has been developed in accordance with TII publication DN-STR-03001 and has included liaison and consultation with TII.

Section 3.3 of PDR Appendix J2 (PDR ST02) describes that the design of the new bridge has been undertaken in accordance with the following publications:

- *"TII publication DN-STR-03001 - Technical Acceptance of Road Structures on Motorways and Other National Roads.*
- *TII's "Code of Engineering Practice for Works on, near or adjacent to the LUAS Light Rail System"*
- *TII publications DN-GEO-03036 and DN-GEO-03040 - Subways for Pedestrians and Pedal Cyclists Layout and Dimensions."*

Section 3.3.3 of the PDR Appendix J2 (PDR ST02) states: *"A minimum vertical clearance of 5.7m will be provided to all carriageways in accordance with DN-GEO-03036 – Cross Section and Headroom. A minimum vertical clearance of 6m will be provided from the top of rail level of the Luas tracks in accordance with TII's 'Code of Engineering Practice for Works on, near or adjacent to the LUAS Light Rail System'. The bridge will have a fully enclosed superstructure with a minimum internal headroom of 2.7m above finished surface level in accordance with TII publications DN-GEO-03036 and DN-GEO-03040 - Subways for Pedestrians and Pedal Cyclists Layout and Dimensions."*

Section 4.1 of PDR Appendix J2 (PDR ST02) describes the traffic management proposals during construction as follows: *"The bridge will be constructed over the highly congested junction of Naas Road, Long Mile Road, New Nangor Road and the Luas Red Line. The construction sequence will need to minimise disruption to Luas, vehicle, cyclist and pedestrian traffic through the junction and limit subsequent effects on traffic in the surrounding areas.*

Construction and erection of each span of the bridge will require temporary lane closures and diversions. It should be carried out outside of peak times during night-time and weekend possessions. The construction sequence should prioritise construction of the arterial spans and central span sequentially rather than simultaneously. This will minimise the lane closures required at any one-time during construction. Construction time over the carriageways and Luas tracks and the extent of lane possessions and traffic management will be minimised through assembly of each span off-line within the main construction compound located within the brown field site to the south of the bridge location. Once assembled, each span will be manoeuvred into position by crawler cranes and Self Propeller Modular Transporters (SPMTs). Localised traffic management will be required throughout

construction, where possible the effects of localised traffic management on the flow of traffic within the junction should be minimised. During construction the minimum vertical clearances of 5.7m over the carriageways in accordance with DN-GEO-03036 and 6m over the Luas tracks in accordance with TII's "Code of Engineering Practice for Works on, near or adjacent to the LUAS Light Rail System". will be maintained."

In summary, as noted in Section 19.2.3 of EIAR Chapter 19 Material Assets the physical interfaces of all major infrastructure and utilities which may be impacted by the Proposed Scheme have been assessed, including the Luas Red Line, and the design of the Proposed Scheme at this location has taken TII's 'Code of practice of engineering practice for works on, near, or adjacent the Luas light rail system' in to consideration as set out in the PDR for ST02.

Pedestrian movement in the vicinity of the Kylemore tram stop

The NTA note TII's concern in respect of pedestrian movements related to Kylemore Tram stop.

As stated in Section 4.5.6.1 of Chapter 4 describes that the proposed arrangement at this location allows for improved bus facilities and passenger interchange with the Kylemore Luas Stop, which will assist in achieving one of the objectives of the Proposed Scheme, namely to enhance the capacity and potential of the public transport system. This is achieved by the provision of additional bus stops in close proximity to the Kylemore Luas stop, as shown in Figure 2.8.8.15, which show the proposed and existing layouts.

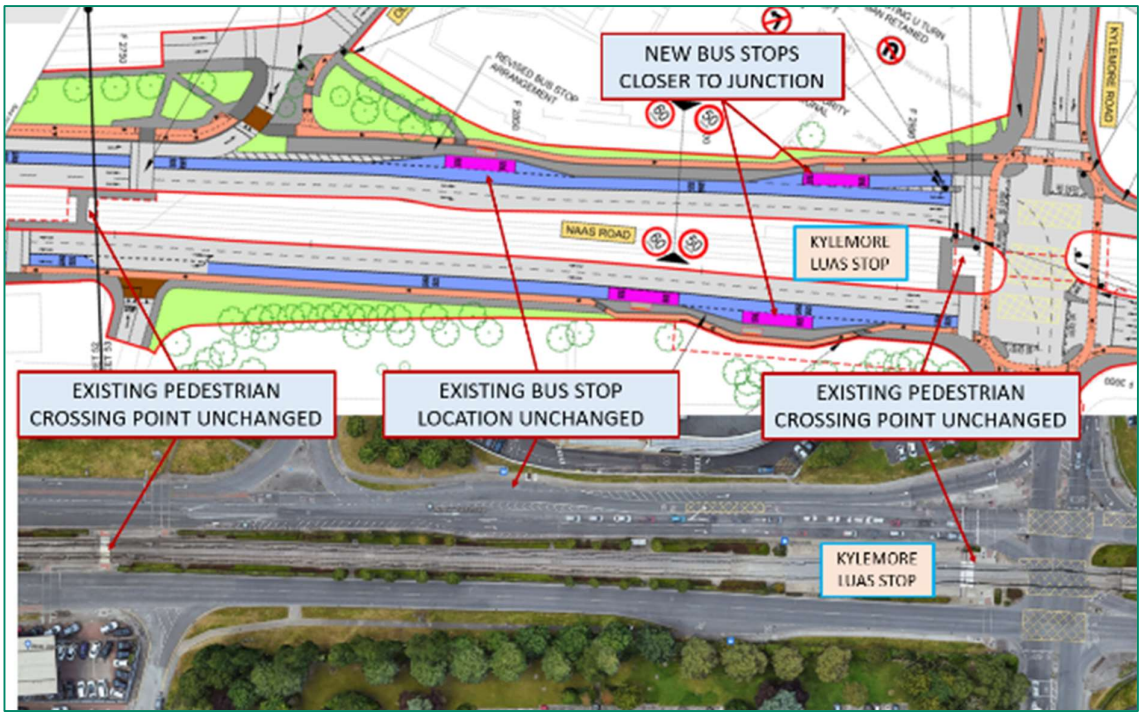


Figure 2.8.8.15 Extract of General Arrangement for the Proposed Scheme and Existing layout

The proposed bus laybys will serve longer distance regional services along the Naas Road, with the laybys allowing for longer dwell times associated with passenger disembarkation, whereas the in-line bus stops will serve the local Dublin bus services running along the length of the Proposed Scheme.

As can be seen from Figure 2.8.8.15, the two existing pedestrian crossing points of the Naas Road will remain unchanged following the implementation of the Proposed Scheme. The two new bus stops are located as close as practicable to the crossing point immediately east of the Kylemore Tram stop, and closer than the existing arrangement.

Section 6.3.2.1.10.1 of EIAR Chapter 6 Traffic and Transport considers the impact on pedestrian infrastructure for this section of the Proposed Scheme. As noted in Table 6.34, the Proposed Scheme is assessed as having a high positive impact on pedestrians at the R810 Naas Road / Kylemore Road / R112 Walkinstown Avenue signalised junction.

No alterations to the Luas infrastructure and associated services are proposed as part of the Proposed Scheme along this section of the route.

In summary, it is considered that the Proposed Scheme will not negatively impact pedestrian movement and behaviour at this location, as raised by the submission.

3 Construction Traffic

The submission notes that Construction Compounds TC13 is located adjacent to the Luas, suggesting that construction traffic must be specifically managed to avoid impact on the Luas.

Section 5.8 of EIAR Chapter 5 Construction describes the management of traffic during construction and notes that a Construction Traffic Management Plan (CTMP) *"has been prepared to facilitate the assessment of the potential impacts on traffic and transport along the Proposed Scheme. The CTMP includes details of the temporary traffic management measures that will be implemented during the construction of the Proposed Scheme.*

The staging of construction and associated temporary traffic management measures has considered the receiving environment when developing the schedule of works. The CTMP has given due consideration to facilitate the maximum practicable movement of people during the Construction Phase through implementing the following hierarchy of transport mode users:

- *Pedestrians;*
- *Cyclists;*
- *Public Transport; and*
- *General Traffic.*

Access will be maintained for emergency vehicles along the Proposed Scheme, throughout the Construction Phase. The construction traffic management measures have been developed in accordance with the Traffic Signs Manual (Department of Transport, Tourism and Sport 2019). Construction traffic management measures are summarised in Section 5.8.1 to Section 5.8.3, with further details (such as routing of construction vehicles, timings of material deliveries, etc.) included in the CTMP in Appendix A5.1 CEMP in Volume 4 of this EIAR."

Section 5.2.3 of Appendix A5.1 describes how *"the appointed contractor shall be responsible for developing a CTMP to effectively manage traffic and transport during the Construction Phase of the Proposed Scheme."* It goes on to provide a list of aspects that the appointed contractor shall address during the preparation of the CTMP.

Section 6.4.5.3 of EIAR Chapter 6 Traffic and Transport describes the envisaged dedicated construction vehicle routes, and notes that "*construction vehicles will be directed to access work sections via the Proposed Scheme and dedicated routes on the National and Regional Road Network where practicable, to minimise use of the local road network*."

Section 6.4.5.3 goes on to state that *"The haulage of material on site is anticipated to be minimal. There will however be the removal of excavated material and the delivery of construction materials to site. It is anticipated that the exporting and delivery of materials will be executed as efficiently as possible using dedicated Construction Access Routes. Construction vehicles will be directed to access work sections via the Proposed Scheme and dedicated routes on the National and Regional Road Network where practicable, to minimise use of the local road network."*

Section 6.4.5.4.6.1 of Chapter 6 describes the predicted general traffic redistribution arising from the construction of the Proposed Scheme and notes that *"Significant impacts due to general traffic redistribution away from the direct study area are not anticipated during the Construction Phase based on the intended nature of the progressive works along the corridor whereby traffic flows, in general, are to be maintained in both directions. There may be a requirement for some localised temporary lane closures during the day, which will involve consultation between the appointed contractor and relevant authorities. Access for general traffic to existing residential and commercial*

units immediately adjacent to the Proposed Scheme is to be accommodated throughout the Construction Phase."

Section 6.4.5.4.6.1 goes to state that *"The appointed contractor will develop a CTMP that gives due consideration to provision of local access requirements and designates appropriate diversion routes in the case where localised temporary closures are required. Overall, for these reasons, the impact on general traffic redistribution is anticipated to be* ***Negative, Moderate and Short Term*** *due to the temporary nature of any restrictions."*

Section 6.4.5.4.6.2 of Chapter 6 discusses construction traffic generation, and quantifies traffic arising from site operatives and heavy goods vehicles. It notes that the *"CTMP will control vehicular movement along the construction route, including restrictions on the number of HGVs accessing and egressing the construction works throughout the day to mitigate the impacts to general traffic on the surrounding road network.*

Based on construction activities associated with the Proposed Scheme, the maximum number of HGVs expected to be in operation across the Proposed Scheme during peak haulage activities is 28 vehicles.

In a typical hour during peak haulage activity of the Proposed Scheme, 40% of lorries are anticipated to be in operation on the public road network which equates to approximately 11 lorries. A total of 11 two-way lorry movements are therefore expected in a typical hour during peak haulage activity of the Proposed Scheme.

Overall Peak Hour Impacts: The contents of Table 6.17 outline the anticipated maximum construction traffic generation by site operatives and HGVs during the AM and PM Peak Hours."

Table 6.17 Anticipated Maximum Construction Traffic Generation during Construction Phase

Peak Hour	Arrivals		Departures		Total Two-Way Traffic Flows (pcu)
	Car / Van (1 pcu)	HGV (2.3 pcu)	Car / Van (1 pcu)	HGV (2.3 pcu)	
AM Peak Hour	10	26	0	26	62
PM Peak Hour	0	26	10	26	62

Figure 2.8.8.16 Table 6.17 of EIAR Chapter 6

Section 6.4.5.4.6.2 concludes as follows: *"Given that the above impacts are minimal and comfortably below the thresholds set out in TII's Guidelines for Transport Assessments, it is considered appropriate to define the general traffic impacts of the Construction Phase to have a Negative, Slight and Short-term effect. Therefore, no further analysis is required for the purpose of this assessment.*

It should be noted that further detail on the restrictions to construction vehicle movements during the peak periods of the day will be contained within the appointed contractor's CTMP prior to construction."

In summary, the EIAR has considered the impact of construction traffic on the road network, which included the junctions that interface with the Luas. The CTMP included in Appendix A5.1 (CEMP), together with the appointed contractor developing a CTMP to effectively manage traffic and transport during the Construction Phase of the Proposed Scheme, will satisfactorily manage any impact on the safe and efficient operation of the national road network.

Mitigations requirements

The submission expresses the view that the EIAR does not appear to fully identify specific mitigation of the potential impacts on Luas network infrastructure and services beyond the traffic management provisions provided in Table 5.8 of EIAR Chapter 5.

The submission also notes that any alteration to tramway and associated services and signalisation, including the overhead bridge, will require pre-development assessment at the two interfaces identified.

The submission states that TII consider it appropriate that specific mitigation and monitoring commitments for potential impact on Luas that have regard to TII's *"Code of Engineering Practice for*

Works on, near or adjacent to the LUAS Light Rail System' are reflected in the CEMP provided as Appendix A5.1 of the EIAR.

Section 6.4.5.3 of EIAR Chapter 6 Traffic and Transport describes the envisaged dedicated construction vehicle routes, and notes that "*construction vehicles will be directed to access work sections via the Proposed Scheme and dedicated routes on the National and Regional Road Network where practicable, to minimise use of the local road network*."

Section 6.4.5.3 goes on to state that *"The haulage of material on site is anticipated to be minimal. There will however be the removal of excavated material and the delivery of construction materials to site. It is anticipated that the exporting and delivery of materials will be executed as efficiently as possible using dedicated Construction Access Routes. Construction vehicles will be directed to access work sections via the Proposed Scheme and dedicated routes on the National and Regional Road Network where practicable, to minimise use of the local road network."* It goes on to list the N7, M50 and N81 as the national roads that are envisaged to form dedicated Construction Access Routes for construction vehicles to travel to and from the construction works.

Section 6.4.5.4.6.2 of Chapter 6 discusses construction traffic generation, and quantifies traffic arising from site operatives and heavy goods vehicles. It notes that the *"CTMP will control vehicular movement along the construction route, including restrictions on the number of HGVs accessing and egressing the construction works throughout the day to mitigate the impacts to general traffic on the surrounding road network.*

Based on construction activities associated with the Proposed Scheme, the maximum number of HGVs expected to be in operation across the Proposed Scheme during peak haulage activities is 28 vehicles.

In a typical hour during peak haulage activity of the Proposed Scheme, 40% of lorries are anticipated to be in operation on the public road network which equates to approximately 11 lorries. A total of 11 two-way lorry movements are therefore expected in a typical hour during peak haulage activity of the Proposed Scheme.

Overall Peak Hour Impacts: The contents of Table 6.17 outline the anticipated maximum construction traffic generation by site operatives and HGVs during the AM and PM Peak Hours."

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AM Peak Hour	10	26	0	26	62
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Figure 2.8.8.17 Table 6.17 of EIAR Chapter 6

Section 6.4.5.4.6.2 concludes as follows: *"Given that the above impacts are minimal and comfortably below the thresholds set out in TII's Guidelines for Transport Assessments, it is considered appropriate to define the general traffic impacts of the Construction Phase to have a Negative, Slight and Short-term effect. Therefore, no further analysis is required for the purpose of this assessment.*

It should be noted that further detail on the restrictions to construction vehicle movements during the peak periods of the day will be contained within the appointed contractor's CTMP prior to construction."

In summary, as noted throughout the response, no alterations to the Luas infrastructure and associated services are proposed as part of the Proposed Scheme at any of the interface locations between the Proposed Scheme and the Luas Red line. In addition, general traffic impacts of the Construction Phase are assessed to have a Negative, Slight and Short-term effect on the road network, and hence the Luas as services traverse the various road junctions. Therefore, it is considered that the construction of the Proposed Scheme will not impact the capacity and efficiency of the Luas network infrastructure and associated services.

Recommendations

Proposed Condition 1

Overhead Conductor System (OCS) poles are located on / adjacent to the proposed scheme. Prior to commencement of development, the following plans and details shall be submitted for the written agreement of the planning authority subject to the written agreement of TII:

i) OCS pole protection and safety distances, and /or

ii) Existing, temporary and subsequent permanent fixings.

The developer shall be liable for all costs associated with the removal and reinstatement of the Luas related infrastructure.

The NTA acknowledges the close liaison with TII that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within TII. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of TII and taking their requirements into consideration, where aligned with and consistent with the EIAR. The NTA is satisfied that these are matters that can be successfully addressed between TII and the NTA, in the absence of any approval condition.

Proposed Condition 2

Luas signalisation infrastructure including Automatic Vehicle Location System (AVLS) is located on / or adjacent to the proposed scheme. Prior to commencement of development, the following plans and details shall be submitted for the written agreement of the planning authority subject to the written agreement of TII:

i) Locations of all Luas signalisation infrastructure and / or

ii) Existing, temporary and subsequent alterations, and / or

iii) Temporary traffic management proposals

iv) The developer shall be liable for all costs associated with the removal and reinstatement of the Luas related infrastructure.

The NTA acknowledges the close liaison with TII that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within TII. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of TII and taking their requirements into consideration, where aligned with and consistent with the EIAR. The NTA is satisfied that these are matters that can be successfully addressed between TII and the NTA, in the absence of any approval condition.

Proposed Condition 3

The Naas Road Pedestrian and Cycle Bridge, overbridge access, Luas Kylemore Tramstop and proposed pedestrian and cycle accesses during construction shall be subject to detailed design and execution in accordance with TII technical approval. TII technical design approval must be obtained prior to commencement of development.,

The NTA acknowledges the close liaison with TII that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within TII. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of TII and taking their requirements into consideration, where aligned with and consistent with the EIAR. The NTA is satisfied that these are matters that can be successfully addressed between TII and the NTA, in the absence of any approval condition.

Proposed Condition 4

Prior to the commencement of development, the Construction Environmental Management Plan (CEMP) shall be submitted for the written agreement of the planning authorities subject to the written agreement of TII. The CEMP will include a method statement to resolve all Luas interface issues that shall:

i) Identify all Luas interfaces,

ii) contain a risk assessment for works associated with the interfaces, including all electrification fault scenarios and

iii) Contain mitigation measures for unacceptably high risks, including electromagnetic interference (EMI) and vibration and settlement monitoring regime if necessary.

The method statement shall be in accordance with TT's "Code of engineering practice for works on, near, or adjacent to Luas light rail system."

The NTA acknowledges the close liaison with TII that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within TII. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of TII and taking their requirements into consideration, where aligned with and consistent with the EIAR. The NTA is satisfied that these are matters that can be successfully addressed between TII and the NTA, in the absence of any approval condition.

Proposed Condition 5

All works associated with removal, temporary and final installation of Luas infrastructure are to be undertaken outside of Luas operational hours, under system shutdown and Overhead Conductor System isolation with prior agreement with TII and the Luas Operator as required.

The NTA acknowledges the close liaison with TII that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within TII. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of TII and taking their requirements into consideration, where aligned with and consistent with the EIAR. The NTA is satisfied that these are matters that can be successfully addressed between TII and the NTA, in the absence of any approval condition.

Proposed Condition 6

Prior to the commencement of development, a Construction Traffic Management Plan including access to services, shall be submitted for the written agreement of the planning authorities subject to the written agreement of TII. The Construction Traffic Management Plan shall include identification of mitigation measures to protect operational Luas infrastructure.

The NTA acknowledges the close liaison with TII that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within TII. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of TII and taking their requirements into consideration, where aligned with and consistent with the EIAR. The NTA is satisfied that these are matters that can be successfully addressed between TII and the NTA, in the absence of any approval condition.

Proposed Condition 7 (numbered 5 in TII submission)

The Luas operator/TII will required 24hr access to Luas infrastructure. Prior to the commencement of development, the developer shall enter into an access and maintenance agreement with TII.

The NTA acknowledges the close liaison with TII that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within TII. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of TII and taking their requirements into consideration, where aligned with and consistent with the EIAR. The NTA is satisfied that these are matters that can be successfully addressed between TII and the NTA, in the absence of any approval condition.

Proposed Condition 8 (numbered 6 in TII submission)

The developer or contractor will be required to apply for a works permit from the Luas Operator by virtue of the Light Railway (Regulation of Works) Bye-laws 2004 (S.I. number 101 of 2004) which regulates works occurring close to the Luas infrastructure in accordance with TII's "Code of engineering practice for works on, near, or adjacent to Luas light rail system." The developer shall be liable for all of TII's costs associated with the removal and reinstatement of the Luas related building fixings and infrastructure. The permit application will require prior consultation, facilitated by the Luas operator, Transdev.

The NTA acknowledges the close liaison with TII that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within TII. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of TII and taking their requirements into consideration, where aligned with and consistent with the EIAR. The NTA is satisfied that these are matters that can be successfully addressed between TII and the NTA, in the absence of any approval condition.

2.8.9 45 - DAU - DHLGH

2.8.9.1 Overview of submission

The submission raised the following points and issues:

1. Calcicole Plant Communities Conservation Plan required.

That prior to the commencement of any on-site works on the Tallaght /Clondalkin to Dublin City Centre Bus Connects Project a Greenhills Road Calcicole Plant Communities Conservation Plan shall be submitted to the South Dublin County Council Heritage Officer for written agreement, this plan to be based on survey work to be undertaken at appropriate seasons to identify calcicole plant species including orchid species occurring in the vicinity of the Greenhills Road which may be affected by the proposed Bus Connects project, and to provide for their conservation in situ, by transplantation to adjacent locations and /or through the encouragement of their colonisation of the new embankments to be constructed adjoining the Greenhills Road as part of this project; the implementation of this plan to be monitored for five years subsequent to the completion of the Tallaght/Clondalkin to City Centre Bus Connects Project and its progress to be reported to the County Heritage Officer annually in writing.

Reason: To conserve the high floral diversity of the calcicole plant communities occurring along the Greenhills Road esker and in its vicinity.

i. No removal of vegetation during main bird breeding season

That no removal of shrubs, trees or other vegetation to facilitate the proposed development shall occur during the main bird breeding season from March to August inclusive.

Reason: To avoid the destruction of bird nests, eggs and nestlings.

ii. Archaeology:

1. All mitigation measures to be implemented in full.
2. CEMP to include location of all archaeology and cultural heritage.
3. Project Archaeologist to be appointed.
4. Planning authority and dept. shall be furnished with final archaeological report

2.8.9.2 Response to submission

1. Calcicole plant communities' conservation plan required

A series of habitat surveys to inform the Environmental Impact Assessment of the Proposed Scheme was undertaken. As documented in Table 12-1, Section 12.2.3.2 of the EIAR, habitat surveys were initially completed between June and August 2018, with ground truthing/validation exercises to capture any changes to the habitat baseline and minor revisions to the Proposed Scheme boundary completed in August 2020, December 2022, and January 2023. As documented in Section 12.2.3.3 of the EIAR, the habitat surveys were completed by suitably qualified and experienced ecologists according to recognised standards[2] for the identification and mapping of habitats. Surveys completed in June and July 2018 were conducted at the appropriate time of year to identify habitats and to identify indicator species of habitats of high conservation value. These indicators include calcicole species such as orchids.

The description 'calcicole plant community' is broad and potentially pertains to a range of Fossitt habitat types, however the DAU's description appears to refer to a grassland community. No habitats matching the description of the DAU submission in terms of flora species were identified during surveys for the Proposed Scheme

[2] Habitats were identified to Level 3 in the Heritage Council's *A Guide to Habitats in Ireland* (Fossitt, 2000), and surveys were completed following the methodologies of contained in *Best Practice Guidance for Habitat Survey and Mapping* (Smith et al, 2011)

The closest equivalent Fossitt (2000) habitat type to the DAU's description, which occurs within the Proposed Scheme boundaries, and which is adjacent to Greenhills Road is 'dry meadows and grassy verges (GS2)', located in Tymon Park (See Section 12.3.5.13 of the EIAR Biodiversity Chapter) which was valued as local importance (higher value). It was identified in Section 12.4.3.2.1 of the EIAR that the loss of 'dry meadows and grassy verges (GS2)' habitat arising from the construction phase of the proposal will be significant at the local geographic scale. Mitigation measures with respect to post-construction landscaping are documented in Section 12.5.1.2.1, and it was concluded in Section 12.6.1 that no significant residual effects would arise following the implementation of mitigation.

The NTA notes the DAU request that a Greenhills Road Calcicole Plant Communities Conservation Plan shall be submitted to the South Dublin County Council Heritage Officer for her written agreement. The NTA will positively engage with South Dublin County Council for the preparation of a Calcicole Plant Communities Conservation Plan, subject to the completion and outcome of a validation exercise to record and map any calcicole plant communities within or adjacent to the proposed development boundary, in the vicinity of the Greenhills Road, in the May/June prior to commencement of construction. The Calcicole Plant Communities Conservation Plan will be prepared should calcicole species be present, based on the survey results.

2. No removal of vegetation during the main bird breeding season

The potential for mortality risk on breeding birds is identified and explored in Section 12.4.3.5.1.2 of the EIAR. It is acknowledged that in the absence of measures to avoid or reduce effects, it is likely that "*nest sites holding eggs or chicks will be destroyed and birds killed*" where site clearance works take place during the bird breeding season – March through August, inclusive. The following measures are therefore included in Section 12.5.1.5.1.2 to remove the risk of mortality for breeding birds:

"*Where practicable, vegetation (e.g., hedgerows, trees, scrub, bankside vegetation and grassland) will not be removed, between the 01 March and the 31 August, to avoid direct impacts on nesting birds. Where the construction programme does not allow this seasonal restriction to be observed, then these areas will be inspected by a suitably qualified ecologist as engaged by the appointed contractor, for the presence of breeding birds prior to clearance. Areas found not to contain nests will be cleared within three days of the nest survey, otherwise repeat surveys will be required. Vegetation clearance will not commence where nests are present, works will resume when birds have fledged and nests are no longer in use, or an agreement is reached with NPWS*."

As documented in Table 12.17, Section 12.6.1 of the EIAR, there are no significant residual effects on birds arising from mortality following the adoption of the above measures.

The DAU submission requests that any removal of vegetation should occur entirely outside of the breeding bird season. The NTA notes this request, but would contend that the measures proposed within the EIAR are sufficiently robust to reduce mortality impacts on breeding birds to levels that are not significant at any geographic scale and that the flexibility provided in the mitigation measures in terms of timing of removal of vegetation are appropriate given the nature of most of the vegetation within the proposed scheme boundary – the vast majority of which comprises isolated street trees where the identification of nests by an ecologist will be feasible within the breeding bird season.

3. Archaeology

All mitigation measures to be implemented in full

The DAU have requested that all mitigation measures set out in Chapter 15 of the EIAR shall be implemented in full. The NTA confirm that the mitigation measures set out in the EIAR will be implemented.

CEMP to include location of all archaeology and cultural heritage constraints relevant to the Proposed Scheme and describe all archaeological impacts and mitigation measures

Chapter 15 in Volume 2 of the EIAR sets out the archaeological baseline in which the Proposed Scheme is located, assesses the potential for archaeological impacts as a result of the Proposed Scheme and sets out the mitigation measures which will be implemented.

In Section 5.1.1.2 on the CEMP (Appendix A5.1 in Volume 4 of the EIAR) outlines that the CEMP is part of the EIAR and should be read in conjunction with it:

"The CEMP has been prepared as part of this EIAR and the NIS, and should be read in conjunction with the following Proposed Scheme specific documents:

- *The EIAR, with particular reference to Chapter 5 (Construction) in Volume 2 of this EIAR; • The NIS;*
- *The Construction Contract; and*
- *Copies of An Bord Pleanála's Order, Inspector's Report and associated documentation….."*

Archaeological mitigation to be implemented is set out in Table 5.2 of the CEMP and it is noted that Table 5.2 should be read in conjunction with the relevant technical assessment chapter (in this case Chapter 15). Table 5.2 of the CEMP list out the locations of all archaeological and cultural heritage constraints which require monitoring, along with proposed actions associated with each location.

Project Archaeologist to be appointed

The NTA notes the proposed condition to appoint a Project Archaeologist and confirm that Section 15.5.1.1 of Chapter 15 of the EIAR sets out that:

"….The NTA will procure the services of a suitably qualified archaeologist as part of its Employer's Representative team administering and monitoring the works….."

Planning authority and department shall be furnished with final archaeological report

With regard to the provision of a final archaeology report, it is acknowledged in Section 15.5.1.1 that when archaeological excavation takes place, there will be a paper and digital archive of the works:

"Archaeological excavation ensures that the removal of any archaeological soils, features, finds and deposits is systematically and accurately recorded, drawn and photographed, providing a paper and digital archive and adding to the archaeological knowledge of a specified area (i.e. preservation by record)….."

2.8.10 55 - Brendan Heneghan

2.8.10.1 Overview of submission

The submission raised the following points and issues:

1. No additional buses

Submission gives the opinion that no extra buses are provided on this corridor

2. Removal of additional bus services

Submission gives the opinion that bus services are removed from estates either side of the corridor in the Crumlin area.

3. Existing difficulties with bus services

Submission gives the opinion that current bus services are unable to run to timetable and difficulties accessing buses in the city centre. In particular the 17, 18, 83 and 150 bus routes.

4. Minimal journey time savings

Submission gives the opinion that proposed scheme will achieve minimal time savings.

5. Inadequate time to review CBC proposal

Submission gives the opinion that application review time period allowed is insufficient, application documents also omit vital information (as above).

6. Appalling consultation process

Submission gives the opinion that consultation process is appalling and suggests further consultation required to deal with specific measures by area. Consultation falls short of Aarhus Convention. Queries intention/meaning of “Non-Statutory”.

7. Inadequate traffic modelling

Submission gives the opinion that additional traffic on locals roads such as Lorcan O’Toole Park, Stannaway Road and general Drimnagh areas has not been advised to residents. Concern regarding impact of scheme, and other CBC schemes, due to traffic displacement onto local roads which the application has not provide clear and proper information.

Pages 152 and 159 of Chapter 6 suggests a large displacement of traffic onto local roads which show scheme has not been considered with adjacent schemes.

Traffic projections based on AM and PM peak hours is inadequate for assessment with bus corridors in place as it cannot be seen what traffic will be at other times of the day. Additional traffic outside AM and PM peak times on local roads will impact noise, pollution, pedestrian safety and on-street parking.

Traffic assessment maps are not large enough to identify affected roads and range of colours insufficient.

States existing traffic projections cannot be trusted giving example of Map 6.13 showing extra cars on Belmont Avenue and Balfe Road and Harty avenue in Walkinstown

8. Metro alternative should be considered

Submission gives the opinion that Metrolink to Tallaght would be a better alternation to this bus corridor

9. Proposed City edge development should be considered

Submission gives the opinion that the City Edge project should be considered for the scheme but unable to find reference to this in the application documents. There does not appear to be any analysis of Metro South west, capacity of the Luas or the City Edge project in the application documents.

10. How is city centre affected?

Submission queries why no analysis of bus routes between Christchurch and Fairview, opinion is that buses slow down when they reach the city centre. DCC proposals for Plaza at college green and its

impact on this corridor has not been analysed. Submission noted discrepancy between the Clongriffin Scheme relation to D1 route time savings

11. Expedite Bunting Road proposals

Submission welcomes proposal for cycle track on Bunting road and suggests construction of this scheme is expedited.

12. Parkview bus route strange

Submission gives the opinion that proposed route here is strange and hopes residents are fully aware

13. Clonard Road and Bangor Drive

Submission queries turn bans at these junctions on Crumlin Road, traffic surveys (2019) are out of date and suggests there is no bus related reason for these turn bans, reducing access at these locations will have negative environmental impact on residents of old County Road.

14. Left slip at Drimnagh Road / Walkinstown Road

Submission questions the removal of the left slip lane from Drimnagh Road to Walkinstown Road

2.8.10.2 Response to submission

1. No additional buses

Section 2.2.1.5 of Chapter 2 (Need for the Proposed Scheme) of Volume 2 of the EIAR notes the following:

"To inform the preparation of the GDA Transport Strategy 2016 - 2035, the NTA prepared the Core Bus Network Report (NTA 2015) for the Dublin Metropolitan Area, which identified those routes upon which there needed to be a focus on high capacity, high frequency and reliable bus services, and where investment in bus infrastructure should be prioritised and concentrated. The Core Bus Network is defined as a set of primary orbital and radial bus corridors which operate between the larger settlement centres in the Dublin Metropolitan Area. The development and implementation of priority infrastructure on the Core Bus Network is to ensure that delays are minimised, reliability is improved through peak and off-peak periods and mode shift from the private car is made more attractive. The reason for focussing on the Core Bus Network is to maximise the return on future investment in bus infrastructure and to facilitate efficient operation of bus services, thereby improving the attractiveness of public transport for a large proportion of the population of the Dublin Metropolitan Area and beyond. The Core Bus Network Report focused on the overall existing bus service network and identified locations where the bus network is operating sub-optimally. The network is dominated by a radial network to / from Dublin City Centre, supplemented by low frequency orbital and local bus routes serving larger destinations outside of the City Centre core.

….. There are two main bus corridors in the south west Dublin area, linking Tallaght / Clondalkin to the City Centre. One runs along the R137 through Terenure, and the other runs along the R819 / R110 through Walkinstown and Crumlin, with a spur to Clondalkin via the R134. While there are significant sections of bus lanes in both directions, there are long sections with little or no bus lanes provided. For example, on the Greenhills Road Corridor there is a 4km section with no bus lanes in either direction. As a result, reliability of journey times is poor in this area. The Core Bus network study included a recommended route from Tallaght and Clondalkin to the City Centre on the basis of the need to serve significant demand along this entire corridor and the need to address service deficits (lack of bus priority and associated journey time reliability) for a high level of scheduled bus services already operating along this corridor."

As stated in Section 2.1 of Chapter 2 of the EIAR, the Proposed Scheme aims to meet growth demand by:

"enhancing capacity of the public transport system and enhancing safe infrastructure for cycling are underpinned by the central concept and design philosophy of 'People Movement'. People Movement is the concept of the optimization of roadway space and / or the prioritisation of the movement of people over the movement of vehicles along the route and through the junctions along the Proposed

Scheme. The aim is to reduce journey times for modes of transport with higher person carrying capacity (bus, walking and cycling), which in turn provides significant efficiencies and benefits to users of the transport network and the environment."

Section 2.2.2 notes the following:

"The Proposed Scheme will enhance interchange between the various modes of public transport operating in the city and wider metropolitan area. The CBC Infrastructure Works, including the Proposed Scheme, are developed to provide improved existing or new interchange opportunities with other existing and planned transport services, including:

- *DART stations;*
- *Existing Dublin Bus and other bus services;*
- *The Greater Dublin Area (GDA) Cycle Network Plan;*
- *Future public transport proposals such as the DART + Programme and MetroLink; and*
- *Supporting the Dublin Bus Network Re-design.*

…. As part of the BusConnects revised bus network proposals, the Proposed Scheme will serve the D-Spine bus services. Image 2.9 is an extract from BusConnects Network Redesign maps and shows the different interfaces along the corridor from Tallaght / Clondalkin into the City Centre. Demand for travel by bus is anticipated to continue to grow in this corridor into the future, in line with population growth. The bus priority measures forming part of the Proposed Scheme are required to accommodate this growth in travel demand and to facilitate the revised bus network (D-Spine) by providing journey time and reliability savings for passengers. This will ensure that the projected growth in passenger demand is facilitated and protected from increasing congestion, providing resilience which can in the future cater for additional bus service provision."

Section 2.4 notes the following:

"The Proposed Scheme has been designed to facilitate improved efficiency of the transport network through the improvement of the infrastructure for active (walking and cycling) and public transport modes making them attractive alternatives to car-based journeys. Central to the design is the optimisation of roadway space with a focus on the movement of people rather than vehicles along the route and through the junctions. A typical doubledeck bus takes up the same road space as three standard cars but typically carries 50-100 times the number of passengers per vehicle. On average, a typical double-deck bus carries approximately 60-70 passengers making the bus typically 20 times more efficient in providing people movement capacity within the equivalent spatial area of three cars. These efficiency gains can provide a significant reduction in road network congestion where the equivalent car capacity would require 50 or more vehicles based on average occupancy levels. Consequently, by prioritising the movement of bus over cars, significantly more people can be transported along the limited road space available. Similarly, cyclists and pedestrians require significantly less roadway space than general traffic users to move safely and efficiently along the route. Making space for improved pedestrian and cycle infrastructure can significantly benefit these sustainable modes and encourage greater use of these modes.

The Proposed Scheme design involves the prioritisation of people movement, focusing on maximising the throughput of sustainable modes (i.e., walking, cycling and bus modes). A quantitative people-movement assessment, as part of the transport impact assessment, facilitates a comparison of the Do Minimum and Do Something peak-hour scenarios for the forecast years (2028 and 2043). The benefits resulting from the 2028 AM Peak Hour people-movement assessment shows that there is projected to be an increase of 145% in the number of people travelling by bus, an increase of 45% in the number of people walking or cycling, and a reduction of 33% in the number of people travelling by car along the route of the Proposed Scheme.

The transport modelling also presents demand outputs for people movement by bus in terms of passenger loadings along the corridor. The results indicate that the improvements in bus priority infrastructure with the Proposed Scheme in place show a substantial increase in bus patronage during the peak hours."

2. Removal of existing bus services

EIAR Volume 2 Chapter 2 Need for the Proposed Scheme outlines the policy context that underpins the Proposed Scheme as well as the regional and local transport need for the Proposed Scheme.

Section 2.2.1.5 notes the following:

"To inform the preparation of the GDA Transport Strategy, the NTA prepared the Core Bus Network Report (NTA 2015) for the Dublin Metropolitan Area, which identified those routes on which there needed to be a focus on high capacity, high frequency and reliable bus services, and where investment in bus infrastructure should be prioritised and concentrated. The Core Bus Network is defined as a set of primary orbital and radial bus corridors which operate between the larger settlement centres in the Dublin Metropolitan Area".

Section 2.2.2 of Chapter 2 notes that: *"The Proposed Scheme will facilitate almost 100% bus priority and will complement the rollout of the Dublin Area Bus Network Redesign to deliver improved bus services on the route. This will improve journey times for bus, enhance its reliability and provide resilience to congestion. The Proposed Scheme will enhance interchange between the various modes of public transport operating in the city and wider metropolitan area. The CBC Infrastructure Works, including the Proposed Scheme, are developed to provide improved existing or new interchange opportunities with other existing and planned transport services, including:*

- *DART stations;*
- *Existing Dublin Bus and other bus services;*
- *The Greater Dublin Area (GDA) Cycle Network Plan;*
- *Future public transport proposals such as the DART + Programme and MetroLink; and*
- *Supporting the Dublin Bus Network Re-design."*

Section 3.2.3.3 of the Preferred Route Option Report included in the Supplementary Information for the application notes the following:

"BusConnects Dublin will introduce a redesigned, higher capacity bus network which is more coherently planned and more understandable, delivery a better overall bus system for Dublin and the surrounding areas. Figure 3-3 indicates the final output from this study and illustrates that the D-Spine (D1, D2, D3, D4, D5) runs from the City Centre to the South West, serving areas along the Greenhills Corridor (Tallaght to City Centre Section).

The following is a list of the different Spines & Branches, Orbital Routes, Radial Routes and Local Routes that interact with the Proposed Scheme:

- *Spines and Branches*
  - *D-SPINE Malahide Rd – City Centre – Crumlin;*
  - *D1 Clongriffin – City Centre – Grange Castle;*
  - *D2 Clare Hall – City Centre – Citywest;*
  - *D3 Clongriffin – City Centre – Clondalkin;*
  - *D4 Swords Road – City Centre – Killinarden; and*
  - *D5 Edenmore – City Centre – Tallaght*
- *Orbital Routes*
  - *S2 Heuston – Kimmage – Ballsbridge – Poolbeg*
  - *S4 Liffey Valley – Ballyfermot – Crumlin – Milltown – UCD;*
  - *S6 Tallaght – Dundrum – UCD – Blackrock;*
  - *S8 Tallaght – Sandyford – Dún Laoghaire;*
  - *W2 Liffey Valley – Clondalkin – Tallaght;*
  - *W4 Blanch. SC – Liffey Valley – Grange Castle Rd. – Tallaght; and*
  - *W6 Maynooth – Celbridge – Citywest - Tallaght.*
- *Radial Routes*

- *71 Tallaght – Ballymount – Warrenmount – East Wall;*
- *72 Drimnagh – Warrenmount – East Wall;*
- *73 Marino – City Centre – Walkinstown;*
- *74 Dundrum – Whitechurch – Crumlin – City Centre;*
- *80 Liffey Valley – City Centre – Ballinteer*
- *82 Killinarden – Crumlin – Ringsend; and*
- *85 Tallaght – Ballyboden – Harold's Cross – Parnell Square.*

- *Local Routes*
  - *L44 Ballymore Eustace – Blessington – Tallaght*
  - *X47 Kiltipper – Seskin View – Tymon North – City Centre; and*
  - *P43 Ballynockan – Blessington – City Centre"*

Figure 2.8.10.1 below provides an extract from the BusConnects Proposed Bus Services Network in this area.

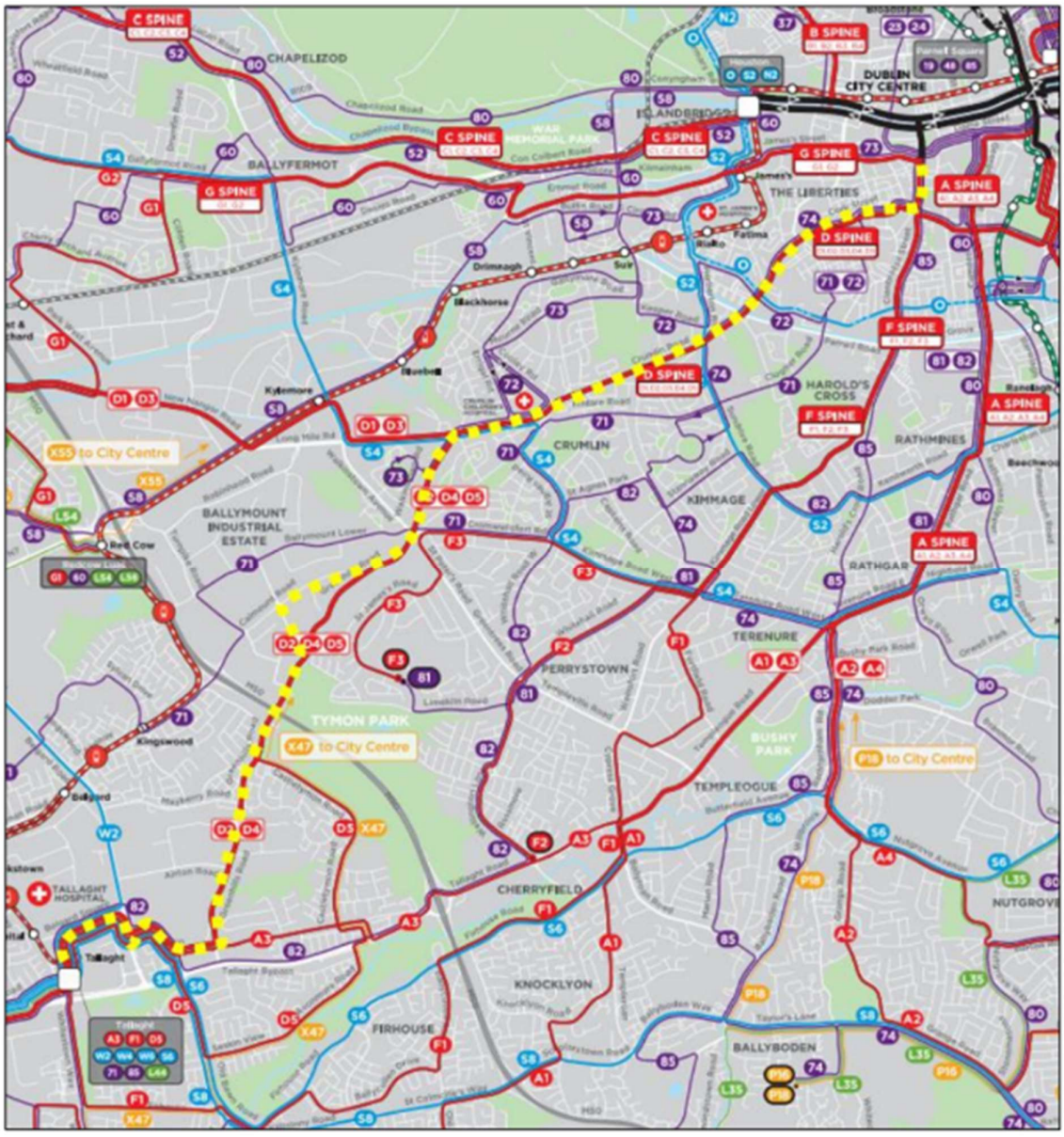


Figure 2.8.10.1: Extract from Preferred Route Option Report Revised Bus Network – South West Quadrant (Figure 3-3)

3. Existing difficulties with bus services

To address deficiencies in the current Dublin bus network, Section 2.2.1.5 of Chapter 2 Need for the Proposed Scheme of Volume 2 of the EIAR notes the following:

"The development and implementation of priority infrastructure on the Core Bus Network is to ensure that delays are minimised, reliability is improved through peak and off-peak periods and mode shift from the private car is made more attractive.

The reason for focussing on the Core Bus Network is to maximise the return on future investment in bus infrastructure and to facilitate efficient operation of bus services, thereby improving the attractiveness of public transport for a large proportion of the population of the Dublin Metropolitan Area and beyond.

The Core Bus Network Report focused on the overall existing bus service network and identified locations where the bus network is operating sub-optimally. The network is dominated by a radial network to / from Dublin City Centre, supplemented by low frequency orbital and local bus routes serving larger destinations outside of the City Centre core.

The following methodology was employed to determine the need for the future core bus infrastructure network:

1) *The existing bus network and bus infrastructure in the Dublin Metropolitan Area was analysed, including the identification, mapping and categorising of the existing bus infrastructure. This analysis identified all roads that have dedicated road space for bus, and other bus priority infrastructure such as Bus Gates, junction bus priority and bus only through routes;*
2) *Journey time delays of the bus network in the Dublin Metropolitan area were examined;*
3) *The frequency of bus services between stops during the peak period was examined to help identify where the highest volume of bus traffic is on the network;*
4) *A demand analysis, including a broad understanding of trip demand was undertaken; and*
5) *Using the above analysis, specific corridors where investment is to be prioritised in the network were identified and mapped.*

Overall, at the time the Core Bus Network Report was prepared, there was approximately 213km of dedicated bus lanes in the GDA, of which 93km can be categorised as outbound and 120km can be categorised as inbound (City Centre or lower order centre as destination).

Bus lanes vary by quality, level of continuity, quality of treatment at junctions and operational times. Generally, all lanes are currently at least operational for their peak hours (i.e. morning peak for inbound and evening peak for outbound). Many are operational in both directions at both peak periods, some from 7am to 7pm and others on a 24-hour basis. Some corridors benefit from a high degree of continuity whereby bus lanes are present for long sections and are not truncated at all junctions. This occurs mostly in locations where a previous full lane of traffic or a pre-existing hard shoulder has been designated as a bus lane.

The GDA Transport Strategy 2016 – 2035 concluded that this high-quality Core Bus Network would form an integral part of the improved public transport infrastructure measures for the Dublin Metropolitan Area. The final resulting Core Bus Network presented in the GDA Transport Strategy represents the most important bus routes within the Dublin Metropolitan Area, generally characterised by high passenger volumes, frequent services and significant trip attractors along the routes."

4. Minimal journey time savings

Section 6.4.6.3 of Chapter 6 of Volume 2 of the EIAR notes the following:

"Bus Network Performance Indicators: A micro-simulation modelling assessment has been developed and network performance indicators of the bus operations along the 'end to end' corridor. A micro-simulation modelling assessment has been developed and network performance indicators of the bus operations along the 'end to end' corridor. The results of the assessment demonstrate that the total bus journey times on all modelled bus services will improve by between 8% and 12% during the AM and PM Peak hours of the 2028 Opening Year and 2043 Design Year. The Proposed Scheme will reduce total bus journey times along the Proposed Scheme by up to 12% in 2028 and 12% in 2043. Based on the AM and PM peak hours alone, this equates to 7.6 hours of savings in 2028 and 7.2 hours in 2043 combined across all buses when compared to the Do Minimum. On an annual basis this equates to approximately 5,750 hours of bus vehicle savings in 2028 and 5,450 hours in 2043, when considering weekday peak periods only. Journey time variation and reliability are shown to improve in all Do Something scenarios compared to the Do Minimum. Overall, it is anticipated that the improvements in journey times and reliability for bus users along the Proposed Scheme will have a Positive, Very Significant and Long-term effect."

5. Inadequate time to review CBC proposal

The application as submitted to An Bord Pleanála on 28 April 2023 was complete and fully in accordance with the requirements of section 51 of the Roads Act 1993 (as amended) and the Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014.

Section 51(3)(a)(iii) requires that a period of not less than 6 weeks be provided for public consultation in relation to a proposed road development such as this. For the Proposed Scheme a period of public consultation of 8 weeks was provided from 9 May 2023 to 4 July 2023.

6. Appalling consultation process

Ireland ratified the Aarhus Convention in June 2012 and it entered into force in Ireland in September 2012. Prior to that ratification, Ireland had to ensure that all the provisions of the Convention were implemented in national law, which took a number of years, and involved over 60 pieces of legislation.

Accordingly, Ireland's obligations under the Aarhus Convention have been fully incorporated into Irish legislation and include rights of access to information on the environment, rights of participation in planning determinations, rights of access to adequate review procedures and various other rights.

These are now statutory provisions, which are binding on all applicable parties.

In relation to transport infrastructure projects, the applicable statutory provisions are set out in the relevant planning and transport legislation, which include requiring major projects to seek planning consent from An Bord Pleanála. Those application processes for large infrastructure schemes provide for a statutory process requiring the making available for public review all of the applicable information set out in the legislation and permitting the making of submissions in relation to the proposals to the determining body, being An Bord Pleanála.

Thereafter, the legislation provides for the holding of an Oral Hearing, enabling direct public engagement and participation in the decision making process.

As part of the scheme development stage, various non-statutory public consultation processes have been undertaken. These processes are in excess of the requirements of the Aarhus Convention, whose obligations are already enshrined in Irish legislation including "statutory public consultations" which is the stage that the project has now reached.

The NTA notes the comment regarding the technical nature and volume of the documents presenting a potential barrier to the general public seeking access to information relating to the scheme. Given the nature of such infrastructure schemes as BusConnects Core Bus Corridors, there is invariably a substantial amount of technical information which needs to be provided, so as to ensure that the

consent application is comprehensive in nature to meet legislative requirements and provide the competent authority with the necessary information to allow them to reach a decision. Volume 1 of the EIAR comprises the Non-Technical Summary of the EIAR for the Proposed Scheme. Chapter 1 in Volume 2 of the EIAR contains information on the content and structure of the EIAR. Section 1.5.6 of Chapter 1 sets out the information which must be contained in the EIAR. The NTA has sought to make the information as concise as possible, while ensuring that the necessary information has been provided. Section 1.5.7 of Chapter 1 sets out the structure of the EIAR. It is considered that the structure of the EIAR does provide the necessary legibility for those interested parties (both lay persons and technical specialists) to find the information of relevance to them. While the EIAR has been prepared in compliance with the EIA Directive, it has also been written to make it accessible to a wider, non-specialist audience in so far as possible.

In May 2017 the NTA launched the BusConnects Programme and then in June 2018 published the Core Bus Corridors Project Report. The report was a discussion document outlining proposals for the delivery of Core Bus Corridor Routes across Dublin.

Since the commencement of the non-statutory period of the CBC Infrastructure Works, there has been a total of three rounds of non-statutory public consultation.

The term “non-statutory” is used to describe the public consultation which occurred from [2018 to 2022] because this consultation process with the public and interested stakeholders was undertaken by the NTA on a voluntary basis and was not required by law. The purpose of this process was to inform the public and stakeholders of the evolution of the proposal from an early stage and to seek feedback on the design proposals.

This is in contrast with the statutory consultation period which ran from 9 May 2023 to 4 July 2023 during which an opportunity was provided to members of the public, including Mr Heneghan, (as well as certain prescribed bodies) to make submissions to An Bord Pleanála in accordance with section 51 of the Roads Act 1993 (as amended).

First Round of Non-Statutory Public Consultation - The first round of non-statutory public consultation on the Emerging Preferred Route Options was from November 2018 until May 2019 divided into three phases. The reason it was divided into three phases was primarily due to the fact that the BusConnects Infrastructure team carried out all aspects of the first round without external design service providers having been appointed at that stage. Moreover, the BusConnects Infrastructure team sought to gain maximum engagement from the public from the commencement of the CBC Infrastructure Works to raise awareness, establish relationships and gain immediate insight and knowledge of the issues at an early stage.

It was also important that at the start of the non-statutory consultation that considerable time and resources were dedicated by the BusConnects Infrastructure team to initiate contact with potential impacted properties. Each of the potentially impacted property owners were offered the opportunity to meet with members of the BusConnects Infrastructure team on a one-to-one basis which meant a significant amount of resources had to be dedicated to this process.

Second Round of Non-Statutory Public Consultation – The non-statutory public consultation for the Preferred Route Options ran from March 2020 to April 2020 as Ireland entered the first lockdown due to the Covid-19 pandemic. The consultation continued in deference to the number of online submissions received during this period. A number of public facing elements of the consultation were cancelled in line with Government health guidelines, however, all other elements of the consultation including online versions of the brochures, supporting documentation were available. Other communication tools including the Freephone, email and digital aspects remained active for submissions to be received.

Third Round of Non-Statutory Public Consultation – This round of non-statutory public consultation for the Preferred Route Options from November 2020 to December 2020 was added due to the disruption caused to the second-round consultation process. It was important that further engagement was facilitated to communicate design development changes prior to concluding the determination of the Preferred Route Options. Methods had emerged whereby traditional public information events could be replaced by virtual online alternatives to offset the restrictions that continued associated with the Covid-19 Pandemic. Accordingly, all elements of the public consultation and stakeholder engagement were conducted virtually or online in line with the Government health guidelines.

7. Inadequate traffic modelling

Section 3.2.1 of Appendix A6.2 Traffic Modelling Report sets out the multi-tiered transport modelling approach that has been adopted. It explains that there are four tiers of transport modelling which have been used to assess the Proposed Scheme.

- *"Tier 1 (Strategic Level): The NTA's East Regional Model (ERM) is the primary tool which has been used to undertake the strategic modelling of the Proposed Scheme and has provided the strategic multi-modal demand outputs for the proposed forecast years;*
- *Tier 2 (Local Level): A Local Area Model (LAM) has been developed to provide a more detailed understanding of traffic movement at a local level. The LAM is a subset model created from the ERM and contains a more refined road network model used to provide consistent road-based outputs to inform the TIA, EIA and junction design models. This includes information such as road network speed data and traffic redistribution impacts for the Operational Phase. The LAM also provides traffic flow information for the micro-simulation model and junction design models and has been used to support junction design and traffic management plan testing;*
- *Tier 3 (Corridor Level): A micro-simulation model of the full 'end to end' corridor has been developed for the Proposed Scheme. The primary role of the micro-simulation model has been to support the ongoing development of junction designs and traffic signal control strategies and to provide bus journey time information for the determination of benefits of the Proposed Scheme; and*
- *Tier 4 (Junction Level): Local junction models have been developed, for each junction along the Proposed Scheme to support local junction design development. These models are informed by the outputs from the above modelling tiers, as well as the junction designs which are, as discussed above, based on people movement prioritisation."*

Section 3.2.4 of Appendix A6.2 provides details of the Proposed Scheme micro-simulation model and Section 3.2.5 states that: *"The Proposed Scheme micro-simulation model has provided key information on end-to-end bus and car journey times along the Proposed Scheme. The Proposed Scheme micro-simulation model is supplied traffic flow information from the LAM and uses consistent information from the junction design models, in terms of signal plans, green times, staging, phasing and offsets. 3D Visualisations of sections of the Proposed Scheme have been developed based on the 2D models to help visualise and demonstrate the benefits and impacts of the scheme to stakeholders.*

Overall, the Proposed Scheme micro-simulation model has provided key transport metric inputs to the TIA in terms of operational features, vehicle interaction, person level delay and bus journey time and reliability performance."

Section 4.3 of Appendix A6.1 provides details of the modelled time periods and notes that:

"The transport models developed for the Proposed Scheme cover all time periods across a typical average weekday. The ERM demand model covers the following time periods with the road and public transport models assigning a representative 1-hour within each of the 3-hr demand periods:

- *AM Peak period covering the period between 07.00-10.00;*
- *Morning Inter-Peak covering the period between 10.00-13.00;*
- *Afternoon Inter-Peak covering the period between 13.00-16.00;*
- *PM Peak period covering the period between 16.00-19.00; and*
- *Off-Peak covering the period between 19.00-07.00.*

The LAM covers the 4 peak hour time periods outlined below:

- *AM Peak hour covering the period between 08.00-09.00;*
- *Morning Inter-Peak hour covering the period between 12.00-13.00;*

- *Afternoon Inter-Peak hour covering the period between 15.00-16.00; and*
- *PM Peak hour covering the period between 17.00-18.00.*

The Proposed Scheme Microsimulation Model covers the following periods:

- *Weekday AM peak between 07:00 and 10:00; and*
- *Weekday PM peak between 16:00 and 19:00."*

Cumulative traffic impact

Section 21.2.7 of EIAR Chapter 21 Cumulative Impacts Environmental Interactions considers the cumulative traffic impacts for the operation scenario and states: *"For operational cumulative effects including the Proposed Scheme, the assessment has been undertaken based on a scenario where all the other 11 Core Bus Corridor schemes are also operational."*

Section 21.3.2.1 of Chapter 21 (Cumulative Impacts & Environmental Interactions) of Volume 2 of the EIAR notes the following:

"A multi-tiered modelling framework (described further in Chapter 6 (Traffic & Transport) of this EIAR) was developed to support this iterative design process, whereby the emerging design for each of the Proposed Schemes has been tested using the transport models as part this iteration both in isolation and with all Core Bus Corridor schemes in place. Each of the CBC projects worked closely together to align proposals at direct interface points (e.g., overlapping junctions) as well in the indirect / offline areas where displaced traffic would arise. This included the provision of complimentary traffic management arrangements and/or turn bans to ensure that any displaced traffic was kept to a minimum and/or was maintained on higher capacity roads, whilst continuing to meet scheme objectives along the Proposed Scheme.

For the Proposed Scheme, the iterative process concluded when the design team were satisfied that the Proposed Scheme both in isolation and in combination with the other 11 Core Bus Corridor Schemes, met its required objectives (maximising the people movement capacity of the Proposed Scheme) and that the environmental impacts and level of residual impacts were reduced to a minimum.

To examine the potential cumulative traffic effects that the Proposed Scheme may have in combination with any of the other Core Bus Corridor schemes, an area of influence for each scheme was determined to understand the scale of traffic displacement and its interactions with other schemes. The 'area of influence' is the area in which traffic flows are likely to change as a result of the Proposed Scheme measures as indicated by the transport modelling. The outcome of this assessment revealed that the Proposed Scheme has direct and indirect interface with the proposed Kimmage, Liffey Valley and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes.

In terms of direct interfaces, the Kimmage to City Centre Core Bus Corridor Scheme proceeds along New Street South and interacts with the proposed implementation of traffic management measures for the Proposed Scheme at the Kevin Street Upper junction. Works proposed to the junction include the introduction of kerblines realignment, cyclist protection islands build-outs, footway paving, pedestrian crossings, cycle tracks and landscaping at Kevin Street Upper / New Street South / Patrick Street junction. The traffic management measures to be implemented by the Proposed Scheme are located at Kevin Street Upper / New Street South / Dean Street / Patrick Street junction as shown on General Arrangement drawing BCIDA-ACM-GEO_GA-0809_XX_00-DR-CR-0033 in Volume 3 of this EIAR.

The Liffey Valley to City Centre Core Bus Corridor Scheme proceeds along Cornmarket and High Street and interacts with proposed implementation of traffic management measures for the Proposed Scheme at the Nicholas Street / Christchurch Place junction. Works proposed to the junction include the introduction of kerblines realignment, cyclist protection islands build-outs, footway paving, pedestrian crossings, cycle tracks and landscaping at High Street / Nicholas Street / Christchurch Place / Winetavern Street junction. The traffic management measures to be implemented by the

Proposed Scheme are located at High Street / Nicholas Street / Christchurch Place / Winetavern Street junction as shown on General Arrangement drawing BCIDA-ACM-GEO_GA-0809_XX_00-DR-CR-0034 in Volume 3 of this EIAR.

The BusConnects Infrastructure team have coordinated the respective scheme designs to provide flexibility in the proposals such that implementation of physical works can be coordinated or delivered in sequence should both schemes be consented. Once in place, both Core Bus Corridor Schemes will provide increased capacity, faster journey times and improved reliability for buses which should lead to considerable mode shift from car transport to public transport, which will reduce traffic levels generally across the road network in and around both corridors.

In terms of indirect effects, modelling has indicated that both the Proposed Scheme and the Kimmage and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes have overlapping traffic ZoI e.g., each scheme results in traffic displacement effecting the other corridor.

When all three schemes are operational (as well as all other proposed Core Bus Corridor schemes), this has the effect of constraining the opportunity for traffic to displace onto adjoining / adjacent roads when compared to the effect when only one of the Core Bus Corridor schemes is operational. In addition to this, with all the Core Bus Corridor schemes operational, there is predicted to be a higher modal shift from private car trips to sustainable modes of travel compared to the singular scheme scenario. This is due to the combined effect of all Core Bus Corridor schemes being operational and the journey time savings and reliability for bus travel and the interchange opportunities that this provides to travel around Dublin in combination with the BusConnects network re-design proposals. In addition, the Core Bus Corridor schemes will facilitate a step change in the level of segregated cycling provision in comparison with existing conditions along the entire length of the corridors resulting in more people cycling.

The result of the above is that the cumulative effect of all Core Bus Corridors in operation and in tandem with the roll out of the wider Greater Dublin Area Transport Strategy measures, future growth in overall travel demand is catered for by sustainable modes. No significant negative effects over and above those considered in the standalone assessments for the Operational Phase were predicted in the cumulative impact assessment and therefore no additional mitigation measures are considered necessary."

In summary, the cumulative impact of the Tallaght/Clondalkin scheme and the Kimmage bus corridor scheme on Stannaway Road has been assessed and concluded that the two schemes have the effect of constraining the opportunity for traffic to displace onto adjoining / adjacent roads when compared to the effect when only one of the Core Bus Corridor schemes is operational. In addition to this, with all the Core Bus Corridor schemes operational, there is predicted to be a higher modal shift from private car trips to sustainable modes of travel compared to the singular scheme scenario.

Traffic displacement

In relation to traffic displacement indicated on page 152 (Diagram 6.40) and page 156 (Table 6.76) of Chapter 6 of the EIAR, the following should be noted:

Section 6.4.6.2.9.3 of Chapter 6 of the EIAR notes the following:

"The contents of Table 6.76 outline that the additional traffic on the key road links within the indirect study area varies between +102 and +631 combined flows during the AM peak hour. Further junction capacity assessment has been undertaken along these road links to determine whether the above road links have the capacity to cater for the additional traffic volumes as a result of the Proposed Scheme.

Operational capacity outputs have been extracted from the LAM at the associated junctions along the subject road links to determine whether there is reserve capacity to facilitate the uplift in traffic. The results are presented in terms of the significance of the impact to the V / C ratio for each junction based on its sensitivity and magnitude of impact.

It should be noted that the worst performing arm of the junction has been used for the purpose of the assessment to ensure a conservative impact assessment is undertaken."

Section 6.4.6.2.9.5 of Chapter 6 of the EIAR notes:

"Following the above threshold assessment, the following three-step approach has been undertaken to determine the significance of the negative impact as a result of the redistributed general traffic on the indirect study area:

Step 1 - Determination of Junction Sensitivity: Where road links experience additional traffic volumes of above the proposed thresholds, a review has been undertaken of its associated junctions using the following categories:

- *High Sensitivity (Category 5) – Roads that cater for a lower volume of traffic than Category 4 with a lower speed limit (30km/h);*
- *Medium Sensitivity (Category 4) – Roads that can cater for a high volume of traffic with a moderate speed limit (30km/h – 50km/h), connecting neighbourhoods;*
- *Low Sensitivity (Category 3) – Roads that interconnect Category 2 type roads with a lower level of mobility than national roads; and*
- *Negligible Sensitivity (Category 1 and Category 2) – Roads that can cater for a high volume of traffic with a high speed limit (100km/h - 120km/h), between major metropolitan cities, i.e. national primary and secondary roads.*

The above sensitivities / categories establish the characteristics of the surrounding road network impacted by the Proposed Scheme. The road link characteristics of the major arm of a junction has been used to determine the junction sensitivity. This has allowed for the identification of where more sensitive locations, in particular Category 5 roads / junctions, are impacted."

In summary, Section 6.4.6.2.9.5 notes:

"Overall, the Proposed Scheme is considered to have a Not Significant or Imperceptible and Long-term effect at 176 junctions within the indirect study area. Five of the 190 junctions assessed are shown to have a significance of effect of Negative, Slight and Long-term, and four are shown to have Negative, Moderate and Long-term effects. Five junctions were assessed to have a Positive, Moderate and Long-term effect.

Capacity issues are noted at the following seven junctions (i.e. they are predicted to operate with a V / C ratio of above 100% in the Do Something scenario):

- *Station Road / Ninth Lock Road (252361);*
- *Killeen Road / Park West Road (14214);*
- *Chapelizod Bypass / Kennelsfort Road Lower (22106);*
- *Spawell Roundabout (9148);*
- *Templeogue Road / Cypress Grove Road (9178);*
- *Citywest Road / Garter Avenue (24298); and*
- *Tallaght Bypass / Whitestown Way / Cookstown Way (24129).*

Six out of seven junctions operate with a maximum V / C ratio of above 100% in both the Do Minimum and Do Something scenarios, therefore, the significance of effect is considered to be Negative, Moderate and Longterm, at worst. Spawell Roundabout operates with a V / C ratio of 85-100% in the Do Something, however, the sensitivity of this road link is deemed to be 'negligible', therefore, the significance of effect is Not Significant and Long-term overall.

The results demonstrate that no junctions are predicted to have a significance of effect of significant or higher, therefore, no further assessment of the AM Peak Hour in the 2028 Opening Year is required."

The above analysis should be read in conjunction with Section 2.1.3.2.1 of Chapter 21 (Cumulative Impacts & Environmental Interactions) of Volume 2 of the EIAR which is provided above and which notes:

"*No significant negative effects over and above those considered in the standalone assessments for the Operational Phase were predicted in the cumulative impact assessment and therefore no additional mitigation measures are considered necessary."*

8. Metro alternative should be considered

As stated in Section 3.2.6 of Chapter 3 Consideration of Reasonable Alternatives of Volume 2 of the EIAR:
"As highlighted above, when considering the appropriate transport systems to meet the expected transport demand, Metro systems are a higher capacity form of light rail, generally designed for peak hour passenger numbers exceeding about 7,000 passengers per hour per direction, and often catering for multiples of that level. Given the consideration of light rail provision, and the level of likely public passenger use along this overall corridor assessed in the transport modelling work, the development of the prior GDA Transport Strategy identified that a metro solution would not be economically justified within the area covered by this corridor (Corridor D). In addition, the development of an underground metro would not remove the need for additional infrastructure to serve the residual bus needs of the area covered by the Proposed Scheme, nor would it obviate the need to develop the cycling infrastructure required along the route of the Proposed Scheme. Environmentally, in comparison to the CBC proposal, the metro alternative would be more impactful in terms of construction impacts, including flora and fauna, heritage, air and noise. Metro systems require unbroken physical lane infrastructure to achieve high-priority. This would involve significantly more land take and potentially involve demolition of buildings at pinch-points. In the case of the bus-based transport solution, bus-priority can be achieved through short lengths at pinch-points by the use of signal-control priority."

Traffic flow maps referred to contained within Chapter 6 Traffic & Transport of the EIAR can be view in higher resolution in TIA Appendix 3 (Maps) 6.7 to 6.9 & 6.13 to 6.16.

9. Proposed City Edge development should be considered

The NTA has engaged with South Dublin County Council and Dublin City Council in respect of the City Edge Strategic Framework.

Within Appendix A2.1 Planning Report contained in the EIAR Volume 4 Appendices Part 1 of 4, Section 3.7.1 on page 62 provides details of the City Edge Strategic Framework (CESF) 2022-2040 as follows.

"The City Edge Strategic Framework (CESF) was 'noted' by the Elected Members of South Dublin County Council and Dublin City Council in May and June 2022. The CESF is described as "a non-statutory plan that sets out a high-level approach and transformational trajectory for the regeneration of City Edge to create a new liveable, sustainable and climate resilient urban quarter". In particular, the CESF proposes the delivery of strategic infrastructure including public transport. It is envisaged that the CESF will be followed by a more comprehensive Statutory Plan which will guide development.

The Proposed Scheme is located within the limits of the City Edge Strategic Framework (CESF) (2022). Within the southern part of the CESF (2022) the Proposed Scheme is located along the Greenhills Road, Ballymount Avenue, Calmount Road and Calmount Avenue. Within the northern part of the CESF (2022) the Proposed Scheme is located along the Nangor Road, Naas Road and Long Mile Road.

Figure 9 of the CESF (2022) identifies two BusConnects Corridors running through the Framework area, including CBC08, with runs along Nagor Road, Naas Road and Long Mile Road, and CBC09 which runs along Greenhills Road, Ballymount Avenue, Calmount Road and Calmount Avenue.

The CESF has adopted several objectives which break down the overall vision. The following objective is relevant to the Proposed Scheme:

"Movement: Focus development on the provision of active and public transport. Ensure Transport Oriented Development by focusing new mixed-use and compact urban development on enhanced active travel and public transport corridors".
The CSEF further states that "A focus on active modes is particularly important if City Edge is to deliver on connectivity, place-shaping and sustainable mobility. This needs to be balanced with maintaining the strategic function of the Naas Road in carrying and distributing traffic to support the city and wider region".

Furthermore, the CESF recognises the BusConnects Programme under 'Projects – Planned and Proposed'. The CSEF outlines that "BusConnects seeks to transform Dublin's bus network through a 10-year programme to provide an efficient, reliable and integrated bus system with enhanced capacity. Improved facilities for walking and cycling are integrated into BusConnects proposals". The CESF outlines the importance of public transport investment to the City Edge by stating "significant public

transport investment will provide capacity for existing communities and enable growth at City Edge, ensuring sustainable travel is an attractive option for longer distance journeys."

Section 3.7.1.1 of Appendix A2.1 explains that: "*The Proposed Scheme is part of the wider BusConnects Programme to deliver service enhancements which will help facilitate sustainable growth, enhanced permeability and accessibly for active travel modes across the City Edge and the wider Greater Dublin Area. The Proposed Scheme will also provide an efficient, reliable and integrated bus system with enhanced capacity. The Proposed Scheme through the provision of enhanced public transport infrastructure will help to achieve the visions and objectives of the CESF.* "

In Dublin City Council's (DCC) submission on the Section 51 Application for the Proposed Scheme, DCC note that the City Edge Strategic Framework *"is a non-statutory plan being progressed collaboratively by Dublin City Council and South Dublin County Council. It sets out a high level strategy for comprehensive regeneration of the area, with implications for land uses and strategic level infrastructure."*

In South Dublin County Council's (SDCC) submission on the Section 51 Application for the Proposed Scheme, SDCC note that the City Edge Strategic Framework is a *"non-statutory framework and is not part of the development consent assessment process."* The SDCC submission goes on to state the following: *"South Dublin welcomes the proposals to introduce high quality public transport and safe segregated facilities to the City Edge area via the Bus Connects project. This ties in with the strategic objectives of City Edge to focus on compact growth, active travel, transport orientated development and 15-minute city principles."*

In summary, appropriate engagement has been undertaken in relation to the CESF, which is non-statutory and in the relatively earlier stages of the planning process. The Proposed Scheme is not in considered premature as its implementation will help to achieve the visions and objectives of the CESF.

10. How is City Centre affected?

The Proposed Scheme forms part of the wider Core Bus network which aligns with the Greater Dublin Area Transport Strategy to form an integral part of the improved public transport infrastructure measures for the Dublin Metropolitan area.

Section 2.2.1.5 of Chapter 2 of Volume 2 of the EIAR notes:

"To inform the preparation of the GDA Transport Strategy 2016 - 2035, the NTA prepared the Core Bus Network Report (NTA 2015) for the Dublin Metropolitan Area, which identified those routes upon which there needed to be a focus on high capacity, high frequency and reliable bus services, and where investment in bus infrastructure should be prioritised and concentrated. The Core Bus Network is defined as a set of primary orbital and radial bus corridors which operate between the larger settlement centres in the Dublin Metropolitan Area.

The development and implementation of priority infrastructure on the Core Bus Network is to ensure that delays are minimised, reliability is improved through peak and off-peak periods and mode shift from the private car is made more attractive.

The reason for focussing on the Core Bus Network is to maximise the return on future investment in bus infrastructure and to facilitate efficient operation of bus services, thereby improving the attractiveness of public transport for a large proportion of the population of the Dublin Metropolitan Area and beyond.

The Core Bus Network Report focused on the overall existing bus service network and identified locations where the bus network is operating sub-optimally. The network is dominated by a radial network to / from Dublin City Centre, supplemented by low frequency orbital and local bus routes serving larger destinations outside of the City Centre core.

…. The GDA Transport Strategy 2016 – 2035 concluded that this high-quality Core Bus Network would form an integral part of the improved public transport infrastructure measures for the Dublin Metropolitan Area. The final resulting Core Bus Network presented in the GDA Transport Strategy represents the most important bus routes within the Dublin Metropolitan Area, generally characterised by high passenger volumes, frequent services and significant trip attractors along the routes."

11. Expedite Bunting Road proposals

Expediting sections of the Proposed Scheme is not part of the scope of the Proposed Scheme planning application.

12. Parkview bus route strange.

Submissions have been received from residents and others in relation to the sustainable link bus route at Parkview / Treepark Road / Birchview Avenue between Mayberry Road and the Greenhills Road M50 overbridge and is dealt with in Section 2.3 of this report.

13. Clonard Road and Bangor Drive.

Section 6.2.5.2.2 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR notes the following in relation to traffic survey data:

"Due to the scale of the CBC Infrastructure Works, the Proposed Scheme required a full set of consistent updated traffic counts for a neutral period e.g. November / February when schools, colleges were in session. Traffic surveys were undertaken in November 2019 and February 2020 (Pre-Covid) with the surveyed counts used as inputs to the model calibration and validation process of the strategic model and micro-simulation model. The two types of counts used in the study are Junction Turning Counts (JTCs) and Automatic Traffic Counts (ATCs)."

Section 6.4.6.2.9.1 of Chapter 6 notes:

"It should be noted that the Do Minimum and Do Something scenarios are based on the assumption that travel behaviour will remain broadly consistent over time and that car demand, used for this assessment, represents a reasonable worst-case scenario. It is possible that societal trends in the medium to long term may reduce car demand further due to the ongoing changes to travel behaviours and further shifts towards sustainable travel, flexibility in working arrangements brought on following COVID-19, and delayed car ownership trends that are emerging."

Section 3.1.4 of the Preliminary Design Report included in the Supplementary Information as part of this application Notes the following in relation to Clonard Road and Bangor Drive:

"On Crumlin Road (R110) bus priority will be maintained by incorporating Signal Controlled Priority and managing the flow of traffic in both directions along the Crumlin Road (R110). Widening of the road corridor here for dedicated bus and traffic lanes in both directions is not feasible due to the size of the front gardens and gradient constraints between the road level and front doors. The proposed arrangement requires the closure of Clonard Road and Bangor Drive for direct access onto Crumlin Road to facilitate traffic management within this portion of the Crumlin Road (R110) such that bus priority can be maintained, one-way access from the Crumlin Road (R110) onto Clonard Road and Bangor Drive will be possible. Egress and access for Bangor Drive and Clonard Road can be achieved via Windmill Road and Old County Road."

Issues relating to redistributed traffic and environmental impacts in relation to the restricted access to Clonard Road and Bangor Drive from Crumlin are addressed in Section 2.5 of this report.

14. Left slip at Drimnagh Road / Walkinstown Road.

In order to achieve the Proposed Scheme objectives along this section of the corridor, as described in paragraph 4.5.3.1 of Chapter 4 of Volume 1 of the EIAR, Proposed Scheme Description, it is proposed to upgrade the junction at Drimnagh Road (R110) / Walkinstown Road (R819) to enhance pedestrian and cycling facilities. To improve the safety of cycle facilities and reduce vehicle speeds, the existing left turn slip lane to the Walkinstown Road (R819) has been removed and additional planting and urban realm enhancements have been proposed.

Page 137 of the Junction Design Report Appendix A6.3 of Volume 4 part 2 of 4 of the EIAR notes the following:

"*Summary*

The existing junction is to be upgraded as per the BusConnects Preliminary Design Guidance Booklet to enhance pedestrian, cyclist and bus priority infrastructure.

Pedestrian Infrastructure

The existing pedestrian infrastructure is proposed to be upgraded. The proposal will relocate the two-stage pedestrian crossing from the western arm to the eastern arm and upgrade it to a toucan crossing to cater for both sustainable modes of travel. Removal of the pedestrian crossing on the western arm will offer efficiency into the junction performance. The proposal will also introduce a direct single stage crossing across Walkinstown Road due to the removal of an existing left turn slip. This will assist to reduce pedestrian crossing distances, thus enhancing pedestrian permeability. The existing pedestrian infrastructure is proposed to be upgraded. The proposal will remove the pedestrian crossing and be replaced with the toucan crossing to the west at the Long Mile Rd / Walkinstown Rd junction. Controlled pedestrian crossings are proposed on the side arms of the junction to facilitate pedestrian priority across Slievebloom Road and Balfe Road

Cyclists Infrastructure

The proposal is to upgrade the junction to cater for cycle tracks along Long Mile Road. Dedicated cyclist crossings are proposed through the junction along Long Mile Road. On Walkinstown road it is proposed to introduce an inbound and outbound shared bus and cycle lane. Cycle tracks haven't been provided at this location due to geometric constraints along this road, however the scheme proposals a cyclist quietway along Bunting Road. The proposed cyclist infrastructure comprises of cycle tracks along Long Mile Road on both sides of the carriageway to facilitate inbound and outbound movements. Dedicated cyclist crossings are proposed through the junction.

Bus Priority Infrastructure

It is proposed to introduce a bus lane along Long Mile road. A shared cycle and bus lane is proposed on Walkinstown Road. For the outbound direction, a break in the bus lane to the east of the junction is proposed to facilitate a new left turning lane inside the bus lane. This will facilitate additional capacity for traffic turning left without impacting on buses. It is proposed to introduce a bus lane along Long Mile Road. For the outbound direction, a break in the bus lane to the east of the junction is proposed to facilitate a new left turning lane inside the bus lane. This will facilitate additional capacity for traffic turning left, from a review of the projected left turning volumes in the Do Something Scenario, it is envisaged the left turning will be low and therefore will not result in delay to buses at this location. For the inbound direction, a bus lane is proposed up to the stop line."

The Proposed Scheme at this location provides the optimum layout that balances the competing demands by enhancing bus priority, improving pedestrian and cyclist infrastructure whilst still retaining appropriate capacity for the forecast level of general traffic.

2.8.11 43 - SDCC

2.8.11.1 Overview of submission

South Dublin County Council's (SDCC) submission comprised of 45 pages. For ease of reference the section titles and order have been retained throughout the NTA's response as set out in the following paragraphs.

Advocate for the Proposed Scheme

Development Management Section

i. Support for the scheme

ii. South Dublin County Council Development Plan 2022-2028 Policy Context

Traffic and Transport Section

i. Support for the scheme

ii. Comments

a) Bus Interchange at Belgard Square

b) Site Compound at Bancroft Park

c) Old Greenhills Road Plaza

d) Cycle Lanes

e) Mayberry Road & Birchview Avenue

f) Treepark Road / Castletymon Road

g) Land Negotiations

h) Green Space between Calmount Road and Existing Greenhills Road

i) CPO of public land, hand on & maintenance

j) Construction Management Plan

k) Summary of Traffic & Transport views on the proposal

Roads Maintenance Section

1) Construction specification.

2) Precast kerbing

3) Road structure bus bay specification.

4) Drainage system / SuDS.

5) Signage

6) Maintenance costs

7) Universal design principles

Economic Development Section

Public Realm Section

i. South Dublin County Council Development Plan 2022-2028 relevance to Public Realm

ii. Tree Management Policy – Living with Trees 2012-2026

iii. Parks and Landscape Section

a) Trees and Hedgerows/ Arboricultural Impact

b) Natural SuDS

c) CPO of public land

d) Tymon Park boundaries and entrances

e) Proposed Compound locations

f) Biodiversity

g) Lighting

h) IE8 Objective 6

i) Landscape Character Type: Green Space e.g. Tymon Park and Bancroft Park

j) Protection of Habitats and Species

k) Public Realm Enhancement

Active Travel Section

Architectural Conservation Section

Water Services Section

City Edge Section

a) General

b) More detailed comments

c) Naas Road bridge

- New Nangor Road/ Oak Road/ Park West Avenue
- Kileen Road/ New Nangor Road
- Calmount Road
- Greenhills Road/ Ballymount Avenue
- Ballymount Avenue/ Calmount Road
- Calmount Avenue/ Greenhills Road

Conclusion

2.8.11.2 Advocate for the Proposed Scheme

Observations raised / clarifications sought

The submission outlines the numerous policy objectives within the County Development Plan 2022-2028 and confirm its support for the Proposed Scheme.

It is noted that SDCC Development Management Section (DMS) make a series of positive comments in its conclusion including that the Proposed Scheme would *be 'very welcome….provide a good balance servicing existing communities…..it is also delivering on the wider remit of smarter travel'*

It also notes that *"Issues such as tree loss and the loss in carriageway width dedicated to cars are decisively outweighed by improved sustainable transport opportunities".*

The DMS also notes that the Proposed Scheme:

- "will support more efficient and intensive use of brownfield serviced urban sites, sustainable and vibrant communities, as well as housing delivery";
- "provides a good balance between servicing existing communities while not seriously and adversely affecting residential amenities, given its routing along existing major roadways and the limited land take identified"
- will deliver the "wider remit of smarter travel given proposed improvements to walking and cycling infrastructure, as well as general amelioration in quality of the public realm"
- SDCC note from page 9 of their submission: "SDCC Traffic and Transportation Section are broadly happy with the planning proposal and are of the view that the proposal aligns with the policies of the NDP, RSES, GDA Transport Strategy, Climate Action Plan 2023 and the SDCC County Development Plan (2022 – 2028). This proposed Bus Connects scheme aligns with and support[s] many of the sustainable movement and climate action policies contained in these national, regional and local strategy documents.
- Also from page 9 of their submission SDCC notes: " This Bus Connects project represents a big step forward in the delivery of sustainable transport alternatives in the South Dublin Local Authority Area."

Response

The support for the scheme is noted and welcomed by the NTA.

2.8.11.3 Development Management Section

Observations raised / clarifications sought

i. Support for the scheme

ii. South Dublin County Council Development Plan 2022-2028 Policy Context

Response

i. Support for the scheme

See 2.3.4.2 above

ii. South Dublin County Council Development Plan 2022-2028 Policy Context

In their submission SDCC set out the Policy Context.

In its submission, SDCC confirmed its support for the Proposed Scheme, and stated in their conclusion on page 42 of the submission:

"SDCC welcomes the proposed Tallaght/ Clondalkin to City Centre Core Bus Corridor route which will provide additional high quality public transport that will serve the Tallaght Urban Village, the redevelopment of the City Edge regeneration area and a wide range of other established neighbourhoods."

In relation to planning policy, the NTA welcomes at page 9 of their submission: *"SDCC Traffic and Transportation Section are broadly happy with the planning proposal and are of the view that the proposal aligns with the policies of the NDP, RSES, GDA Transport Strategy, Climate Action Plan 2023 and the SDCC County Development Plan (2022 – 2028). This proposed Bus Connects scheme aligns with and support[s] many of the sustainable movement and climate action policies contained in these national, regional and local strategy documents."*

2.8.11.4 Traffic and Transport Section

Observations raised / clarifications sought

i. Support for the scheme

ii. Comments

a) Bus Interchange at Belgard Square
b) Site Compound at Bancroft Park
c) Old Greenhills Road Plaza
d) Cycle Lanes
e) Mayberry Road & Birchview Avenue
f) Treepark Road / Castletymon Road
g) Land Negotiations
h) Green Space between Calmount Road and Existing Greenhills Road
i) CPO of public land, hand on & maintenance
j) Construction Management Plan
k) Summary of Traffic & Transport views on the proposal

Response to Issue

i. Support for the scheme

SDCC set out (at page 5 of its submission) that: *"SDCC are strongly supportive in principle and are of the view that it aligns with the policies of the County Development Plan (2022 – 2028). The scheme supports the National Development Plan, RSES, and the Transport Strategy for the Greater Dublin*

Area, (2022 – 2024). In particular, the scheme supports the sustainable movement policies within this strategic plan.

In addition, the proposed Tallaght and Clondalkin core bus corridor scheme supports the actions contained in the latest Climate Action Plan 2023. Contains within this document is the statement "*the NDP continues the Programme for Government commitment to rebalance the share of capital expenditure to favour new public transport schemes over road projects".*

South Dublin County Council went on to state: "*The comments provided within this SDCC submission report are mainly focused on the construction management controls and minor design details of the scheme. To date many of our concerns have been addressed through the extensive consultation process that has been conducted by the NTA with the various stakeholders in our Local Authority area.*"

Response

The NTA notes the view expressed by the submission.

The NTA is grateful for the positive and constructive liaison that has occurred with the SDCC BusConnects Liaison Office throughout the design and planning process to date, and through that liaison office with other Departments and Sections within SDCC regarding the progression of the Proposed Scheme.

ii. Comments

a) Bus Interchange at Belgard Square

In their submission SDCC acknowledge NTA and SDCC worked closely on the design and layout of the proposed Bus Interchange at Belgard Square North and the interface with a new public plaza immediately adjacent the bus interchange SDCC for tie-in and service connections with adjoining SDCC public plaza.

SDCC requests that a planning condition be secured requiring the liaison with SDCC on tie-ins and adjoining service connections to ensure the bus interchange and adjoining plaza are co-ordinated.

Response

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the SDCC comments as these matters were the subject of extensive liaison throughout the design development process.

NTA will continue the very positive and constructive liaison with SDCC throughout the procurement and construction process including in relation to co-ordination with interfacing developments and infrastructure.

b) Site Compound at Bancroft Park [TC2]

SDCC in their submission raised concerns about the location of the proposed temporary compound at Bancroft Park, noting their belief it is too close to residential properties and advising the location is a well-used local amenity.

Additionally, SDCC highlighted the danger of introducing HGV traffic in a busy residential area, in proximity of St. Mary's National School.

SDCC requests final design and layout, visual impact, hours of operation, traffic and noise should be secured by planning condition for agreement with LA. If permission granted the area will need to be reinstated to original standard and handed back to council when project completed.

Response

Location

Construction Compound requirements to facilitate the Construction Phase of the Proposed Scheme are illustrated in Section 5.7 in Chapter 5 (Construction) in Volume 2 of the EIAR. The Proposed Scheme will require temporary acquisition of a part of the green area at Bancroft Park for site Construction Compound TC2. The temporary land to be acquired is needed in order to allow the appointed contractor to manage the delivery of and construct the Proposed Scheme.

Figure 2.8.11.1 below shows the indicative layout of the temporary construction compound TC2 and access arrangements.

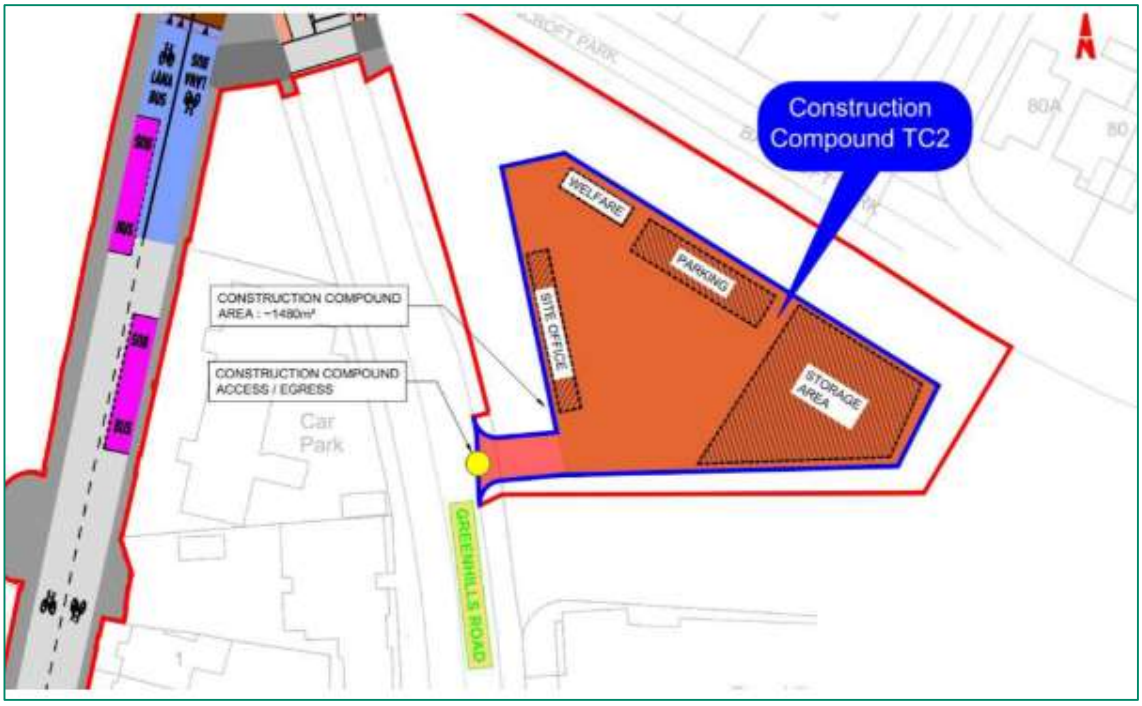


Figure 2.8.11.1: Extract of Image 5.2 of Chapter 5 Construction of Volume 2 of the EIAR

As described in Section 5.7.1 of Chapter 5 Construction of Volume 2 of the EIAR, *'The Construction Compound locations have been selected due to the amount of Available space, their relative locations near to the majority of the Proposed Scheme major works, and access to the National and Regional Road network.*

A potential alternative location for the Construction Compound is the "Esso Site" at the junction of Old Greenhills Road and Main Road.

The "Esso Site" fulfils the criteria for location of a construction compound stated above in relation to its relative location near to the majority of the Proposed Scheme major works and access to the National and Regional Road network. However, as this site is in private ownership it would require acceptance from the current owner for use as a construction compound for the duration of works required for the Proposed Scheme. The current owner Sirio Homes was refused SDCC planning permission for this site on 25th November 2020 (AD20A/0250). As this is a privately owned site prior agreement would be required with the owner for use as a temporary site compound for the construction timeframe commencing 1 to 3 years from the time of the ABP submission. As it is unknown if the owner of this site may again apply for a revised planning application to develop this site in the future it cannot be assumed that the site would be available for use by the Proposed Scheme in the future.

Another potential alternative location on Greenhills Road opposite Airton Road junction (hoarding advertising Elephant Storage) is subject to a Strategic Housing Development Planning Application to SDCC. This site located on Greenhills Road opposite the Airton Road junction fulfils the criteria for location of a construction compound stated above in relation to its relative location near to the majority of the Proposed Scheme major works and access to the National and Regional Road network. Greenhills Living Limited has submitted a planning application for a Strategic Housing Development on this site which is under consideration by SDCC (SHD3ABP-313590-22). If this planning application is granted the site would not be available to the Proposed Scheme for use as a construction Compound.

Therefore, the green area at Bancroft Park is the optimum and the only available site in this area.

The Construction Compound at Bancroft Park will be fenced off during the construction phase (see section 5.5.2.8 in Chapter 5 of Volume 2 of the EIAR). As shown in Figure 2.1.6, the temporary compound will occupy the south-western portion of the wider green area, the eastern portion of the of

the green area will remain available to the community at all times.



Figure 2.8.11.2: Site Compound TC2 within the wider green area at Bancroft Park (Image Source: Google)

Enhanced landscaping proposals for the green area will be implemented once the temporary construction compound is removed.

Figure 2.8.11.3 is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR and shows the proposed enhanced landscaping proposals for the green area that will be implemented once the temporary construction compound is removed.



Figure 2.8.11.3 Extract from Landscaping General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR

As identified in the Landscaping General Arrangement Drawings (contained in Part 1 of 3 of Volume 3 of the EIAR), none of the existing trees will need to be removed to allow the area to be used for Construction Compound TC2 during construction of the Proposed Scheme.

It is noted that the proposed temporary construction compound area includes less than half of the Open Space zoned lands at Bancroft Park. Furthermore, it does not back onto any residential rear amenity space and is separated from nearby residential properties to the north by Bancroft Park Road and to the south by an existing row of trees and further Open Space zoned lands.

Furthermore, it is noted that there is a significant area of Open Space zoned lands nearby to the north at Tallaght Athletics Club/Bancroft Park and to the south along Whitestown Stream. St Mary's National School is situated further to the north and will not interact with the Temporary Construction Compound.

Traffic Management

Section 5.1 of Chapter 5 (Construction) of the EIAR describes the construction phasing and programme as well as the construction activities necessary to undertake the works. Section 5.8 presents the temporary traffic management measures, including the staging measures to be carried out (i.e. how vehicles, cyclists and pedestrians will be impacted and safely catered for, during the works). The construction traffic management measures have been developed in accordance with the Traffic Signs Manual. Construction traffic management measures are included in the (Draft) Construction Traffic Management Plan (CTMP) in Appendix A5.1 CEMP in Volume 4 of the EIAR.

Section 5.2.1.1 of the CTMP notes the following:

"The purpose of this CTMP is to demonstrate that the residual impacts to the public road network during the Construction Phase of the Proposed Scheme which have been identified in the application documentation can be minimised and that transport related activities are carried out as safely as possible and with the minimum disruption to other road users. The CTMP has also been prepared for the purpose of identifying feasible, appropriate and safe methods of access for construction traffic to the Proposed Scheme."

Section 5.2.1.2 of the EIAR also notes:

"The objectives of the CTMP are to:

- *Outline minimum road safety measures to be undertaken, including site access / egress locations, during the works;*
- *Provide measures that respond to all road user needs including public transport, pedestrians, cyclists and vehicular traffic;*
- *Ensure disruption is minimised, with access to houses and businesses maintained, as is reasonably practicable in delivering the Proposed Scheme;*
- *Demonstrate to the NTA, the appointed contractor and suppliers, the need to adhere to the relevant guidance documentation for such works; and*
- *Identify objectives and measures for inclusion in the management, design and construction of the Proposed Scheme to control the traffic impacts of construction insofar as it may affect the environment, local residents and the public in the vicinity of the construction works."*

Section 6.4.5.4.6.2 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR notes the following:

"Typical work hours on site are between 07:00 and 23:00 with staff working across early and late shifts, with these hours to be agreed with DCC/SDCC. The adopted shift patterns help minimise travel by personnel during the peak hour periods of 08:00 to 09:00 and 17:00 to 18:00.

The appointed contractor will prepare a Construction Stage Mobility Management Plan (CSMMP) which will be developed prior to construction, as described in Appendix A5.1 CEMP in Volume 4 of this EIAR, to actively discourage personnel from using private vehicles to travel to site. The CSMMP will promote the use of public transport, cycling and walking by personnel. Private parking at the Construction Compound will be limited. Vehicle-sharing will be encouraged, subject to public health guidelines, where travel by private vehicle is a necessity e.g., for transporting heavy equipment. A combination of CSMMP measures, as well as work shift patterns, means that fewer than 10 trips by private vehicle are envisaged to and from site during peak periods.

***Heavy Goods Vehicles (HGVs)**: Additional construction traffic will be generated during the Construction Phase of the Proposed Scheme, for the purpose of the following:*

- *Clearance of existing site material and waste;*
- *Deliveries of construction material; and*
- *Removal of construction waste material.*

Chapter 5 (Construction) of this report provides a breakdown of the expected operation for the construction of the Proposed Scheme during each subsection. It should be noted that the CTMP will control vehicular movement along the construction route, including restrictions on the number of HGVs accessing and egressing the construction works throughout the day to mitigate the impacts to general traffic on the surrounding road network.

Based on construction activities associated with the Proposed Scheme, the maximum number of HGVs expected to be in operation across the Proposed Scheme during peak haulage activities is 28 vehicles.

In a typical hour during peak haulage activity of the Proposed Scheme, 40% of lorries are anticipated to be in operation on the public road network which equates to approximately 11 lorries. A total of 11 two-way lorry movements are therefore expected in a typical hour during peak haulage activity of the Proposed Scheme.

***Overall Peak Hour Impacts**: The contents of Table 6.17 [EIAR Chapter 6] outline the anticipated maximum construction traffic generation by site operatives and HGVs during the AM and PM Peak Hours.*

*Given that the above impacts are minimal and comfortably below the thresholds set out in TII's Guidelines for Transport Assessments, it is considered appropriate to define the general traffic impacts of the Construction Phase to have a **Negative, Slight and Short-term effect**. Therefore, no further analysis is required for the purpose of this assessment.*

It should be noted that further detail on the restrictions to construction vehicle movements during the peak periods of the day will be contained within the appointed contractor's CTMP prior to construction."

Section 6.2.4.5 of Chapter 6 Appendix A6.1 of Chapter 6 of Volume 4 Part 2 of 4 of the EIAR notes the following in relation to maximum peak hour construction traffic generation:

"*Overall Peak Hour Impacts: The contents of Table 6.1 the anticipated maximum construction traffic generation by site operatives and HGVs during the AM and PM Peak Hours.*

"Given that the above impacts are minimal and comfortably below the thresholds set out in TII's Guidelines for Transport Assessments, it is considered appropriate to define the general traffic impacts of the Construction Phase to have a Low Negative and Short Term impact. Therefore, no further analysis is required for the purpose of this assessment.

It should be noted that further detail on the restrictions to construction vehicle movements during the peak periods of the day will be contained within the appointed contractor's CTMP prior to construction."

Figure 2.8.11.4 below is an extract from EIAR Appendix A6.1 Section 6.2.4.5 (Table 6.1)

Peak Hour	Arrivals		Departures		Total Two-Way Traffic Flows (pcus)
	Car / Van (1 pcu)	HGV (2.3 pcu)	Car / Van (1 pcu)	HGV (2.3 pcu)	
AM Peak Hour	10	26	0	26	62
PM Peak Hour	0	26	10	26	62

Figure 2.8.11.4: Anticipated Maximum Construction Traffic Generation during Construction Phase (Table 6.1)

Section 6.4.5 of Chapter 6 Traffic & Transport of Volume 2 of the EIAR notes the following:

"As with any construction project, the appointed contractor will be obliged to prepare a comprehensive Construction Traffic Management Plan (CTMP). In preparing the CTMP for the proposed works, the

appointed contractor will be required to give consideration where practicable to facilitate and identify opportunities for the maximum movement of people during the construction period through implementing the following hierarchy of transport mode users:

- *Pedestrians;*
- *Cyclists;*
- *Public Transport; and*
- *General Traffic.*

Access will be maintained for emergency vehicles along the Proposed Scheme, throughout the Construction Phase."

Section 5.2.3.18 of Appendix 5.1 Construction Environmental Management Plan of Chapter 5 of Volume 2 of the EIAR notes: *"The appointed contractor shall ensure that unobstructed access is provided to all emergency vehicles along all routes and accesses. The NTA shall provide to the local authorities and emergency services, contact details of the appointed contractor personnel responsible for construction traffic management."*

Section 5.2.3.19 of Appendix 5.1 Construction Environmental Management Plan of Chapter 5 of Volume 2 of the EIAR notes: *"The appointed contractor shall, through the NTA, ensure that close communication with the relevant local authorities and the emergency services shall be maintained throughout the Construction Phase. As discussed in Section 5.1.6, the appointed contractor shall, through the NTA, also ensure that the local community, landowners, and strategic stakeholders are appropriately informed of proposed traffic management measures in advance of their implementation. Contact information for key points of contact will be provided for members of the public to obtain additional information and to provide additional knowledge such as local events, sports fixtures etc. which may conflict with proposed traffic management measures."*

Further details on the CTMP are provided in item j of this response section below, in relation to additional comments from Traffic and Transport.

Air quality

As noted in Section 5.7.3. (Construction Compound Services) of Chapter 5 (Construction): "*information on the air quality, noise and vibration and water related mitigation measures that will be implemented is included in Chapter 7 (Air Quality), Chapter 9 (Noise & Vibration) and Chapter 13 (Water) of this EIAR."*

Chapter 7 Air Quality of the EIAR sets out the methodology adopted to assess the impact on air quality of the Proposed Scheme. Table 7.1 identifies the air quality receptors within the study area with an air quality sensitive area which is predominately residential dwellings including Bancroft Park, located within 30m of the east of the road edge.

Section 7.2.4.4 acknowledges that the greatest potential impact on air quality during the Construction Phase is from construction dust emissions, PM_{10} / $PM_{2.5}$ emissions and the potential for nuisance dust.

As further stated in Section 7.2.4.4 an appraisal has been carried out to assess the risk to sensitive receptors as a result of dust soiling, health impacts and ecology impacts due to the Construction Phase in accordance with the IAQM's Guidance on the Assessment of Dust from Demolition and Construction (IAQM 2014). This appraisal reviews the sensitivity of the site's location with respect to dust nuisance, human health and ecological impacts and then calculates a risk of impact using the magnitude of site activities.

Section 7.4.2.3 of Chapter 7 identifies the predicted changes in concentration and impact on mean annual concentration at each of the ambient receptors in the context of the TII significance criteria (TII 2011) for the construction stage.

Table 7.27 (Predicted Changes in 2024 Construction DN and DS and Impact Significance Criteria at Most Impacted Receptor Locations) of Chapter 7 provides a list of the 27 most impacted receptor locations, none of which includes receptor locations in the vicinity of Bancroft Park (AQ323 at Bancroft Park, AQ31 at St. Mary's National School, AQ322 & AQ366 on Old Greenhills Road, AQ367 & AQ 368 on Main Road and AQ319 on Blessington Road).

Section 1.2.3 of Chapter 7 Appendix 7.1 provides the predicted change in and pollutant concentrations between DM and DS in 2024. Table 2.3 (Predicted Changes in Construction DM and

DS and Impact Significance Criteria at all Modelled Receptor Locations) All these locations in the vicinity of Bancroft Park and Tallaght Village are assessed as experiencing a negligible impact due to the Proposed Scheme in terms of the annual mean NO_2 concentration. These are all assessed as experiencing a negligible impact due to the Proposed Scheme in terms of the annual mean PM_{10} and $PM_{2.5}$ concentrations.

Section 7.4.2.3 of Chapter 7 notes: *"The significance of the changes in the concentration of each of the ambient receptors has been determined in the context of the TII significance criteria (TII 2011). As shown in Table 7.27 and Figure 7.6 in Volume 3 of this EIAR, the majority of modelled receptors are estimated to experience a negligible impact due to the Proposed Scheme in terms of the annual mean NO_2 concentration. A slightly beneficial impact is estimated at 48 receptors, a moderate beneficial impact at 30 receptors and substantial beneficial impacts are expected at two receptors. All beneficial impacts are modelled along the Proposed Scheme due to the diversion of traffic off these routes. A slight adverse impact is expected at six receptors. As shown in Table 7.27 and Figure 7.7 in Volume 3 of the EIAR the Proposed Scheme will be overall neutral in terms of annual mean PM_{10} concentrations, with all receptors experiencing a negligible impact. As shown in Table 7.27 and Figure 7.8 in Volume 3 of this EIAR the Proposed Scheme will be overall neutral in terms of the annual mean $PM_{2.5}$ concentration with all receptors experiencing a negligible impact."*

Section 7.4.2.3 concludes that in accordance with the EPA Guidelines (EPA 2022) the impacts associated with the Construction Phase traffic emissions are overall neutral and short term.

Section 7.5 of Chapter 7, sets out the mitigation measures that the appointed contractor will implement to ameliorate air quality impacts during the construction phase.

Section 7.6.1 sets out the predicted residual air quality impacts during the construction phase. When the dust minimisation measures detailed in the mitigation section of this Chapter are implemented, fugitive emissions of dust from the site will be insignificant and pose no nuisance at nearby receptors. Thus, there will be no residual Construction Phase dust impacts.

The air dispersion modelling assessment of Construction Phase traffic emissions has found that the Proposed Scheme will be neutral overall in the study area. There are no substantial or moderate adverse effects expected as a result of the Construction Phase of the Proposed Scheme.

Therefore, overall it is considered that the residual effects as a result of the Proposed Scheme's construction are neutral and short-term. No significant residual impacts have been identified during the Construction Phase of the Proposed Scheme, whilst meeting the scheme objectives set out in Chapter 1 (Introduction).

Noise

Within Section 9.2.1 of Chapter 9 Noise & Vibration of the EIAR, Table 9.1 identifies the noise sensitive locations (NSLs) along the Proposed Scheme.

Within the Tallaght to Ballymount study area, the key NSLs are predominately residential NSL's in Belgard Square residential area. These residential NSLs are within 10m of the Proposed Scheme. Other sensitive NSLs in this zone include Tallaght Hospital and TUD Tallaght within 40m to 100m of the road edge. Residential NSLs lining either side of R819 Greenhills Road are within 10m to 100m of the Proposed Scheme.

Section 9.4.3.2 of Chapter 9 considers construction noise and Section 9.4.3.2.5 specifically considers construction noise from "Construction Site Compounds", which is applicable to the works in Bancroft Park. Table 9.40 [EIAR Chapter 9] provides predicted noise levels for Construction Compound TC2 at closest NSLs. The total predicted cumulative construction noise levels (CNL) for TC2 at the closest residential NSLs to south of compound at Greenhills Court (10m) are 78 dB $L_{Aeq, 1hr}$ in the absence of noise mitigation associated with day to day material handling activities. Making reference to Table 9.50 [EIAR Chapter 9], the potential noise impacts at the closest NSLs range between negative, not significant to significant and temporary during the daytime period and negative, not significant to very significant and temporary during the evening and weekend periods in the absence of noise mitigation.

Section 9.5.1 in Chapter 9 sets out the mitigation measures which the Contractor will be required to implement during the Construction Phase.

Section 9.5.1.1 Noise, notes the following: *"The appointed contractor will be required to take specific noise abatement measures to the extent required and comply with the recommendations of BS 5228–1 (BSI 2014a) and S.I. No. 241/2006 - European Communities (Noise Emissions by Equipment for Use Outdoors) (Amendment) Regulations 2006. The mitigation measures outlined below for the*

Construction Phase have also been included in the Construction and Environmental Management Plan (CEMP) in Appendix A5.1 in Volume 4 of this EIAR.

These measures will ensure that:

- *During the Construction Phase, the appointed contractor will be required to manage the works to comply with the limits detailed in Section 9.2.4.1 using methods outlined in BS 5228–1 (BSI 2014a); and*
- *The best means practicable, including proper maintenance of plant and equipment, will be employed to minimise the noise produced by on site operations.*

BS 5228–1 includes guidance on several aspects of construction site practices, which include, but are not limited to:

- *Selection of quiet plant;*
- *Control of noise sources;*
- *Screening;*
- *Hours of work;*
- *Liaison with the public; and*
- *Monitoring."*

Section 9.5.1.2 Vibration, notes the following: *"On review of the likely vibration levels associated with construction activities, it is considered that the construction of the Proposed Scheme is not expected to give rise to vibration that is either significantly intrusive or capable of giving rise to structural or cosmetic damage to buildings.*

Vibration from construction activities will be limited to the values set out in Table 9.14 to avoid any form of potential cosmetic damage to buildings and structures. Monitoring will be undertaken at identified sensitive buildings, where proposed works have the potential to be at or exceed the vibration limit values in Table 9.14.

In the case of vibration levels giving rise to human discomfort, in order to minimise such impacts, the following measures shall be implemented during the Construction Phase:

- *A clear communication programme will be established by the NTA to inform adjacent building occupants in advance of any potential intrusive works which may give rise to vibration levels likely to result in significant effects as per Table 9.15. The nature and duration of the works will be clearly set out in all communication circulars as necessary;*
- *Activities capable of generating significant vibration effects with respect to human response (as per Table 9.15) will be restricted to daytime hours only, as far as practicable; and*
- *Appropriate vibration isolation shall be applied to plant (such as resilient mounts to pumps and generators), where required and where feasible."*

Table 9.55 [EIAR Chapter 9] sets out the predicted construction phase impacts following the implementation of mitigation. The noise impacts associated with Construction Compounds is predicted to be negative, not significant and temporary at NSLs at distances within 10m of Construction Compounds Monday to Friday Daytime (07:00 – 19:00hrs) and negative, not significant and temporary at NSLs at distances within 10m of Construction Compounds and negative, not significant and temporary at NSLs at distances greater than 15m from the Construction Compounds Monday to Friday Evening (19:00 – 23:00hrs) or Saturdays (08:00 – 16:30hrs).

Vibration

Section 9.4.3.2.9 of Chapter 9 Noise & Vibration of Volume 2 of the EIAR notes the following:

"Referring to the vibration magnitudes above and Table 9.15 [EIAR Chapter 9], vibration impacts during ground-breaking activities using heavy breakers have the potential to generate a negative, slight to moderate, temporary effects at distances of 10m from the activity. Beyond 50m from this type of activity, impacts are reduced to not significant to slight and temporary. For all other works, vibration impacts will be below those associated with perceptible vibration and will be imperceptible to not significant and temporary. All construction works are orders of magnitude below limits values associated with any form or cosmetic or structural damage for structurally sound or protected or historical buildings or structures referred to in Table 9.14 [EIAR Chapter 9] even at closer distances to

the source. Notwithstanding the above, any construction activities undertaken on the site will be required to operate below the recommended vibration criteria set out in Table 9.14 [EIAR Chapter 9] . No vibration sensitive processes have been identified along the Proposed Scheme."

As stated in Section 9.5.1.2 Vibration of Chapter 9 of the EIAR: *"On review of the likely vibration levels associated with construction activities, it is considered that the construction of the Proposed Scheme is not expected to give rise to vibration that is either significantly intrusive or capable of giving rise to structural or cosmetic damage to buildings. Vibration from construction activities will be limited to the values set out in Table 9.14 to avoid any form of potential cosmetic damage to buildings and structures. Monitoring will be undertaken at identified sensitive buildings, where proposed works have the potential to be at or exceed the vibration limit values in Table 9.14. In the case of vibration levels giving rise to human discomfort, in order to minimise such impacts, the following measures shall be implemented during the Construction Phase:*

> *• A clear communication programme will be established by the NTA to inform adjacent building occupants in advance of any potential intrusive works which may give rise to vibration levels likely to result in significant effects as per Table 9.15. The nature and duration of the works will be clearly set out in all communication circulars as necessary;*
>
> *• Activities capable of generating significant vibration effects with respect to human response (as per Table 9.15) will be restricted to daytime hours only, as far as practicable; and*
>
> *• Appropriate vibration isolation shall be applied to plant (such as resilient mounts to pumps and generators), where required and where feasible."*

In summary Section 9.4.3.3 of Chapter 9 Noise & Vibration of Volume 2 of the EIAR notes the following: *"The potential for elevated levels of vibration at sensitive locations during construction activities associated with the Proposed Scheme is typically associated with surface breaking activities used for road widening and utility diversions….. Referring to the vibration magnitudes above and Table 9.15, vibration impacts during ground-breaking activities using heavy breakers have the potential to generate a negative, slight to moderate, temporary effects at distances of 10m from the activity. Beyond 50m from this type of activity, impacts are reduced to not significant to slight and temporary. For all other works, vibration impacts will be below those associated with perceptible vibration and will be imperceptible to not significant and temporary."*

Table 9.55 in Chapter 9 of the EIAR provides a summary of the predicted construction phase impacts following implementation of mitigation. With regard to vibration arising from construction activities the impact is predicted to be no greater than negative, slight and temporary.

Visual impact

As noted in Section 5.5.2.4. (Tree Protection) of Chapter 5 (Construction): *"information on mitigation measures with regards to the removal and protection of trees is provided in Chapter 12 (Biodiversity), and further information on the assessment of tree removal with regards to landscape and visual impact is provided in Chapter 17 (Landscape (Townscape) & Visual) of this EIAR."*

Section 17.4.3.2.5 of EIAR Chapter 17 Landscape (Townscape) and Visual, summarises the assessment of the construction impact on various amenity designations along the Route of the Proposed Scheme, including Bancroft Park. It is concluded that the *"potential townscape / streetscape and visual impact of the Construction Phase on Amenities is assessed to be* ***Negative, Significant and Temporary / Short- Term****."*

Section 17.4.4.2.5 of EIAR Chapter 17 Landscape (Townscape) and Visual, summarises the assessment of the operational impact on various amenity designations along the Route of the Proposed Scheme, including Bancroft Park and states the following: *"There will be provision of landscape improvements at the open spaces off Blessington Road, Bancroft Park and Rutland Avenue which will be used as construction compounds. Improvements include new tree planting and provision of new footpaths. The sensitivity is high and the magnitude of change is medium.*

The potential townscape / streetscape and visual impact of the Operational Phase on open spaces is assessed to be ***Positive, Moderate and Short-Term becoming Positive, Significant, Long-Term****."*

Landscape proposals & reinstatement

SDCC requested that the compound should be reinstated and not kept as a maintenance compound after works are completed.

As noted earlier in this response, the Proposed Scheme includes the provision of enhanced landscaping proposals for the green area at this location, which will be implemented once the temporary construction compound is removed. Figure 2.1.5 above provides an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR and shows these proposals.

c) Old Greenhills Road Plaza

The SDCC submission notes the removal of a recent Council delivered area of high quality public realm the NTA should provide enhanced public realm along Old Greenhills Road up to Tallaght Village area to mitigate this loss to be secured by planning condition.

Response

As set out in Section 4.6.11.3.1 of EIAR Chapter 4 Proposed Scheme Description, the planting strategy for the Proposed Scheme *"has been developed in response to the objectives set out in both the South Dublin County Development Plan 2022 – 2028 (SDCC 2021) and the Dublin City Development Plan 2022 – 2028 (DCC 2021). The planting strategy is also in response to landscape and urban realm opportunities arising from the Proposed Scheme to integrate new infrastructure within the existing local context and to enhance the visual and amenity value of streets and spaces.*

The planting strategy includes replacement of street trees and groups of trees that may be impacted by the Proposed Scheme, but also the introduction of new tree planting and street trees within other spaces and along streets. Reinforcement of green infrastructure along the route will improve the overall amenity, character and appeal of the route corridor and localities along it, as well as enhancing biodiversity. In addition to trees and street trees, other vegetation is also proposed along the route including hedgerows, ornamental planting and amenity grassland, shrub and meadow grass areas. These will be utilised to reinstate property boundaries altered by the Proposed Scheme."

As described in Section 4.5.1.1 general overview of the Proposed Scheme of Chapter 4 Proposed Scheme Description of Volume 2 of the EIAR *"…it is proposed for buses to use the Old Greenhills Road alignment and create a new bus only junction at the location of the existing cul-de-sac opposite Bancroft Park Road, to facilitate bus only turn movements to Greenhills Road (R819). ….. Stone paving will be used in the area and localised planting will be implemented to retain the character of the existing cul-de-sac treatment."*

Section 4.5.1.9 of EIAR Chapter 4 provides an overview of the landscaping proposals at this location as follows: *"Between the Old Greenhills Road and the junction with Mayberry Road, and along the R819 Greenhills Road, it is proposed to utilise land take on both the west and east side of the existing R819 Greenhills Road. This will require replacement tree planting but also gives opportunity to introduce potential Sustainable Drainage Systems (SuDS) interventions along this section of the route."*

Section 4.5.1.9 goes on to state that between Old Greenhills Road and the junction with Mayberry Road *"An extensive tree planting scheme is proposed along the entire route to provide a more consistent level of tree cover that will enhance the visual appearance of the route and increase the local biodiversity values. Key enhancements will include the new sustainable transport link road at Parkview and the creation of new public realm links, SuDS interventions and enhancement of the green infrastructure through new tree planting and development of meadow grass areas."*

Section 17.4.1.4.1 of Chapter 17 (Landscape & Visual) notes the key landscape measures within the section of the Proposed Scheme between Tallaght and Ballymount. These include the following in the vicinity of Old Greenhills Road To mitigate the loss of 9 trees at the Old Greenhills Road Plaza cul-de-sac:

- *"Provision of appropriate replacement paving scheme and tree planting at new bus-only junction at Old Greenhills Road / Greenhills Road junction (Ch. A1940 to Ch.1990);*
- *Reinstatement of open space at Bancroft Park with provision of additional landscape improvements in the form of a new gravel footpath, tree planting and boundary hedgerows (off-chainage);*

- *Improved pedestrian crossing points on Greenhills Road at junctions of Bancroft Park, TUD Tallaght access road, Tallaght Athletics Club, Astro Park, Broomhill Road and Hibernian Industrial Estate using sett paving (Ch. A1950 to Ch. A2760);"*

An extract from Landscaping General Arrangement Drawings, which are provided in Part 1 of 3 of Volume 3 of the EIAR, are included in Figure 2.8.11.5, showing the proposals at the northern end of Old Greenhills Road.

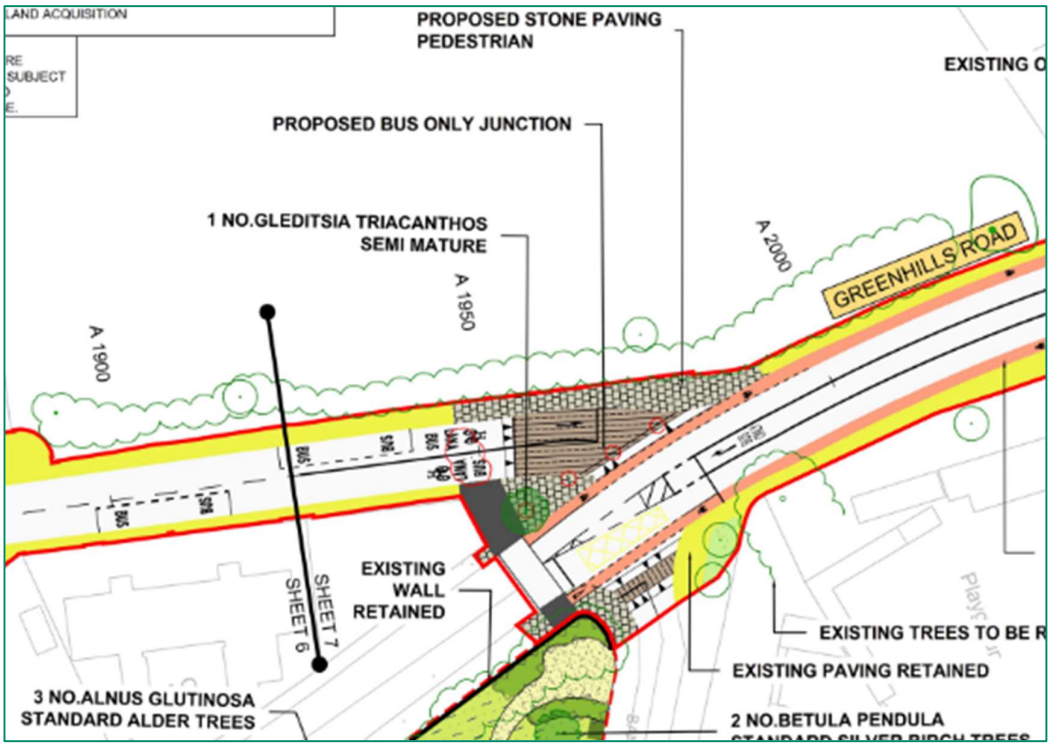


Figure 2.8.11.5 Extract from Landscaping General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that these are matters that can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

d) Cycle Lanes

SDCC comment that there are several locations [non-specific, but General Arrangement sheet 8 of 56 noted] where cycle lanes only extend short distances off the main route into connecting roads, suggesting that wherever possible cycle lanes should connect into existing cycle lanes.

Response

The NTA notes this comment. In providing cycle infrastructure along the route of the Proposed Scheme, cycle connections have been proposed at all side roads, with the proposed cycle tracks tie-ing into any existing cycle track / lane provision on the side road.

In relation to the specific query at Airton Road on Sheet 8 of 56 referenced by SDCC, Airton Road does not currently have cycle track / lane provision and cycle lanes are included in the Proposed

Scheme for approximately 30m on Airton Road, from where cyclists will join the general traffic. Figure 2.8.11.6 shows an extract of Sheet 8 General Arrangement Drawings in Volume 3 of the EIAR.

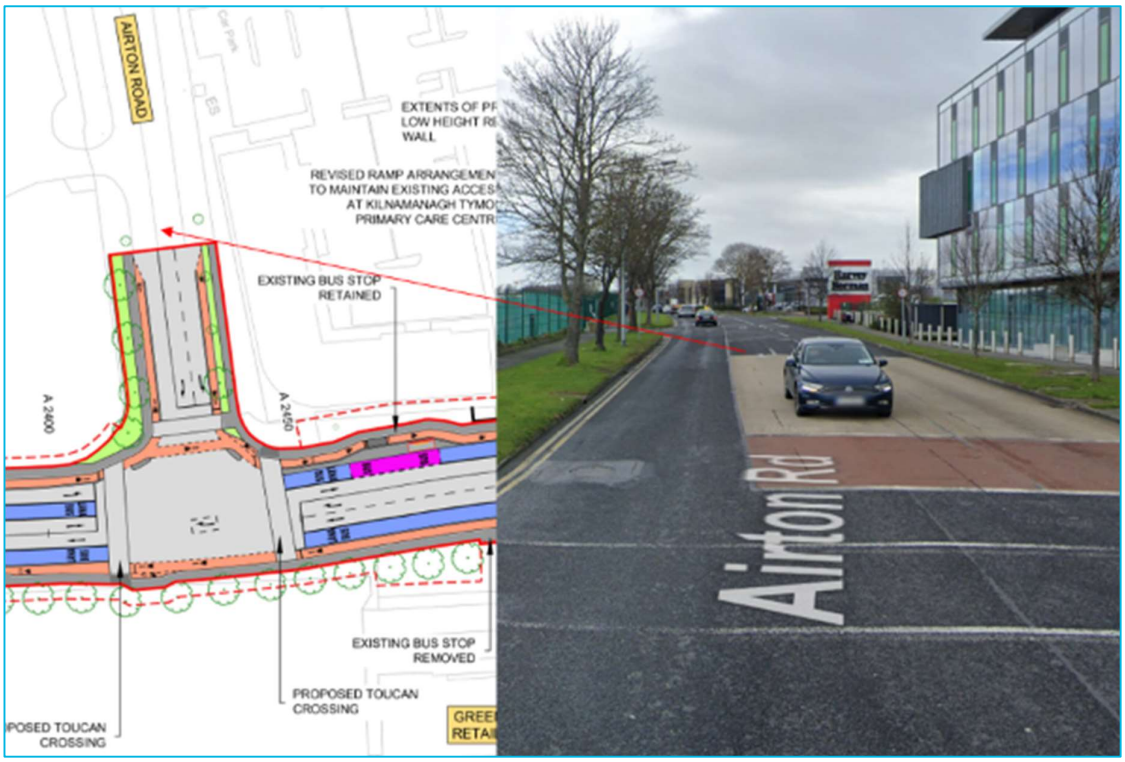


Figure 2.8.11.6: Extract of General Arrangement Drawings at Airton Road and Existing View of Airton Road (Image source: Google)

e) Mayberry Road & Birchview Avenue

The SDCC submission comments that the NTA should clearly set out how the Proposed Scheme will re-provide a high-quality open space as the it affects the existing amenity of green open space at Mayberry Road & Birchview Avenue, adding that the proposed temporary site compound could create negative impacts on surrounding residential areas. The submission requests the final design and layout, visual impact, hours of operation, traffic and noise should be secured by planning condition for agreement with LA.

Response

High quality open space

Section 4.5.1.9 of EIAR Chapter 4 Proposed Scheme Description provides an overview of the landscaping proposals at this location as follows: *"Between the Old Greenhills Road and the junction with Mayberry Road, and along the R819 Greenhills Road, it is proposed to utilise land take on both the west and east side of the existing R819 Greenhills Road. This will require replacement tree planting but also gives opportunity to introduce potential Sustainable Drainage Systems (SuDS) interventions along this section of the route."*

Section 4.5.1.9 goes on to state that *"An extensive tree planting scheme is proposed along the entire route to provide a more consistent level of tree cover that will enhance the visual appearance of the route and increase the local biodiversity values. Key enhancements will include the new sustainable transport link road at Parkview and the creation of new public realm links, SuDS interventions and enhancement of the green infrastructure through new tree planting and development of meadow grass areas.*

An extensive SuDS attenuation area is proposed at Tymonville Crescent. It will be planted with native species adaptable to wetland conditions and surrounded by native woodland trees in small clusters to provide a new landscaped parkland that will resemble the existing tree belt retained on the eastern side of Greenhills Road."

Figure 2.8.11.7 and Figure 2.3.13 are extracts from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed extensive landscaping proposals at Parkview / Birchview Avenue / Treepark Road.



Figure 2.8.11.7: Extract from Landscape General Arrangement Drawing (Sheet 10)

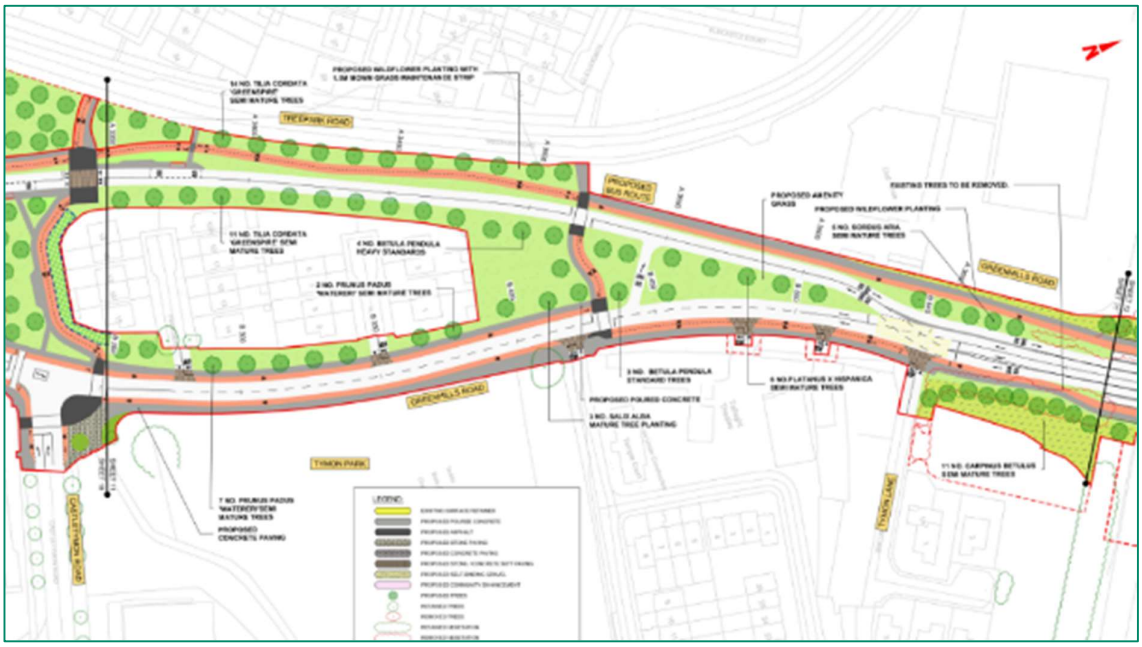


Figure 2.8.11.8: Extract from Landscape General Arrangement Drawing (Sheet 11)

Section 17.4.4.1.1. of EIAR Chapter 17 Landscape (Townscape) and Visual notes the following in relation to the operational phase of the Proposed Scheme: "*There will be substantial replacement and additional tree planting within this section, particularly at the open space at Blessington Road, at Belgard Square West, industrial sections of Greenhills Road, and at open spaces at Birchview / Parkview / Treepark, which will aid in reducing some of the negative effects, and in some cases will result in localised positive effects over the long-term as the trees mature. The introduction of*

ornamental planting on Belgard Square East and Blessington Road will help soften and improve the amenity of the existing streetscape. Improved paving schemes are proposed to sections of footpaths within Tallaght Town Centre and at the southwest entrance to Tymon Park which will provide localised improvements to streetscape amenity.

The Operational Phase will have a substantial effect on the existing streetscape character at Birchview / Parkview / Treepark where there will be a considerable loss of amenity in the short-term, with a reduction in negative effects over the long term as replacement and additional planting matures. Some other areas of the section will experience localised, positive short-term effects with the introduction of improved paving and long-term effects as tree planting matures."

Construction Compounds

The Proposed Scheme will require temporary acquisition of a part of the green area at this location for site Construction Compounds TC3 and TC4. The temporary land to be acquired is needed in order to allow the appointed contractor to manage the delivery of and construct the Proposed Scheme. The Site Compounds will be fenced off during the construction phase.

Section 5.3.1.16 of EIAR Chapter 5 describes the construction works for section 1p of the Proposed Scheme as follows: *"Section 1p encompasses a length of approximately 620m at the greenfield site, between Treepark Road and Parkview. This will consist of a new two-way bus route constructed parallel to Birchview Avenue and Treepark Road. The construction activities at Section 1p will comprise new pavement, footway and cycleway construction. New kerbs will also be provided. Construction activities will also consist of the installation of additional signage, new road markings, new traffic signal infrastructure, new road lighting, new street furniture, bus stops (including shelters and information displays etc.) and landscaping works. Construction Compounds TC3 and TC4 will be located in the green space between Greenhills Road and Birchview Avenue / Treepark Road, which will ultimately form part of the permanent works. Various utility diversions and / or protections will be required; including water distribution and telecommunications infrastructure. The expected construction duration will be approximately four months."*

The locations and extent of Construction Compounds TC3 and TC4 are shown in Figures 2.8.11.9 and 2.8.11.10.



Figure 2.8.11.9: Extract of Image 5.3 of Chapter 5 Construction of Volume 2 of the EIAR

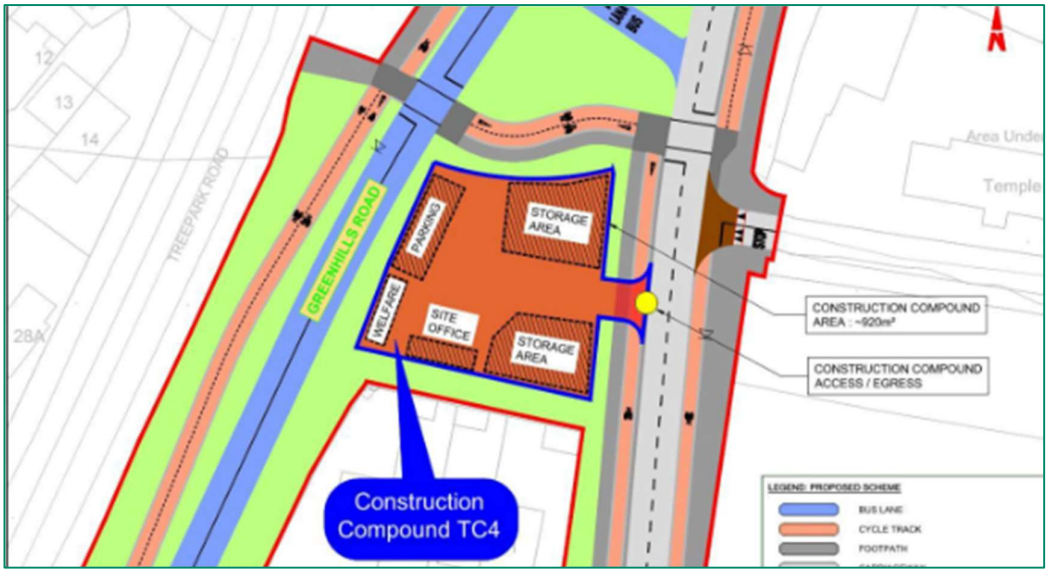


Figure 2.8.11.10: Extract of Image 5.4 of Chapter 5 Construction of Volume 2 of the EIAR

In relation to the hours of operation for the construction work, construction traffic and noise associated with Construction Compounds TC3 and TC4, the relevant comprehensive responses provided in item b) above (Construction Compound TC2 at Bancroft Park) above equally apply to Construction Compounds TC3 and TC4. It is not proposed to repeat that commentary here.

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised (relating to hours of operation, construction traffic and noise) can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

Visual Impact

The submission references the visual impact of the final design and layout as an item that should be secured by planning condition.

Chapter 17 Landscape (Townscape) & Visual of Volume 2 of the EIAR recognises that major changes and substantial effects that the Proposed Scheme will have on the green space at Parkview. However, this green space has been subject to a long-standing future road objective in the current and previous South Dublin Development Plan. The Proposed Scheme includes for three integrated pedestrian / cycle crossings of the new bus route in this area and the proposed landscape measures, which include significant new tree planting, will assist in the medium and longer-term integration of the Proposed Scheme. The tree planting will also reduce and screen potential for viewing of private areas.

Section 17.4.4.1.1 of Chapter 17 Landscape (Townscape) & Visual of Volume 2 of the EIAR considers operational phase townscape and visual effects of the scheme and notes the following:

"The Operational Phase will have a substantial effect on the existing streetscape character at Birchview / Parkview / Treepark where there will be a considerable loss of amenity in the short-term, with a reduction in negative effects over the long term as replacement and additional planting matures. Some other areas of the section will experience localised, positive short-term effects with the introduction of improved paving and longterm effects as tree planting matures."

Figure 2.8.11.7 and Figure 2.8.11.8 above are extracts from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed landscaping layout at Parkview / Birchview Avenue / Treepark Road.

Figure 2.8.11.11 to Figure 2.8.11.16 are extracts from EIAR Chapter 17 Figure 17.2.4.2 Photomontage Views 02, 03 and 04 As Existing and As Proposed showing the existing and the intended scheme visuals at Birchview Avenue, Greenhills Road / Castletymon Road Junction and Treepark Road.



Figure 2.8.11.11: View 02 As Existing View from South West along Birchview Avenue



Figure 2.8.11.12: View 02 As Proposed View from South West along Birchview Avenue



Figure 2.8.11.13: View 03 As Existing View from East at Greenhills Road / Castletymon Road Junction



Figure 2.8.11.14: View 03 As Proposed View from East at Greenhills Road / Castletymon Road Junction



Figure 2.8.11.15: View 04 As Existing View from South along Treepark Road



Figure 2.8.11.16: View 04 As Proposed View from South along Treepark Road

Section 17.5.2.1.2 of Chapter 17 (landscape & Visual) notes the following:

"Figure 17.2.2.2 shows the proposed view from Birchview Avenue, looking north-east. The road remains unchanged but there is the addition of a new bus-only road which is visible, running parallel to Birchview Avenue through the open space. There is some tree loss with removal of the hedgerow, however, new tree planting is provided within the grass area. There is a neutral change to the visual amenity of this view."

Section 17.4.1.4.1 of Chapter 17 (Landscape & Visual) notes the following proposed works at this location:

"Provision of substantial reinstatement / additional tree planting and boundary planting to open spaces along residential section of Greenhills Road, proposed bus-only road adjacent to Treepark Road and reinstated areas of open spaces used for construction compounds TC4 and TC5 (Ch. A2900 to Ch. A3700)." [Note Compound TC3 is at chainage A3050 to A3270].

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised (relating to hours of operation, construction traffic and noise) can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

f) Treepark Rd/ Castletymon Rd

SDCC note in their submission that the provision of pedestrian and cycle linkages from Treepark Road to Castletymon Road is welcomed, noting that the proposals will address concerns in relation to severance at this location.

Response

The support for this element of the Proposed Scheme is noted and welcomed by the NTA.

g) Land Negotiations

The submission states on page 7 of their submission: *"Land negotiations with the affected landowners shall be conducted and concluded as early as possible."*

Response

The NTA notes this comment.

If the CPO is confirmed by An Bord Pleanála, a Notice to Treat will be served on the landowner whose land is being acquired. Following service of the Notice to Treat, the landowner will be required to submit a claim for compensation and as part of this process, the NTA will pay the reasonable costs (as part of the claim) for the landowner to engage its agent / valuer in preparing, negotiating and advising on compensation.

h) Green space between Calmount Road and existing Greenhills Road

The submission notes the following: *"The design of the green space between the extended Calmount Road and existing Greenhills Road requires more consideration and better resolved design outcome.*

a. *A landscaping plan should be provided for this new green space demonstrating area of planting, where desire and ped/ cycle movement routes are, and how the open space will interface with the sizeable development site (Chadwicks) to the south of the green space*
b. *The proposed cycle bridge and ramp appears of standard engineering specification, and an uplift in design quality and appearance is warranted in this important location at a key entry to the wider City Edge regeneration lands."* The submission then lists six example items.

Response

Figure 2.8.11.17 is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed landscaping proposals to the green space between the extended Calmount Road and existing Greenhills Road.

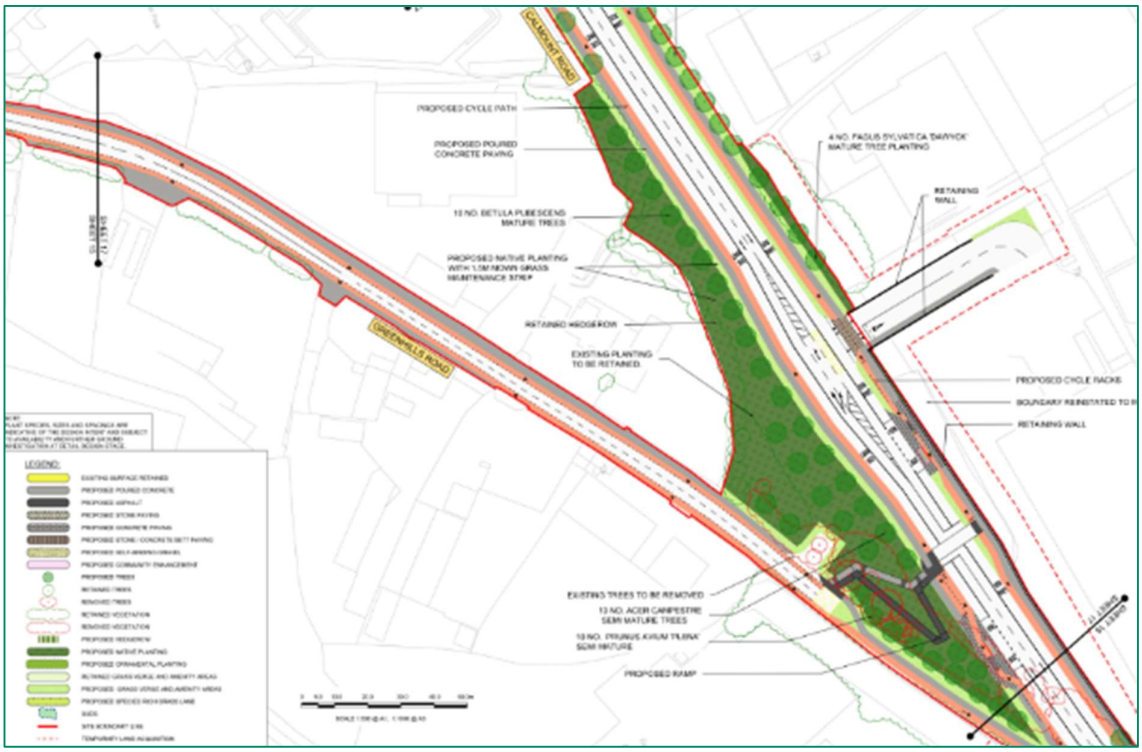


Figure 2.8.11.17: Extract of Landscaping General Arrangement Drawings between the extended Calmount Road and existing Greenhills Road

The submission references a sizeable development site (Chadwicks) to the south of the green space.

This is the Strategic Housing Development reference SHD3 ABP 313129-22 included in EIAR Cumulative Impact Appendix A21.1 in Volume 4 Part 4 of 4, where it is described as *"Demolition of the former Chadwicks Builders Merchant development and the construction of a mixed-use Build-to-Rent residential and commercial development comprising 633 build-to rent apartment units, 1 childcare facility and 10 commercial units in 4 blocks (A-D) ranging in height from 5 to 12 storeys."*

This SHD application was considered by An Bord Pleanála at a Board meeting held on 27/07/2022 and the Board decided to refuse permission. Therefore, there is currently no confirmed proposals for this development site.

As set out in Section 4.6.11.1 of EIAR Chapter 4 Proposed Scheme Description, the landscape and urban realm proposals are derived from analysis of the existing urban realm, including existing street and public space character, heritage features, boundaries, tree planting and vegetation, and the range of contemporary and heritage materials in use that inform the quality and character of different parts of the overall route.

Section 4.6.11.3.1 describes how the planting strategy for the Proposed Scheme has been developed in response to the objectives set out in both the South Dublin County Development Plan 2022 – 2028 (SDCC 2021) and the Dublin City Development Plan 2022 – 2028 (DCC 2021). The planting strategy is also in response to landscape and urban realm opportunities arising from the Proposed Scheme to integrate new infrastructure within the existing local context and to enhance the visual and amenity value of streets and spaces.

The landscaping proposals included in the Proposed Scheme at this location are in accordance with the scheme's planting strategy.

In relation to the concern about the appearance of the proposed cycle facilities in the context of the wider City Edge regeneration lands, as noted elsewhere in their submission. SDCC note that the City Edge Strategic Framework is a *"non-statutory framework and is not part of the development consent assessment process."*

The layout of the ramps and proposed Toucan crossing at this location (noting that no cycle bridge is proposed) is shown in Figure 2.8.11.18, which is an extract from the General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR.

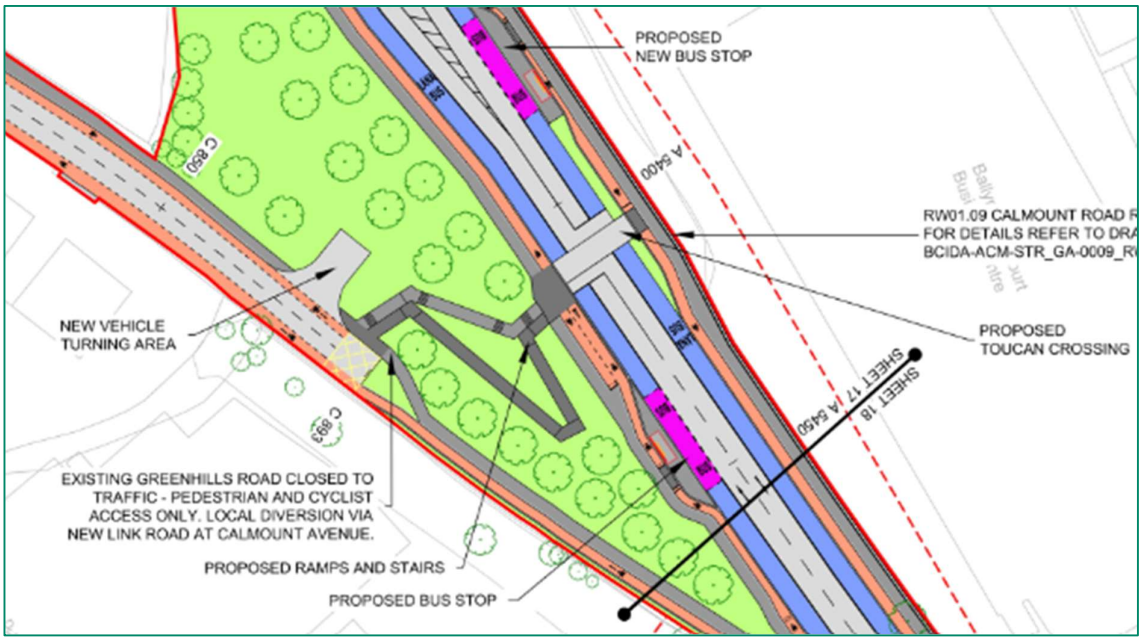


Figure 2.8.11.18: Extract of General Arrangement Drawings between the extended Calmount Road and existing Greenhills Road

As stated in Section 4.6.3 of EIAR Chapter Proposed Scheme Description, one of the objectives for the Proposed Scheme is to enhance the potential for cycling by providing safe infrastructure, segregated from general traffic wherever practicable, noting that physical segregation ensures that cyclists are protected from motorised traffic and can bypass vehicular congestion, thus improving cyclist safety and reliability of journey times. The cycle facilities at this location achieve this and have bene designed in accordance with the relevant design standards.

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works.

i) CPO of public land, hand on & maintenance

SDCC note on pages 7-8 of their submission: *"SDCC encourages further discussion between NTA and SDCC on the exact parcels of public land identified within the scheme. Also on additional CPO plots, we would like discussion on the hand on of such lands into LA management and the particular maintenance implications of such additional infrastructure and land bank."*

Response

Under the provisions of the relevant legislation, the NTA has exercised certain powers under Section 44(2)(b) of the 2008 Act to the effect that the functions in relation to securing the provision of public transport infrastructure falling within Section 44(2)(a) of the 2008 Act (as amended) in relation to the CBC Infrastructure Works, should be performed by the NTA. Those functions include the design and construction of the Proposed Scheme and, effectively, the NTA becomes the road authority in respect of the exercise of those functions.

Under the relevant legislation, upon the completion of the construction of the Proposed Scheme the NTA automatically ceases to be the road authority and the status of DCC as the relevant road authority is automatically restored. Accordingly, the legislative provisions appropriately govern the arrangements for the NTA to commence the construction of the Proposed Scheme, subject to the necessary planning and environmental consents, and govern the restoration of the road authority function to the relevant local authority, in this case being South Dublin County Council. Consequently

all CPO lands acquired by NTA for purposes of the Proposed Scheme will be transferred to the relevant local authority.

NTA will continue the very positive and constructive liaison with SDCC throughout the procurement and construction process including in relation to the CPO & maintenance.

j) Construction [Traffic] Management Plan

The submission makes a number of points in relation to the future construction management plans and lists twelve specific items that it believes a future Construction Traffic Management Plan should include. It also notes that a Project Construction Waste and Demolition Management Plan be prepared that addresses intended construction waste management and traffic issues that may arise from such a plan.

Response

The Construction Environmental Management Plan (CEMP) for the Proposed Scheme is included as Appendix A5.1 of EIAR Volume 4 Part 1 of 4. In Section 5.1.1 of Appendix A5.1 it states that "*The CEMP will be updated by the National Transport Authority (NTA) (the Employer for the construction works) prior to the commencement of the Construction Phase, so as to include any additional measures required pursuant to conditions attached to any decision to grant approval. The NTA shall set out the Employer's Requirements in the Construction Contract including all applicable mitigation measures identified in this EIAR, as well as additional measures required pursuant to conditions attached to any decision to grant approval.*"

Section 5.2 of the CEMP relates to the required Construction Traffic Management Plan, and Section 5.2.3 notes that the appointed contractor will be responsible for developing a CTMP to effectively manage traffic and transport during the Construction Phase of the Proposed Scheme. Section 5.2.3 also lists a number of aspects that the appointed contractor will address during the preparation of the CTMP. Further details of the aspects listed are provided in Section 5.2.3.1 to Section 5.2.3.19 of the CEMP.

In addition, Table 5.2 of the CEMP summarises the Construction Phase mitigation (i.e. which the appointed contractor will implement), outlined in the relevant EIAR technical assessment chapters.

Section 5.5 of the CEMP provides a Construction and Demolition Resource and Waste Management Plan and Section 5.5.1 states that: "*This Construction and Demolition Resource and Waste Management Plan (CDRWMP) has been prepared to ensure that waste arising during the Construction Phase and Demolition Phase of the Proposed Scheme, will be managed and disposed of in a way that ensures compliance with the provisions of the Waste Management Act, as amended, and associated Regulations to ensure that optimum levels of reduction, reuse and recycling are achieved. The purpose of this CDRWMP is to facilitate reuse and recycling and divert waste from landfill.*

The CDRWMP is consistent with best practice management practices and any relevant mitigation measures as contained within the EIAR. The content and headings used in this CDRWMP comply with the EPA Best Practice Guidelines for the Preparation of Resource Management Plans for Construction and Demolition Projects (EPA 2021a).

This CDRWMP is based on the estimated quantities of waste generation and the proposed management measures from the Proposed Scheme at planning stage."

Table 2.8.11.1 below presents the list of aspects that the appointed contractor will address and identifies where each of the 12 points raised by SDCC is covered.

Table 2.8.11.1: Summary of where SDCC Points are Addressed by the CEMP

Aspect Listed in CEMP Section 5.2	SDCC Point Raised
Access and egress;	(ix) Access arrangements (x) Measures to obviate queuing on adjoining road network
Construction Compounds;	(ii) on-site car parking (v) Location of materials compound

Aspect Listed in CEMP Section 5.2	SDCC Point Raised
	(vi) Security fencing
Routing of construction vehicles;	(ix) Routes to be used by construction traffic
Pedestrian (including able-bodied pedestrians, wheel-chair users, mobility impaired pedestrians, pushchair users etc.) and cyclist provisions;	(xii) Arrangements for pedestrians
Public transport provisions;	
Parking and access;	
Lighting;	
CSMMP;	
Traffic management signage;	
Timings of material deliveries;	
Traffic management speed limits;	
Vehicle cleaning;	(i) Vehicle cleansing / wheel washing
Road cleaning;	(iv) Road sweeper
Road condition;	
Road closures and diversions;	
Enforcement of Construction Traffic Management Plan;	
Interface with other projects;	
Other Sections of CEMP	SDCC Point Raised
Table 5.2 Mitigation and Monitoring	(ii) Dust suppression measures (xi) Measures to protect watercourses
CDRWMP	(viii) Use and control of spoil
Other Comments	SDCC Point Raised
Details of Contractor not yet known	(vii) Name and address of site manager

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised (relating to hours of operation, construction traffic and noise) can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

k) Summary of Traffic & Transport views on the proposal

The submission states that SDCC Traffic and Transport Section are broadly happy with the planning proposal and notes that *"the comments provided are mainly focussed on the construction management controls and minor design details of the scheme."*

Response

The support for the scheme is noted and welcomed by the NTA.

2.8.11.5 Road Maintenance Section

Observations raised

The submission makes 7 points; the first 3 relating to construction and the next 4 relating to design.

Construction observations

1. SDCC request that all works are be constructed as per TII Specifications unless agreed separately with SDCC Road Maintenance.
2. SDCC request that precast kerbing is not permitted
3. SDCC requests that the road structure of the bus bay should be 300mm thick reinforced concrete slab with a geogrid overlapping the joints, a 60mm binder course and 40mm surface course.

Response

The NTA notes the comments in items 1 and 2.

In relation to point 3, Section 7.1.4 of the Preliminary Design Report, included in the Supplementary Information, discusses the selection of appropriate pavement materials. Regarding concrete(rigid) pavements it notes the following: "Specific materials should be selected for specific loading areas. Concrete (rigid) pavements, particularly if proposed at bus stops may prove impractical for these works due to long curing times and the need to remain untrafficked until sufficient strength gain has been achieved. For such reasons, concrete pavements at on-line bus stops are likely to be difficult to accommodate without delaying the construction programme. However, off-line bus stops, and bus interchanges where buses are likely to remain stationary for longer periods of time and thus benefit from rigid construction, could more feasibly be concrete pavements without causing delay to construction. This will need to be reviewed during future detailed design."

Section 7.1.4.2.1 of the Preliminary Design Report, discusses the use of concrete (rigid) pavements at the proposed bus interchange at Belgard Square West and notes the following:

"A bus interchange is proposed on Belgard Square West at The Square, Tallaght. This location will be trafficked by a large volume of buses. Slow moving, stationary, vibrating and manoeuvring buses are extremely damaging to both the pavement surface and the pavement structure. Fully flexible (bituminous mixtures) and flexible composite (bituminous mixtures on a hydraulically bound base) pavement structure are unlikely to provide a durable and low maintenance option for this location. It is therefore proposed for the pavement to be rigid (concrete) at that location. Rigid pavements do not rut, are highly resistant to scuffing and oil dropping, requiring limited maintenance, for example at joints."

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised (relating to hours of operation, construction traffic and noise) can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

Design observations

4. Drainage system to be design using SuDS

5. Signage to be kept to minimum
6. The proposals will present an increased financial management issue for SDCC
7. Universal Design principle should be employed in the design

Response

Drainage system designed using SuDS.

The response to this observation is set out drainage requirements/ SuDS strategy in DCC Section 4.11.4 Environmental Protection Division.

Signage kept to minimum.

The signage notes signage to be kept to minimum to avoid street clutter.

The NTA notes this comment. Significant efforts have been made during the design process to minimise above-ground utility infrastructure/ signage where practicable. Where such infrastructure is necessary, it has been sited in appropriate locations, and rationalised where practicable.

Section 17.4.1.4.6 of Chapter 17 Landscape and Visual notes that, inter alia, the following specific landscape / townscape and visual measures are included within the Proposed Scheme:

"Proposals for the treatment of the urban realm within the streetscape impacted by the Proposed Scheme will have regard to the existing character of the street or location, to emerging policies, objectives and proposals for the urban realm and to opportunities for mitigation of impact on the urban realm and the streetscape. Proposals will have regard to historic details and features, to the quality of existing and proposed materials, to the reduction of clutter, ease of legibility, and management and maintenance requirements."

Maintenance costs.

As noted, the Proposed Scheme upon its completion reverts to the status of a public road under the management of the relevant local authority, in this case South Dublin County Council. The funding of costs associated with the maintenance of public roads can involve a number of parties depending on the status of the road – for instance, in the case of a national road Transport Infrastructure Ireland would have an involvement. As the Proposed Scheme does not encompass any section of national road, its components constitute regional and/or local roads only. Funding of regional and local roads fall under the ambit of the relevant local authority and the Department of Transport.

The Exchequer does not currently provide the NTA with funds for dispersal to local authorities for maintenance activities and the NTA does not have a role in overseeing or organising general public road maintenance activities. However, the NTA does retain responsibility for bus fleet, bus stops and bus shelters, and maintenance of these elements falls within its remit.

The NTA anticipates continuing its collaboration with SDCC to ensure the delivery of an appropriate maintenance regime. As part of this collaboration, the NTA will support the provision of the necessary funding by the relevant parties to ensure that the benefits of the Proposed Scheme are not inappropriately eroded. These are matters that can be successfully addressed between SDCC and the NTA.

Universal design principles should be employed in design

Accessibility for mobility impaired users is a core element of the Proposed Scheme design. As set out in Section 4.5 of Chapter 4 (Proposed Scheme Description), in Volume 2 of the EIAR,"*….The assessment of the existing street infrastructure and its ability to support access for disabled users has been based mainly on the Irish Wheelchair Association [IWA] 'Best Practice Guidelines, Designing Accessible Environments' and The National Disability Authority's [NDA] 'Building for Everyone: A Universal Design Approach'.*

In addition, the Bus Interchange has been designed in accordance with BS8300:2009 +A1:2010 Design of buildings and their approaches to meet the needs of disabled people – Code of practice.

Accessibility for mobility impaired users is a core element of the Proposed Scheme design and it has been informed by the principles of Best Practice Guidelines, Designing Accessible Environments (Irish Wheelchair Association 2020) and Building for Everyone: A Universal Design Approach (NDA 2020). Accessibility is also addressed in Chapter 12 of the PGDB. Further detail on accessibility for mobility impaired users is given in Section 4.6.5."

Accessibility is also addressed in Chapter 12 of the PGDB (Appendix A4.1 in Volume 4 of the EIAR).

Further detail on accessibility for mobility impaired users is given in Section 4.6.5 in Chapter 4 of Volume 2 of the EIAR. It acknowledges that *"the Disability Act 2005 (as amended) places a statutory obligation on public service providers to consider the needs of disabled people. A Disability Audit of the existing environment and proposed draft preliminary design for the corridor was undertaken. The Audit provided a description of the key accessibility features and potential barriers to disabled people based on the Universal Design standards of good practice. The Audit was undertaken in the early design stages with the view to implementing any key measures identified as part of the design development process.*

In achieving the enhanced pedestrian facilities there has been a concerted effort made to provide clear segregation of modes at key interaction points along the Proposed Scheme which was highlighted as a potential mobility constraint in the Audit. In addressing one of the key aspects to segregation, the use of the 60mm set down kerb between the footway and the cycle track is of particular importance for guide dogs, whereby the use of white line segregation is not as effective for establishing a clear understanding of the change of pavement use and potential for cyclist/pedestrian interactions.

One of the other key areas that was focused on was the interaction between pedestrians, cyclists and buses at bus stops. The Proposed Scheme has prioritised, where possible, the use of island bus stops, including signal call button for crossing of cycle tracks, to manage the interaction between the various modes with the view to providing a balanced safe solution for all modes."

In Chapter 10 (Population), the assessment has had cognisance of vulnerable groups such as people with disabilities. In Section 10.2.4.1.2.1 addressing landtake, a high sensitivity has been applied to residential properties which; *"….ensures that all populations are considered in the assessment including vulnerable groups such as young children, elderly, and people with disabilities….."*

Section 11.3.2 in Chapter 11 (Human Health) addresses deprivation, disability and health inequalities. Table 11.5 sets out the population, disability and relative deprivation within the study area. The data in Table 11.5 shows that approximately 3.9% of people within the study area have at least one disability. This is a substantially lower proportion of the population than average for Dublin (14.9%) but nevertheless equates to 4,144 people. An analysis of 2016 Census data by Disability Federation Ireland (DFI) identified that 44% of people in Dublin City and 21% of people in South Dublin who have a disability do not have access to a car, compared to 31% of the general population.

Section 11.4.4.6 addresses impacts on health inequalities. It states in the section that the Proposed Scheme: *"…may help to reduce inequalities by improving access to employment for those dependent on public transport. Groups that would benefit most are the socially disadvantaged and some people with disabilities, noting that there is often an interrelationship between disability and deprivation and that car ownership among disabled people is lower (see Section 11.3.2).*

The Proposed Scheme has been designed following the guidelines Building for Everyone – A Universal Design Approach (Centre for Excellence in Universal Design 2020) ensuring it will meet current Universal Design good practice standards, or at least make it no worse than the current situation. An accessibility audit identified several issues with the existing urban environment and the audit report sets out recommendations for the Proposed Scheme to address these issues. The recommendations include issues such as accessible parking, accessible routes (including use of tactile paving), appropriate changes in levels, appropriate surface materials, use of street furniture and management of shared spaces. Assuming these design measures are correctly installed the urban environment will be easier and safer for a wider variety of pedestrians including visually impaired, wheelchair users and people with mobility difficulties, parents with young children and pushchair users. Details of provision or mobility impaired are set out in Chapter 4 (Proposed Scheme Description). This would help to reduce health inequalities in terms of access in the urban environment particularly for people with disabilities (see Section 11.3.2).

The introduction of a reliable public transport corridor, with improved accessibility for public transport users and pedestrians, would have a likely positive effect in the short to medium term for reducing health inequalities associated with accessibility for disabled people in particular. The potential impact will be Positive, Moderate and Long Term, on the basis that the study area has a smaller proportion of disabled residents and lower levels of deprivation than average for Dublin, so the benefits may influence health inequalities at a modest level.

Section 11.6.2 in Chapter 11 sets out the predicted operational phase residual impacts. It states that: "…*The Proposed Scheme is expected to have a significantly positive contribution to health outcomes related to increased physical activity, equitable access to services and improved safety for vulnerable road users…".*

Providing accessibility for mobility impaired users is a core element of the Proposed Scheme and the potential impact on people with disabilities has been appropriately considered in both the scheme design and the impact assessment.

2.8.11.6 Economic Development Section

Observations raised / clarifications sought

SDDC Economic Development Section states that clarity on taking in charge line should be borne in mind to avoid creating any ransom strips along the route. In tandem with this and if observed, the completed corridor / area when handed back to the Local Authority should have clear/ good title.

Response

The NTA notes this comment. NTA will continue the very positive and constructive liaison with SDCC throughout the procurement and construction process including in relation to the CPO and hand back requirements. These are matters that can be successfully addressed between SDCC and the NTA.

2.8.11.7 Public Realm Section

Overview of observations raised / clarifications sought

The submission from the Public Realm Section covers the following aspects:

i. Relevant extracts from South Dublin County Council Development Plan 2022-2028

ii. Parks and Landscape Section

a) Trees and Hedgerows/ Arboricultural Impact

b) Natural SuDS

c) CPO of public land

d) Tymon Park boundaries and entrances

e) Proposed Compound locations

f) Biodiversity

g) Lighting

h) Protection of Habitats and Species

i) Public Realm Enhancement

i. South Dublin County Council Development Plan 2022-2028 relevant to Public Realm

In the introduction to their submission SDCC Public Realm Section sets out the South Dublin County Council Development Plan (SDCCDP) 2022-2028 policy context of relevance to Public Realm, outlining the relevant policy context included throughout the SDCCDP.

Response

The NTA notes the policy context provided, which aligns with the policy list included in Section 3.7.1 of Appendix A2.1 Planning Report (EIAR Volume 4 Part 1 of 4) and within Table 1.3 in Sub-Appendix 1 (Local Policy) of the Planning Report.

ii. SDCC Parks and Landscape Section

SDCC Parks and Landscape Section raises a number of observations and concerns under the topics listed below. Response to the comments raised are provided with in the each of the sub-sections below.

a) Trees and Hedgerows/ Arboricultural Impact

b) Natural SuDS

c) CPO of public land

d) Proposed Compound locations

e) Biodiversity

f) Lighting and Protection of Habitats and Species

g) Public Realm Enhancement

a) Trees and Hedgerows/ Arboricultural Impact

SDCC state that they have serious concerns about loss of trees and hedgerows in the Proposed Scheme, adding that proposed removal of trees is not matched by replacement tree planting in South Dublin.

The submission provides the following quotes from page 13 of the Arboricultural Impact Assessment (AIA), included in Appendix A17.1 in Volume 4 of the EIAR:

- "*186 individual trees, 33 tree groups, ten hedges and two shrubs are to be removed to facilitate the Proposed Development*",
- "*In addition, 13 individual trees and one tree group of very low quality (Category U) are also recommended for removal*", and
- "*15 individual uncategorised trees are also to be removed.*"

The submission states that the entire scheme proposes 1,055 no. trees planted; and 590m of proposed hedgerow.

The submission highlights the Green Infrastructure (GI) Strategy for SDCC which requires developments to examine the green infrastructure within the development and develop and enhance the GI within their own development and link it to the wider, regional GI.

The submission comments on the need to provide a suitable environment for walking and cycling and highlighting the Importance of retaining trees where possible and replant trees to ensure urban heat island effect is reduced. It makes a specific reference to Belgard Square North and Belgard Square West in this regard.

The submission request a planning condition seeking provision of landscape strategy for agreement with the Local Authority, specifically demonstrating re-provision of 125% of trees removed and 150% of hedgerow removed.

Response

Tree retention and protection

The following sections of EIAR Chapter 4 Proposed Scheme Description provides a description of specific landscape and urban realm design works in the sections of the Proposed Scheme with South Dublin County Council's area.

Section 4.5.1.9, Section 1: *"An extensive tree planting scheme is proposed along the entire route to provide a more consistent level of tree cover that will enhance the visual appearance of the route and increase the local biodiversity values. Key enhancements will include the new sustainable transport link road at Parkview and the creation of new public realm links, SuDS interventions and*

enhancement of the green infrastructure through new tree planting and development of meadow grass areas.

An extensive SuDS attenuation area is proposed at Tymonville Crescent. It will be planted with native species adaptable to wetland conditions and surrounded by native woodland trees in small clusters to provide a new landscaped parkland that will resemble the existing tree belt retained on the eastern side of Greenhills Road."

Section 4.5.2.9, Section 2*: "The new connection to R819 Greenhills Road through Ballymount Industrial Estate provides an opportunity for public realm enhancement utilising SuDS features, new tree planting, shrub and meadow grass areas to enhance the local biodiversity value and create localised public open spaces along the route.*

Walkinstown Roundabout will be enhanced with new planting, and a redefined public realm with cycle facilities."

4.5.5.9 Section 5*: "Existing left turn slip lanes at the Woodford Walk / New Nangor Road junction are to be removed. This has provided additional space for a small urban realm intervention that incorporates a raised planter with new tree / shrub planting, seated walls and new concrete paving. The new paving areas will help strengthen the pedestrian connections between the new bus stop locations and the entrance to the N10 Grand Canal Greenway walkway.*

New tree planting along R134 New Nangor Road will replace the existing boulders that align adjacent to the carriageway which will soften the character of the area whilst defining and protecting the existing boundaries.

Cycle tracks will be provided on both sides of the carriageway the length of R134 New Nangor Road, with cyclists able to join the cycle track at Woodford Walk from either the carriageway or the N10 Grand Canal Greenway. Additional cyclist connections to the Greenway from the north of R134 New Nangor Road are provided at the M50 overbridge. This route aligns with the proposed Primary Route 7B / N10 until cyclists re-join R134 New Nangor Road beyond the M50 overbridge. To accommodate these new connections their sections of trees will be removed. These will be substituted with new green verges and new tree planting where possible.

Junctions at the entrance to commercial properties along New Nangor Road will be improved, where practicable. Additional tree planting and new concrete paving will help formalise these entrances whilst softening their character. Potential for SuDS interventions has been identified within a number of green verges along this section of R134 New Nangor Road.

Due to the carriageway width being increased along the interface with Western Business Park there are a number of existing trees that will need to be removed. These will be replaced with new tree planting to re-define this boundary.

At the entrance to Diageo Baileys there will be a section of existing hedgerow removed to accommodate the new carriageway design. New hedgerow planting is proposed in addition to some additional tree planting to ensure this interface is maintained."

4.5.6.9 Section 6: *"At the New Nangor Road / Naas Road / Long Mile junction a pedestrian and cyclist footbridge is proposed.*

The existing left turn slip lane at R112 Kylemore Road is to be removed, with traffic diverted via Old Naas Road (a short distance upstream) in order to access R112 Kylemore Road. This arrangement allows for improved bus facilities, interchange with Kylemore Luas Station and opportunities for additional tree planting.

A two-way cycle track is provided along the north side of R810 Naas Road with a verge to segregate the cycle track from the carriageway provided where possible. A one-way westbound cycle track is provided along the south side of R810 Naas Road with a verge to segregate the cycle track from the carriageway provided where possible."

Section 4.6.11.3.1 of EIAR Chapter 4 Proposed Scheme Description details the softscape planting strategy as follows: *"The planting strategy has been developed in response to the objectives set out in both the South Dublin County Development Plan 2022 – 2028 (SDCC 2021) and the Dublin City Development Plan 2022 – 2028 (DCC 2021). The planting strategy is also in response to landscape and urban realm opportunities arising from the Proposed Scheme to integrate new infrastructure within the existing local context and to enhance the visual and amenity value of streets and spaces.*

The planting strategy includes replacement of street trees and groups of trees that may be impacted by the Proposed Scheme, but also the introduction of new tree planting and street trees within other spaces and along streets. Reinforcement of green infrastructure along the route will improve the overall amenity, character and appeal of the route corridor and localities along it, as well as enhancing biodiversity.

In addition to trees and street trees, other vegetation is also proposed along the route including hedgerows, ornamental planting and amenity grassland, shrub and meadow grass areas. These will be utilised to reinstate property boundaries altered by the Proposed Scheme."

Section 4.6.11.4 of EIAR Chapter 4 Proposed Scheme Description states that an Arboricultural Impact Assessment (AIA) Report is included in Appendix A17.1 in Volume 4 of the EIAR. This identifies the likely direct and indirect impacts to trees of the Proposed Scheme along with suitable mitigation measures, as appropriate to allow for the successful retention of significant trees, or to compensate for trees to be removed.

Section 14.6.2 of the Preliminary Design Report (PDR), included in the Supplementary Information, states that *"Despite the best efforts to protect trees, especially trees of a mature and significant stature there will be inevitable impacts on local trees. In total it is estimated that there will be 720 trees lost, refer to Table 14-1 below. This loss has been addressed through mitigation and replanting efforts as outlined in the planting strategy (Section 14.6.3) below resulting in a substantial tree planting plan with a net increase of 328 additional semi-mature trees along the Proposed Scheme."*

Table 14-1 of the PDR provides a summary, as shown in Figure 2.8.11.19.

Table 14-1: Summary of Trees Retained, Removed and Proposed as part of the Proposed Scheme.

Retained Trees	Removed Trees	Proposed Trees	Total Trees in Development
Total retained in development	Total identified tree numbers lost	Street trees planted	Proposed Scheme
3023	**720**	**1048**	**4071**

Figure 2.8.11.19 Table 14-1 of the Preliminary Design Report

As shown in Figure 2.8.11.xx, 720 trees are to be removed and 1048 are to be planted, which represents a 145% re-provision.

Section 4.6.11.5 of EIAR Chapter 4 describes the typical planting typologies that will be employed on the Proposed Scheme. With regard to new street trees, in Section 4.6.11.5.1, it states that: *"Typically, trees will be semi-mature and where appropriate, selected for having a clear stem height to facilitate visual permeability."*

With regard to new woodland/parkland areas and tree groups, Section 4.6.11.5.2 states: *"…..Elsewhere along the Proposed Scheme, there are smaller areas of existing and proposed woodlands and tree groups that will be retained, reinstated or established in order to provide appropriate landscaping connectivity and design interventions at a range of different spaces, including carriageway boundaries, new landscape spaces arising from junction reconfiguration, reinforcement of established vegetation areas, and also establishing new public realm and landscape opportunity areas. Tree species will be determined by location and will comprise either native woodland trees as set out above, or selected street trees. Additionally, understory planting, long grass and swathes of bulbs will be provided to reinforce the character of landscaped areas along the scheme corridor. A number of different landscaped central median areas exist along the Proposed Scheme, including those within high-capacity dual carriageway and smaller scale medians within suburban and urban settings. Landscaping proposals respond to the different localities and may include grass planting, hedgerows and trees as appropriate in medians within the larger scale roadways, and grasses, ornamental planting, hedgerows and trees within the suburban and urban medians…."*

Section 17.5.1 (Construction Phase) of EIAR Chapter 17 Landscape and Visual describes mitigation and monitoring measures which are proposed to ameliorate, remediate or reduce significant landscape (townscape) and visual impacts from the Construction and Operational Phases wherever possible. It states:

"A series of mitigation and management measures are proposed to avoid, reduce or remediate, wherever practicable significant negative landscape (townscape) and visual effects of the Construction Phase of the Proposed Scheme. These measures are to be applied across the scheme wherever necessary to avoid disturbance of landscape features or characteristics to be retained. Generally, the effect rating post-mitigation will be the same as pre-mitigation, however the measures proposed should still be applied as necessary to manage the potential effects of construction activities. A summary of predicted Construction Phase effects following the implementation of mitigation and monitoring measures is listed in Table 17.9.

- Trees and vegetation to be retained within and adjoining the works area will be protected in accordance with the British Standard Institution (BSI) British Standard (BS) 5837:2012 'Trees in relation to in relation to design, demolition and construction–- Recommendations' (BSI 2012). Works required within the root protection area (RPA) of trees to be retained will follow a project specific arboricultural methodology for such works, which will be prepared by a professional qualified arborist. For details of trees to be retained refer to Tree Protection Plans (Appendix A17.1 Arboricultural Impact Assessment in Volume 3 of this EIAR);
- Wherever practicable, trees and vegetation will be retained within the Proposed Scheme. Trees and vegetation identified for removal will be removed in accordance with 'BS 3998:2010 Tree Work – Recommendations' (BSI 2010) and best arboricultural practices as detailed and monitored by a professional qualified arborist. For details of trees and vegetation to be removed refer to Tree Protection Plans (Appendix A17.1 Arboricultural Impact Assessment in Volume 3 of this EIAR) and Landscape General Arrangements (BCIDA-ACM-ENV_LA-0809_XX_00-DR-LL-9001 in Volume 3 of this EIAR);
- The Arboricultural Assessment prepared for the Proposed Scheme will be fully updated by the appointed contractor at the end of the Construction Phase and made available, with any recommendations for on-going monitoring of retained trees during the Operational Phase;…." [list continues].

In summary, the Planting Strategy for the Proposed Scheme has ensured that the green infrastructure within the Proposed Scheme has been examined, developed and enhanced within the development, in South Dublin and Dublin City areas.

Belgard Square West and Belgard Square North

Section 4.5.1.1 of EIAR Chapter 4 provides the following description of the Proposed Scheme at this location: *"The Proposed Scheme commences at the junction of Old Blessington Road / Cookstown Way to facilitate access to the proposed Bus Interchange on Belgard Square West. General traffic will also be permitted to access the Square Shopping Centre from this junction via Belgard Square South due to Belgard Square West being restricted to buses, cyclists and other authorised vehicles. Bus traffic across Old Blessington Road will be controlled by signal-controlled priority maintaining a similar arrangement to the existing scenario for orbital services heading towards the bus interchange.*

It is proposed to change the existing Belgard Square South roundabout to a fully signalised junction with improved pedestrian facilities. The section of Belgard Square West from Belgard South to Old Blessington Road and immediately north of Old Blessington Road is proposed to be a bus only route and will no longer be a through route for general traffic."

Section 4.5.1.1 continues *"The Bus Interchange design will require land take and will integrate with the adjacent shopping centre, the proposed South Dublin County Council (SDCC) public realm development and the wider Tallaght area.*

It is proposed to change the roundabout junction on Belgard Square North at the Tallaght Hospital Entrance to a fully signalised junction to accommodate new bus, cycle and pedestrian facilities.".

The relevant extracts from the Landscaping General Arrangement Drawings for Belgard Square West and North are shown below.

The southern section of Belgard Square West includes substantial new green infrastructure as part of the proposed Tallaght bus interchange, as shown in Figure 2.8.11.20.



Figure 2.8.11.20 Extract of Landscape General Arrangement Drawings Belgard Square West (south of Old Blessington Road)

Section 4.5.1.9 of EIAR Chapter 4 Proposed Scheme Description provides the following description for the proposed works along Belgard Square West: *"The main landscaping intervention along this section of the route is the proposed Tallaght Bus Interchange. The proposals include a new plaza space with bus shelters incorporated into sculptural canopies. The new plaza and interchange open space will greatly improve transport links to the area and cater for greater public access. It will become an important new connecting space within the local urban realm. Tree and shrub planting will increase biodiversity in the area while creating a pleasant interface with the surrounding context – refer to Image 4.1."*

Figure 2.8.11.21 shows Image 4.1.



Image 4.1: Tallaght Bus Interchange

Figure 2.8.11.21: Image 14.1 of EIAR Chapter 4

Image 14-10 of the Preliminary Design Report included as part of the Supplementary Information provides a sketch of the Urban realm Improvement, see Figure 2.8.11.22.



Figure 14-10: Sketch Scheme Urban Realm Improvement - Tallaght Bus Interchange

Figure 2.8.11.22: Figure 14-10 of Preliminary Design Report

For the norther section of Belgard Square West, there are minimal changes proposed to the existing road and green infrastructure, as shown in Figure 2.8.11.23

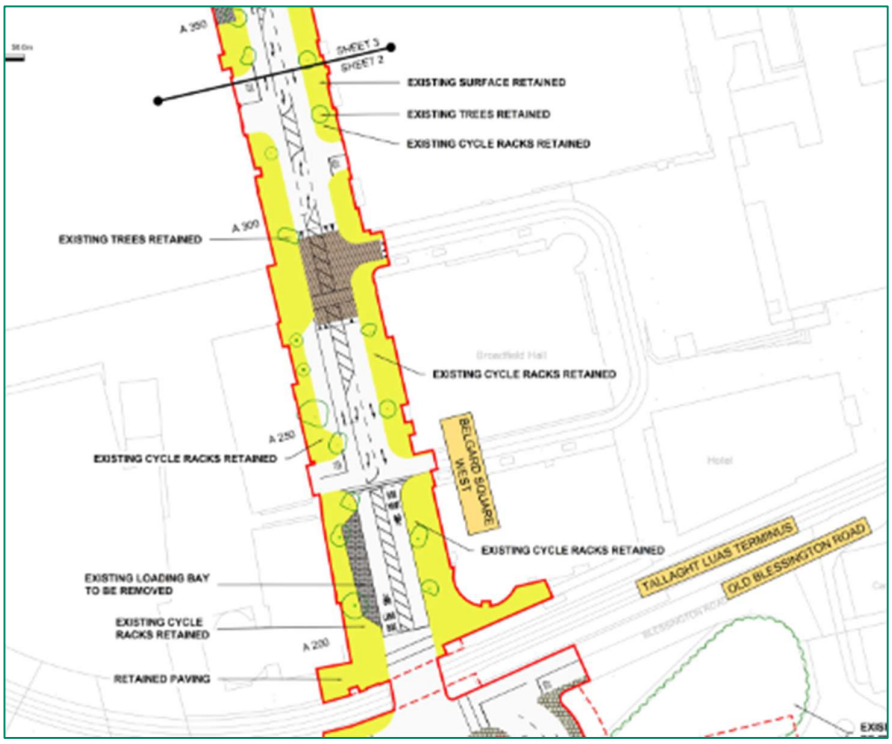


Figure 2.8.11.23 Extract of Landscape General Arrangement Drawings Belgard Square West (north of Old Blessington Road)

For Belgard Square North, new planting is proposed immediately east of the entrance to Tallaght University Hospital, as shown in Figure 2.8.11.24

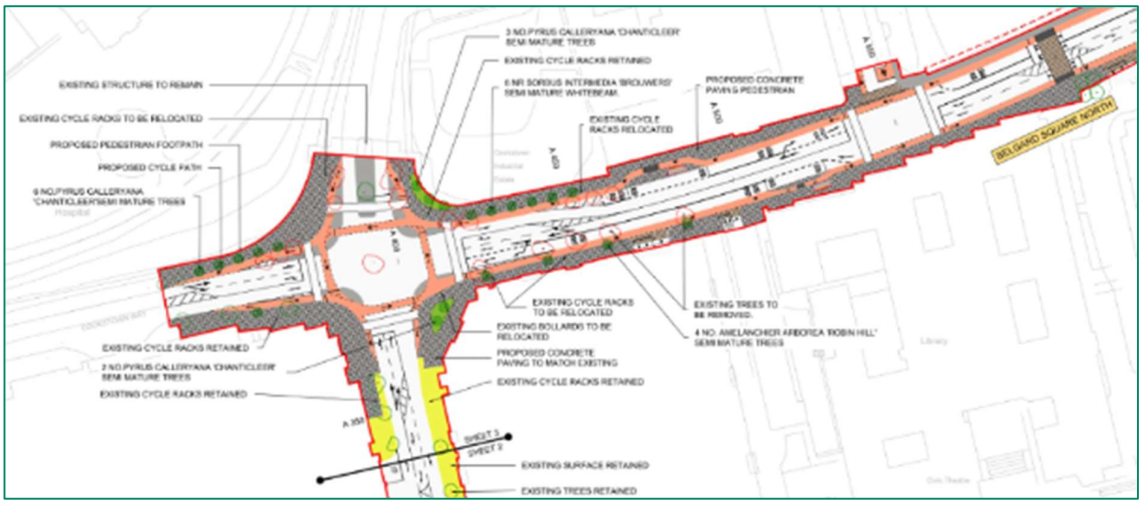


Figure 2.8.11.24 Extract of Landscape General Arrangement Drawings Belgard Square North

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the SDCC Public Realm Section comments as these matters were the subject of extensive liaison throughout the design development process.

NTA will continue the very positive and constructive liaison with SDCC throughout the procurement and construction process including in relation to the landscape strategy/ Green Infrastructure Strategy.

b) Natural SuDS

The submission welcomes some proposals for natural SuDS across the scheme but was concerned some swales may not be sufficiently deep which would impact on their viability. A concern was also raised about the overall extent of natural SuDS across the scheme, requesting that this should be increased, and suggesting a planning condition requesting a detailed landscaping strategy.

Response

Section 4.6.14.4 of EIAR Chapter 4 Proposed Scheme Description highlights that *"Whilst in some areas the Proposed Scheme will increase the impermeable areas, additional permeable areas are also provided by the softening of urban realm along the routes. The drainage design aims to sustain flow levels within the existing pipe network after a rainfall event by controlling the discharge rate within each catchment. Flows will be controlled by the implementation of SuDS techniques, where practicable. One of the principal objectives of the road drainage system is to minimise the impact of the runoff from the roadways on the surrounding environment via the position of: filter drains, swales, bio-retention areas, tree pits, silt traps and attenuation features if necessary."*

The drainage design is based on a number of best practice general principles, which are set out in the document 'BusConnects Core Bus Corridor Drainage Design Basis' which is included as Appendix K of the Preliminary Design Report in the Supplementary Information. A SuDS drainage design has been developed as a first preference and in accordance with the SuDS Management Train described in the CIRIA SuDS manual (CIRIA 2015). The CIRIA SuDS Manual recommends that when considering SuDS solutions, the preferred approach is a hierarchy whereby runoff using source control solutions (e.g. pervious surfacing) are considered first. Where source control is not possible or cannot fully address an increase in runoff from a development, residual flows are then managed using site controls (e.g. bioretention / infiltration basins). If this is not practical or residual flows remain above existing runoff rates, regional controls (e.g., oversized pipes) are used. SuDS provide the dual benefits of controlling flow and treating water quality.

Regarding the concerns over the swale depth, Section 4.6.14.5 of Chapter 4 notes the following:

- "All drainage structures for newly paved areas are designed with a minimum return period of no flooding in 1:30 years with a 20% climate change allowance.
- A SuDS drainage strategy has been developed for all newly paved areas in accordance with the SuDS hierarchy. SuDS are provided to ensure no increase on existing runoff rates from new paved areas will also provide a level of treatment before discharging into the existing network system; and
- Infiltration rates were assumed to be zero for calculating the required attenuation volumes for SuDS measures. This is a conservative approach and ensures SuDS measures are not knowingly undersized at this stage of the design. Where necessary, permeability tests will be completed so that infiltration rates can be considered in further design."

In summary, SuDS have been proposed across the scheme wherever practicable and sized appropriately.

The NTA will continue to liaise closely with South Dublin County Council Public Realm Section and this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme taking their requirements into consideration, where aligned with and consistent with the EIAR.

c) CPO of public land

SDCC Public Realm section note they are unconvinced of the necessity of CPO of public land to carry out public works.

The submission also makes some comments in respect of specific locations of CPO of public land.

Response

Necessity

Under the provisions of the relevant legislation, the NTA has exercised certain powers under Section 44(2)(b) of the 2008 Act to the effect that the functions in relation to securing the provision of public transport infrastructure

falling within Section 44(2)(a) of the 2008 Act (as amended) in relation to the CBC Infrastructure Works, should be performed by the NTA. Those functions include the design and construction of the Proposed Scheme and, effectively, the NTA becomes the road authority in respect of the exercise of those functions.

Under the relevant legislation, upon the completion of the construction of the Proposed Scheme the NTA automatically ceases to be the road authority and the status of DCC as the relevant road authority is automatically restored – it does not require the operation of the conventional "taking-in-charge" arrangements provided for elsewhere in legislation. Accordingly, the legislative provisions appropriately govern the arrangements for the NTA to commence the construction of the Proposed Scheme, subject to the necessary planning and environmental consents, and govern the restoration of the road authority function to the relevant local authority, in this case being South Dublin County Council. Consequently, all CPO lands acquired by NTA for purposes of the Proposed Scheme will be transferred to the relevant local authority.

NTA will however continue the very positive and constructive liaison with SDCC throughout the procurement and construction process including in relation to the CPO.

Permanent CPO (and temporary CPO) of part of Bancroft Park

SDCC Urban Realm Section request on page 14 of their submission that if planning permission is granted for the use of Bancroft Park as a temporary compound, a planning condition should require the applicant to replace existing boundaries with low stone wall and mild steel railing. Additionally, the submission notes, replacement entrance details and landscape compensatory measures are to be agreed with SDCC.

Response

Figure 2.8.11.25 is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR and shows the proposed enhanced landscaping proposals for the green area that will be implemented once the temporary construction compound is removed.



Figure 2.8.11.25 Extract from Landscaping General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR

As identified in Figure 2.8.11.25, none of the existing trees will need to be removed to allow the area to be used for Construction Compound TC2 during construction of the Proposed Scheme. In addition, only a short section of the existing boundary wall will be removed and a new pedestrian entrance to the replanted open space is proposed.

Section 4.6.18.1 of EIAR Chapter 4 states that *"To maintain the character and setting of the Proposed Scheme, the approach to undertaking the new boundary treatment works along the corridor is*

replacement on a 'like for like' basis in terms of material selection and general aesthetics, unless a section of street can benefit from urban improvement appropriate to the area."

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

Permanent CPO (and temporary CPO) of part of Tymon Park

SDCC express the view on page 14 of their submission that the landtake proposed adjacent to Tymon Park is excessive, citing that proposed route alignment at western edge of Tymon Park could be reduced within the extent of existing red line for the planning application.

The submission also quotes Section 12.4.3.5.2.1 of Chapter 12 of the EIAR biodiversity impacting suitable wintering birds habitat during construction and seeks confirmation that sufficient transects were taken to establish Brent Geese in the area.

In addition, the submission requests that the existing boundary walls are replaced with low stone wall and railings and request that the revised park entrance to be agreed with SDCC.

Response

Alignment Option/ Geometry

As noted in Section 3.3.2.1.5 of EIAR Chapter 3 Reasonable Alternatives, three viable route options for sub-section 2.1 were assessed for this section of the route as follows:

- *"Route Option 1 (BW1): This route option would run along R819 Greenhills Road as far as Walkinstown Roundabout;*
- *Route Option 2 (BW2): This route option would turn from R819 Greenhills Road onto a new link road to Ballymount Industrial Estate connecting into Ballymount Avenue. At the Ballymount Avenue / Calmount Road junction, the route would turn onto Calmount Road. A new link would be provided to connect Calmount Road to R819 Greenhills Road allowing the route to continue as far as Walkinstown Roundabout. The existing R819 Greenhills Road would be closed to through traffic; and*
- *Route Option 3 (BW3): This route option would run along R819 Greenhills Road which would be restricted to bus and local access only. General traffic would turn from R819 Greenhills Road onto a new link road to Ballymount Industrial Estate connecting into Ballymount Avenue. At the Ballymount Avenue / Calmount Road junction, the route would turn onto Calmount Road. A new link would be provided to connect Calmount Road to R819 Greenhills Road allowing the general traffic to continue as far as Walkinstown Roundabout."*

These options are shown in Figure 2.8.11.26

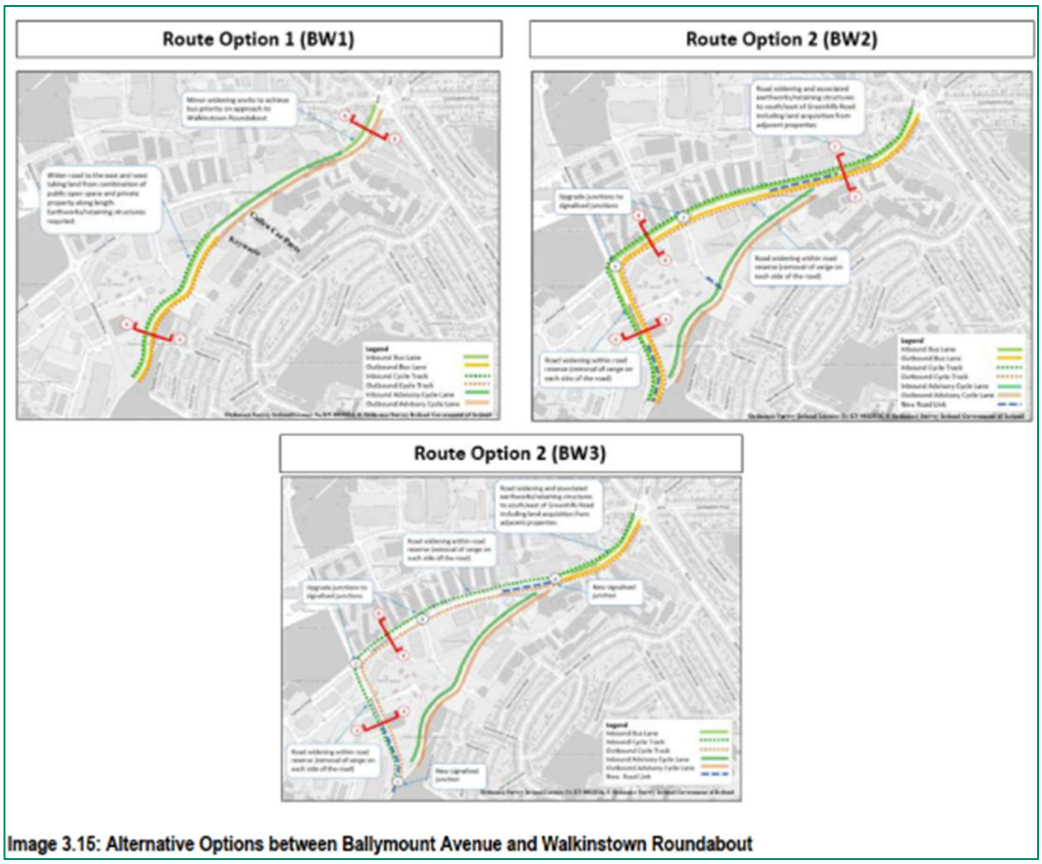


Image 3.15: Alternative Options between Ballymount Avenue and Walkinstown Roundabout

Figure 2.8.11.26 Image 3.14 of EIAR Chapter 3

Section 3.3.2.1.5 of EIAR Chapter 3 goes on to state that "*route option BW2 is preferred for the Ballymount area for the following reasons:*

- *It strikes the right balance between cost and delivering reliable journey times compared to BW1 which is cheaper to construct but provides less bus lane priority;*
- *It delivers high quality cycle facilities along the entire length of the route, forming part of secondary cycle route 8A, which are not achievable along R819 Greenhills Road. Cycle access to R819 Greenhills Road, which is identified as a feeder route, could also be maintained in this option;*
- *Compared to route option BW3, this option removes the need for additional signalised junctions associated with bus access to and from the current R819 Greenhills Road alignment. Furthermore, it directly serves Ballymount Industrial Estate which is a major trip attractor with a large employment catchment;*
- *It delivers road links which are included as objectives in the South Dublin County Council Development Plan 2016 – 2022. It also allows R819 Greenhills Road to be downgraded to a local road which is more suitable for its current alignment and geometry; and*
- *It has less impact on the environment compared to other options due to BW2 taking all through traffic away from residential receptors, BW3 taking general traffic away from residential receptors and BW1 bringing traffic closer to residential receptors."*

Option BW2 was adopted as the Emerging Preferred Route and further refined over the design phase to reduce the impact on Tymon Park as much as practicable while still achieving the objectives of the Proposed Scheme.

It is noted that one of the reasons route option BW2 was chosen is that "*it delivers road links which are included as objectives in the South Dublin County Council Development Plan 2016 – 2022."*

Figure 2.8.11.27 below is an extract from South Dublin County Council Development Plan 2016 – 2022 Table 6.5 Six Year Road Programme.

SOUTH DUBLIN COUNTY COUNCIL DEVELOPMENT PLAN 2016 - 2022 | TRANSPORT & MOBILITY (T&M)

Table 6.5 Six Year Road Programme

ROAD	DESCRIPTION	FUNCTION
Greenhill Road upgrade and links	Upgrade of Greenhills Road from Airton Road to Walkinstown Roundabout with new links to Ballymount Avenue, Limekiln Road and Calmount Road.	To provide improved access to/between employment lands within Tallaght, Ballymount and Robinhood and to provide improved access to and from the Greenpark, Limekiln and Greenhills area.

Figure 2.8.11.27: Extract from South Dublin County Council Development Plan 2016 – 2022 Table 6.5 Six Year Road Programme

Figure 2.8.11.28 below is an extract of Approved SDCC Greenhills Ballymount Reconfiguration (Sheet 1 of 4) Part 8 drawing.

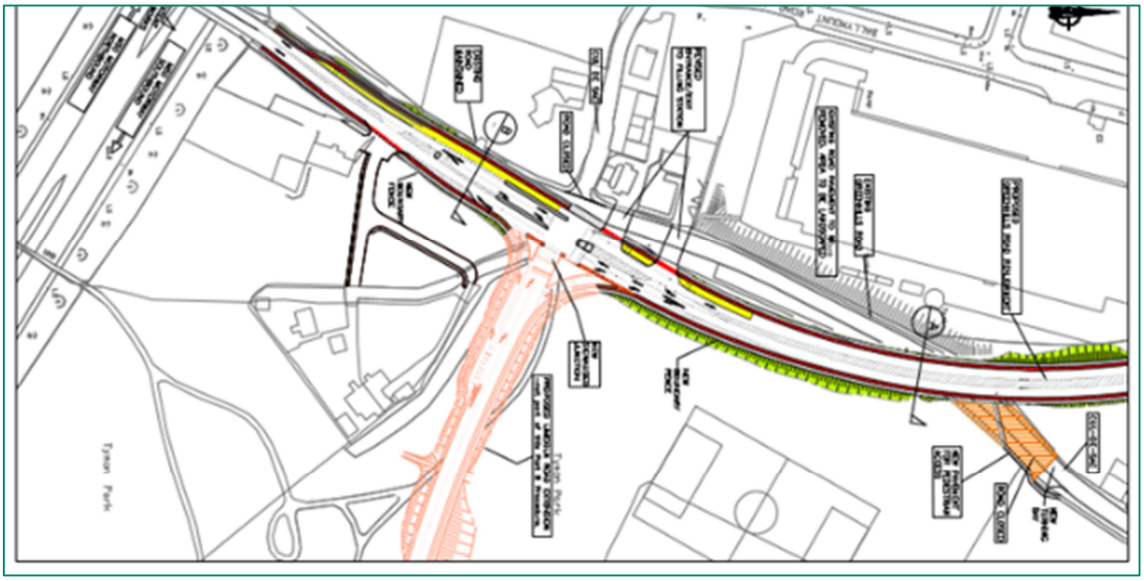


Figure 2.8.11.28: Extract of SDCC Greenhills Ballymount Reconfiguration (Sheet 1 of 4) Part 8 drawing

Figure 2.8.11.29 below is an extract of Sheets 12 & 13 of 56 of the General Arrangement Drawings in Part 1, Volume 3 of the EIAR showing the same stretch of Greenhills Road



Figure 2.8.11.29: Extract of Sheets 12 & 13 of the General Arrangement Drawings

Figure 2.8.11.30 below shows the extents of SDCC Greenhills Ballymount Reconfiguration (Sheet 1 of 4) Part 8 scheme superimposed on the General Arrangement drawings for the Proposed Scheme.

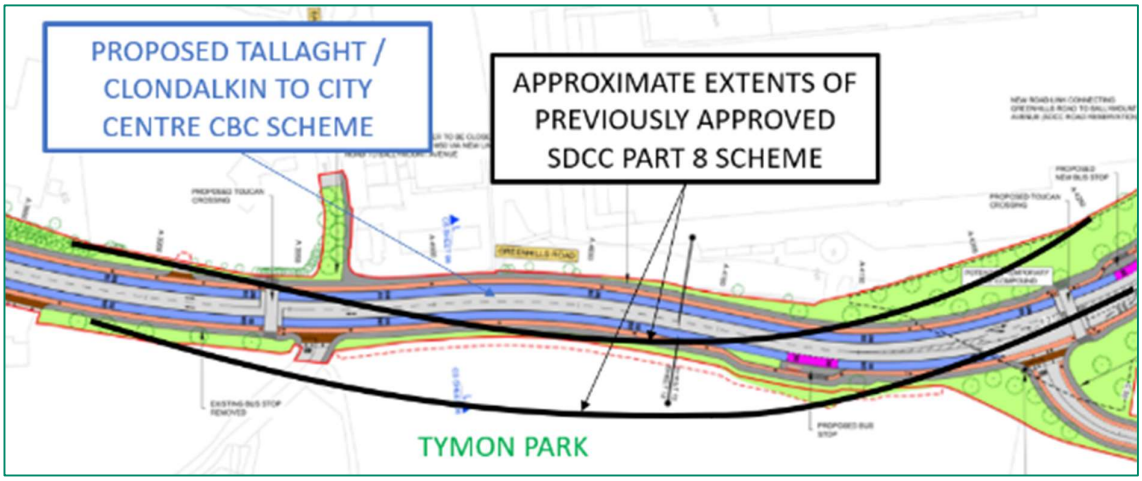


Figure 2.8.11.30: Extract of Sheets 12 & 13 of the General Arrangement Drawings

It can be seen from the Figure 2.8.11.30 that the Proposed Scheme has a significantly reduced impact on Tymon Park compared to the Approved SDCC Greenhills Ballymount Reconfiguration scheme at this location.

It is also noted that during the liaison with South Dublin County Council Public Realm Section during the development of the preliminary design of the Proposed Scheme, the potential use of part of Tymon Park at this location as a construction compound was discussed. Following feedback from SDCC this suggestion was rejected to minimise impact on Tymon Park and an alternative location was selected, namely TC7, which is located within the footprint of the permanent works at the southern end of the new link to Ballymount Avenue.

In summary the design of the Proposed Scheme has made all reasonable efforts to reduce the impact on Tymon Park as much as practicable while still achieving the objectives of the Proposed Scheme.

Wintering bird surveys

From the outset of the design of the Proposed Scheme, transects were designed so that areas potentially used by wintering birds based on an analysis of documented inland feeding sites, and likely directly impacted by the Proposed Scheme were subject to survey. Thus, transects were typically located within or close to the Proposed Scheme boundary or in areas where screening vegetation between the Proposed Scheme and potentially suitable inland feeding sites were identified. Following public consultation and design development, the extent of the boundary was reduced in places. This included Tymon Park, for which at an earlier stage the Proposed Scheme had extended further into Tymon Park. For consistency across survey seasons (and in order to provide the most complete baseline information), Transect CBC0809WB0003 was retained and as such is shown inside the Proposed Scheme boundary but also in parts extending into Tymon Park. The surveys at Tymon Park include vantage point surveys, which recorded a flock of Brent Geese inside Tymon Park as opposed to along the periphery of the Park, which would not be typical behaviour for geese, who like open territory so as to flee potential predation or physical disturbance[3].

Other transects such as CBC0809WB0002, south of the M50 were located outside the Proposed Scheme boundary. This transect was included on a precautionary basis as the understanding of potential usage was less clear e.g. it was not part of the documented inland feeding sites database.

[3] Groom *et al*., (2020). Site selectin by geese in a suburban landscape.. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7518184/

As noted in Section 12.2.1 in Chapter 12 of the EIAR," the study area comprised "*The area suitable for wintering birds within or immediately adjacent to the Proposed Scheme footprint where wintering birds could be directly affected during construction / operation*". Thus the survey effort was proportional to the Proposed Scheme requirement, in that multiple surveys across multiple years were undertaken as described in Section 12.3.9.2.

The approach for wintering bird surveys was a 'look-see' methodology (based on Gilbert *et al.,* 1998) as set out in Section 12.2.3.6 in Chapter 12 of the EIAR. All birds present within a site were identified with reference to Collins Bird Guide (Svensson 2009) to confirm identification (where necessary) and were recorded using the British Trust for Ornithology (BTO) species codes. The total flock size of birds present, their general location within the site and any activity exhibited were also recorded. Bird droppings were recorded along walked transect lines.

The SDCC submission also makes reference to the recently announced. North-West Irish Sea candidate Special Protection Area (cSPA, site code 004236). Whilst it was announced since the submission of the planning application for the Proposed Scheme, it nonetheless adjoins twelve existing SPAs from along the eastern seaboard, the majority of which e.g. South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA, Baldoyle Bay SPA, Howth Head Coast SPA, Ireland's Eye SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, Lambay Island SPA, Skerries Islands SPA, Rockabill SPA are included within the assessment for the Proposed Scheme. While the majority of the listed SCIs for the cSPA are largely coastal, a number can venture inland. However, their inclusion as part of the Appropriate Assessment would not alter the outcome of the assessment presented in respect of the Proposed Scheme, as the SCI's and potential impacts from within the vicinity of the Proposed Scheme have effectively been captured in the NIS submitted in support of the planning application. This does not change the outcome of the NIS.

Tymon Park boundaries and entrances

Section 4.6.18.1 of EIAR Chapter 4 states that *"To maintain the character and setting of the Proposed Scheme, the approach to undertaking the new boundary treatment works along the corridor is replacement on a 'like for like' basis in terms of material selection and general aesthetics, unless a section of street can benefit from urban improvement appropriate to the area."*

Figure 2.8.11.31 below shows the relevant extracts from the Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR and shows the proposed boundary proposals.

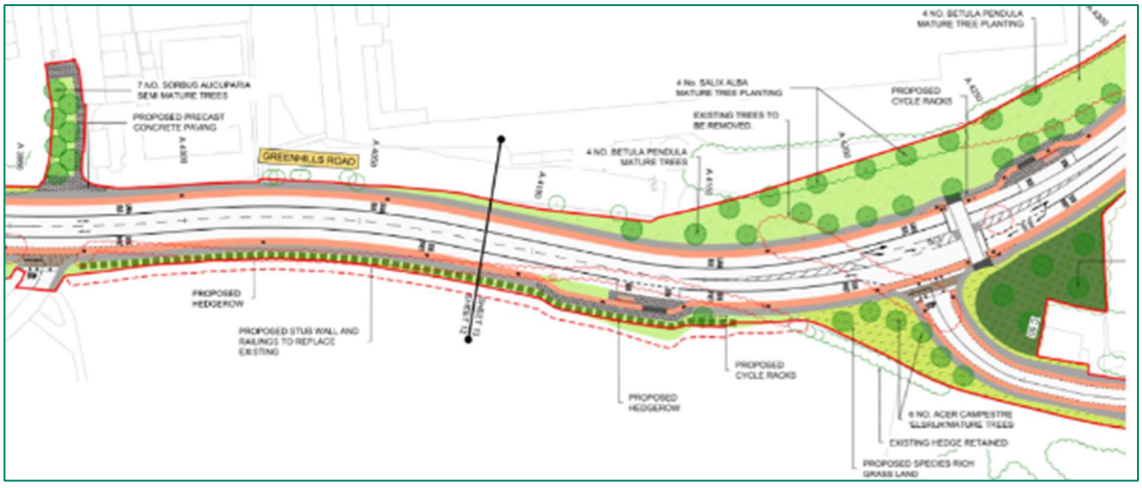


Figure 2.8.11.31: Extract of Sheets 12 & 13 of the Landscape General Arrangement Drawings

As shown in Figure 2.8.11xx, the proposed boundary treatment is a stub wall and railings, with a new hedgerow running on the road side of the boundary for the full length of the new wall.

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has

properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

d) Proposed Compound locations

Observations raised / clarifications sought

SDCC note the following on page 15 of their submission in relation to proposed temporary construction compound locations:

- TC1 - reinstatement and landscape compensatory measures to be agreed with SDCC prior to works commencement, efforts should be made to avoid existing tree loss and protect existing trees.
- TC2, TC3, TC4 - reinstatement and landscape compensatory measures to be agreed with SDCC prior to works commencement.
- TC5 - recommend locating elsewhere; if not possible protection of existing habitats, reinstatement and landscape compensatory measures to be agreed with SDCC prior to works commencement.
- TC6 - recommend locating elsewhere; if not possible protection of existing habitats, reinstatement and landscape compensatory measures to be agreed with SDCC prior to works commencement.

Response to Issue

Section 5.7.1 Construction Compound Locations of Chapter 5 Construction of Volume 2 of the EIAR notes the following:

The locations of TC1 and TC2 are shown in Figure 2.8.11.32.

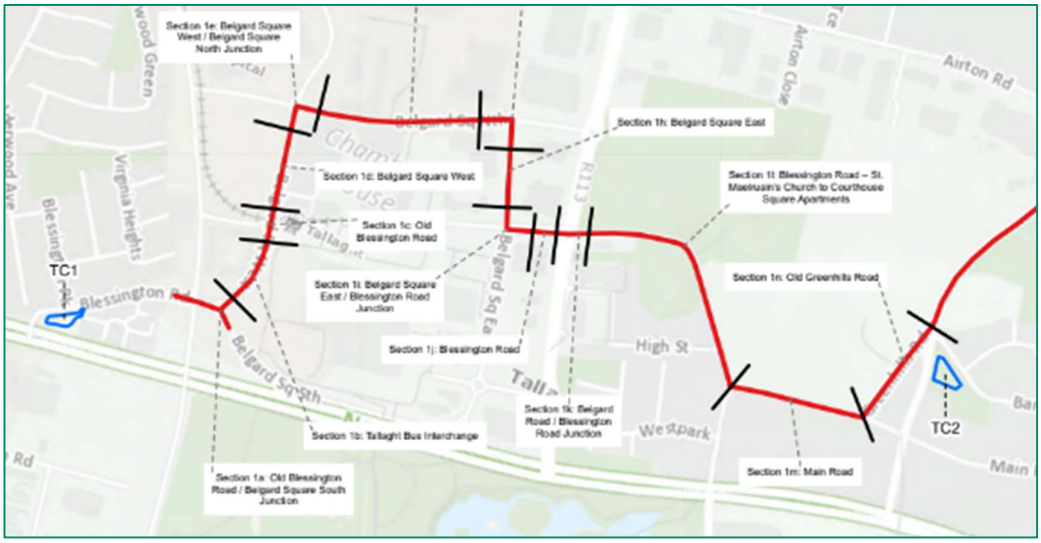


Figure 2.8.11.32: Extract from EIAR Figure 5.1 Work Location Drawing (EIAR Volume 3 Part 3 of 3) showing location of TC1 and TC2

For both TC1 and TC2 the extents of the compounds have been designed to avoid the loss of any existing trees.

Section 5.5.5 Construction Site Decommissioning of Chapter 5 Construction of Volume 2 of the EIAR notes the following:

"On completion of construction, all construction facilities and equipment such as plant, materials, temporary signage, and laydown areas, Construction Compounds, etc. will be removed. The area which was occupied by the Construction Compounds will be reinstated (refer to the Landscaping General Arrangement Drawings (BCIDA-ACM-ENV_LA-0809_XX_00-DR-LL-9001) in Volume 3 of this EIAR)."

The reinstatement proposals for TC1 and TC2 are show in in Figure 2.8.11.33

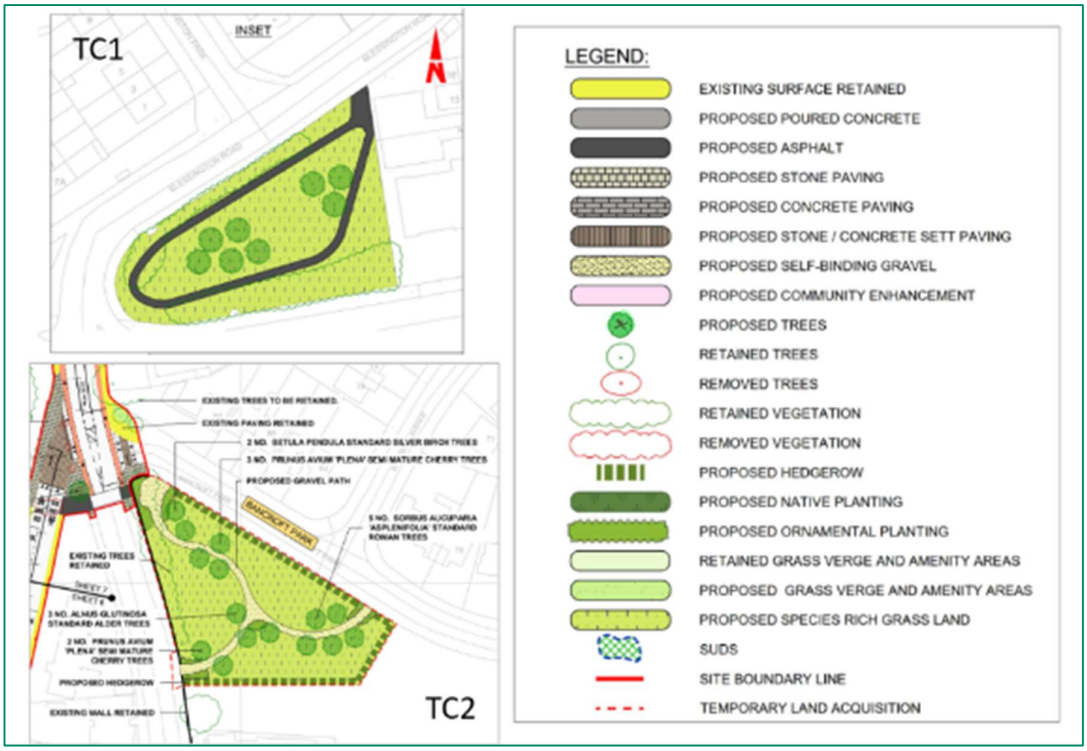


Figure 2.8.11.33: Extract of the Landscape General Arrangement Drawings showing proposed reinstatement of TC1 and TC2

The locations of TC3, TC4, TC5 and TC6 is shown in Figure 2.8.11.34



Figure 2.8.11.34: Extract from EIAR Figure 5.1 Work Location Drawing (EIAR Volume 3 Part 3 of 3) showing location of TC3, TC4, TC5 and TC6

As shown in Figures 2.8.1.35 and 2.8.11.36, construction compounds TC3 and TC4 are located in areas that will ultimately form part of the permanent works and the reinstatement proposals are therefore included as part of the Proposed Scheme at these locations.

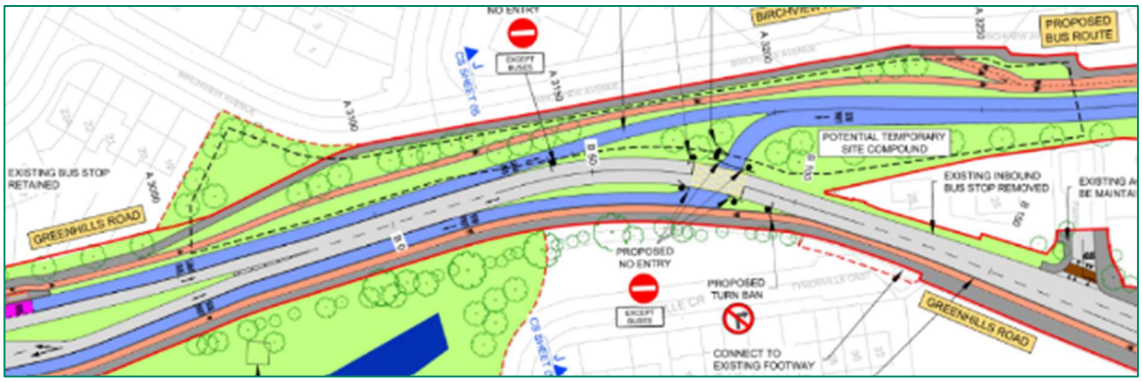


Figure 2.8.11.35: Extract of General Arrangement Drawings showing location of TC3

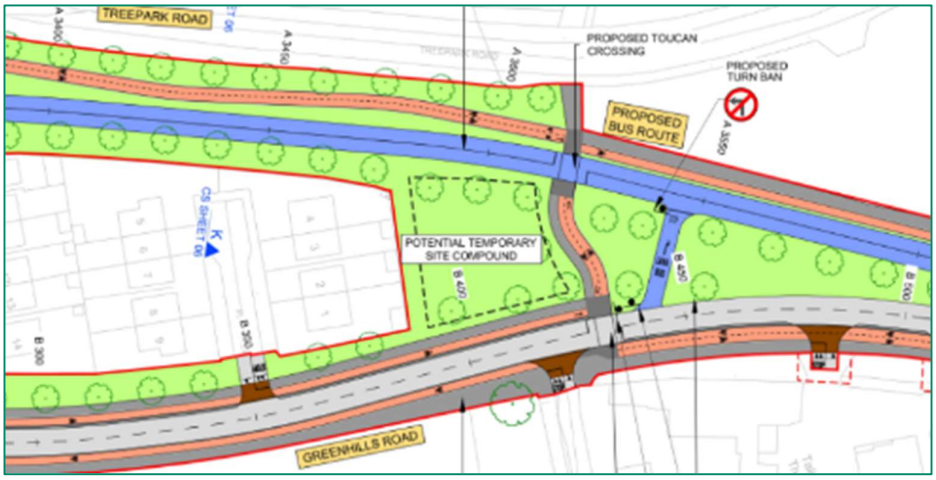


Figure 2.8.11.36: Extract of General Arrangement Drawings showing location of TC4

In respect of TC5 and TC6, section 5.3.2.1 of EIAR Chapter 5 states: *"Construction Compound TC5 will be located at a green space along Greenhills Road, outside Tallaght Truck Dismantlers north-east of the M50 Motorway. Construction Compounds TC5 and TC6 will be located at the green spaces on the east side of the Greenhills Road, either side of, and adjacent to, the M50. The Construction Compounds will be utilized for the construction of the new pedestrian and cycle bridges.*

Section 5.7.1 provides further details of these compounds:

- *"Construction Compound TC5 will be located at a green space along Greenhills Road, to the north of Tymon Lane, as shown in Image 5.5. The area of Construction Compound TC5 is approximately 1,290m².*
- *Construction Compound TC6 will be located at a green space along Greenhills Road, outside Tallaght Truck Dismantlers north-east of the M50 Motorway, as shown in Image 5.6. The area of Construction Compound TC6 is approximately 370m².*"

The locations and extents of TC5 and TC6 are shown in Figures 2.8.11.37 and 2.8.11.38

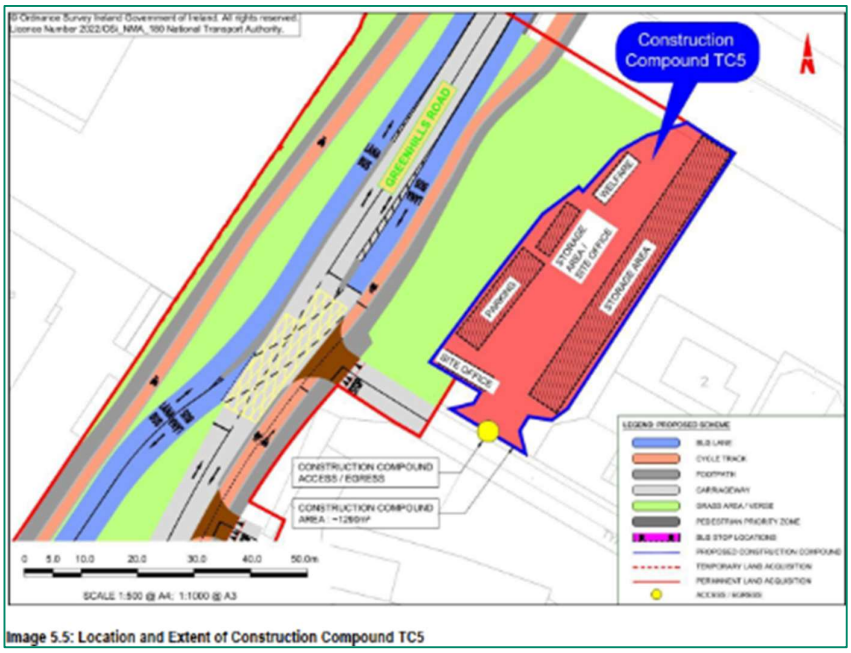


Image 5.5: Location and Extent of Construction Compound TC5

Figure 2.8.11.37: Image 5.5 of EIAR Chapter

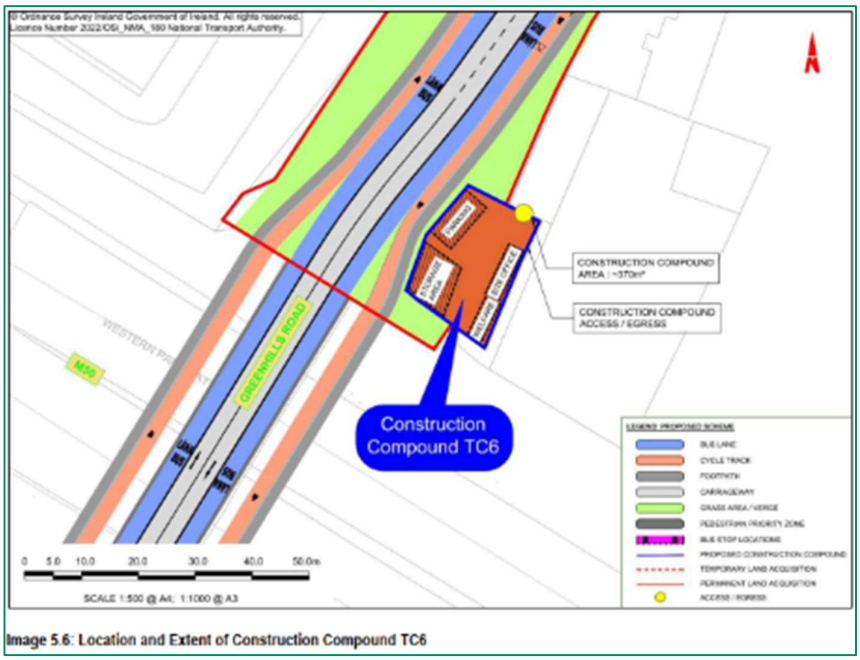


Image 5.6: Location and Extent of Construction Compound TC6

Figure 2.8.11.38: Image 5.6 of EIAR Chapter

The construction works associated with the bridges are, by necessity, adjacent to, and ultimately over, the M50. Section 5.5.4.1 of EIAR Chapter 5 provides the following detialed description of the proposed construction methodology for the new pedestrian and cyclist bridges. "*The Greenhills Road Pedestrian and Cycle Bridge will be formed of two new pedestrian / cycle bridges located adjacent to the existing Greenhills Bridge spanning the M50. The new bridges will provide dedicated facilities for pedestrians and cyclists travelling in both directions along Greenhills Road. Traffic and bus lanes will be accommodated on the existing Greenhills Road Bridge.*

The new bridges will take the form of a Warren Truss type structure that comprises steel sections joined longitudinally by angled cross members, which forms triangular shapes along its length. The Warren Truss bridge will be designed with a full through-construction where the structure is built up around the deck. The bridge will span approximately 48.55m over the M50 carriageway. The width of the new pedestrian/cycle bridges will be 4.65m wide, providing a 2.65m segregated cycle track and 2m pedestrian footway. A minimum internal vertical clearance of 2.7m will be provided along the length of the bridges. A minimum vertical clearance of 5.7m will be provided between the M50

carriageway and the underside of the bridge. The steel deck will be finished with an anti-skid surfacing.

Both new bridges will be supported on two reinforced concrete full height abutments constructed in-situ within the embankments on either side of the M50 carriageway. The abutments will be supported by rotary bored piled foundations. The south abutment will be set back 2.60m from the edge of the M50 northbound carriageway with the face of the north abutment set back 4.20m from the edge of the southbound carriageway. A safety barrier will be incorporated between the face of abutments and the edge of both the north and southbound carriageway. No central supports will be required within the M50 central median for either bridge.

Access to the works area will be primarily from the Greenhills Road and adjacent verge areas. Access will also be required from the M50 westbound diverge lane for the south abutment, and the M50 eastbound merge lane for the north abutment.

The ground surface will be prepared, with minor excavations to achieve the piling level for the north and south abutments. The piles will be installed before the pile caps and abutments are constructed. The drilling / piling activity will be completed over a period of approximately two weeks, with one to two piles installed per day. Once the pile caps have been constructed, reinforcing steel will be fixed in place for the abutments. Formwork will be installed next and then concrete poured. Once the concrete has cured, bearings will be installed to support the bridge deck. The Warren Truss bridges will be assembled and lifted into place by mobile cranes. Parapet edge restraint will be provided on the approaches to both bridge structures once the footway and cycle tracks have been connected to the new bridges. Reinstatement of adjacent areas will then be completed.

The Warren Truss deck structures will be delivered to site and assembled within the temporary land take areas, in advance of them being lifted into place. The M50 will need to close temporarily in both directions, during the lifting operation, which will require two mobile cranes positioned on the M50 carriageway. The NTA and the appointed contractor will liaise with Transport Infrastructure Ireland (TII) in advance of the works taking place. It is expected that each bridge structure will be lifted into place over one night. During the temporary nighttime road closure, traffic will be diverted at Junctions 10 and 11 via the N81, R113 and R838. For more information, refer to the details in Table 5.8."

Given the complexity of these works adjacent to, and over, the M50 it is considered essential that the contractor is provided construction compounds in the immediate vicinity to allow for the safe and efficient construction of these important elements of the Proposed Scheme.

As with all other construction compounds, the ares will be reinstated and the landscaping enhanced following completion of the construction contract.

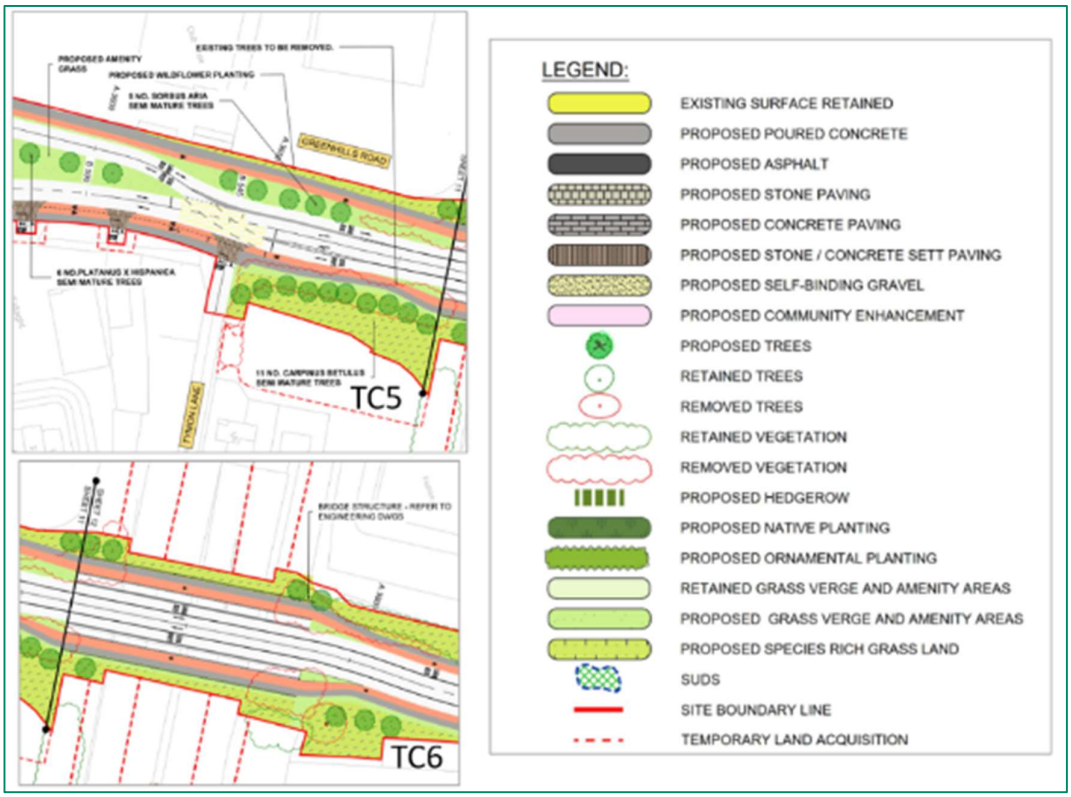


Figure 2.8.11.39: Extract of the Landscape General Arrangement Drawings showing proposed reinstatement of TC5 and TC6

Adjacent to Grand Canal in SDCC

SDCC Urban Realm Section state: *"the applicant is to be commended for retaining vegetation at this location."*

Summary

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

e) Biodiversity

Green Infrastructure Corridors

Observations raised / clarifications sought

The SDCC submission comments (on pages 17-21) that given the route proposals traverse two Strategic Green Infrastructure (GI) corridors, namely the M50 and the Grand Canal, and it is suggested that an opportunity exists for the BusConnects proposal to improve ecological links within these corridor areas and enhance the connectivity between parks, open spaces and ecological areas. The submission suggests that any proposals that further fragment the green infrastructure assets within these areas should be designed out insofar as possible. The submission also suggests that planting of native trees and hedgerows and use of natural based SuDS measures should be carefully planned and proposed to enhance existing habitat and provide ecological buffer zones.

This section of the submission concludes SDCC are of the opinion that the proposals at present do not provide enhancement of the green infrastructure corridors to the extent they believe is required

and suggest a planning condition be secured requiring the provision of a green infrastructure plan to be agreed with the local authority, setting out how enhancements and ecological links throughout the scheme would be delivered in line with the identified Green Infrastructure Corridors.

Response to Issue

The NTA notes that the Proposed Scheme traverses the M50 and Grand Canal Strategic Green Infrastructure (GI) corridors. The enhancement of the connectivity between parks, open spaces and ecological areas along the Strategic GI corridors is outside the scope and objectives of the Proposed Scheme.

The design of the Proposed Scheme does not further fragment the green infrastructure assets in these two Strategic GI corridors at the locations where it traverses them.

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

f) Lighting and protection of Habitats and Species

Observations raised / clarifications sought

Lighting

The submission provides some commentary on lighting (on pages 20-21) highlighting provisions of the County Development Plan to minimise the environmental impact of external lighting within the GI network to achieve a sustainable balance between the recreational needs of an area, the safety of walking and cycling routes and the protection of light sensitive species such as bats. The submission highlights the need to ensure external lighting schemes minimise light spillage or pollution in the immediate surrounding environment and do not adversely impact on residential amenity and biodiversity in the surrounding areas

The submission suggests that in the event of a grant of planning permission a Public Lighting condition should be secured demonstrating how public lighting will balance the needs of environment, wildlife and the public using these streets.

Bat Surveys

The SDCC submission emphasises the protection of habitats and species, including those not covered by European or Irish legislation, and notes bats are a European protected species.

The submission notes the following on pages 21-27 of its submission:

"We note with concern the lack of bat survey transects for a significant portion of the proposed route between Bancroft Park and Tymon Park; see Drawing CIDE-JAC-ENV_BD- 0809_XX_00-DR-GG-0403 below. Tymon Park is part of the significant ecological corridor in the county that is a named Green infrastructure Strategic Corridor. It represents a significant ecological corridor that runs north south through the county. One can see from the map below the significant corridor of green space that runs north south at this location. One would expect bat surveys to be carried out to ensure the EIAR properly assesses the impact of the scheme. The omission of bat survey work in this area, given the significant proposed changes to the open space areas in this locality raises concerns about the assessment of impacts on biodiversity.

It is also of note that the proposal removes hedgerow from this location and encroaches into Tymon Park, introducing new lighting into this area. The EIAR does not consider this during the operational stage:

"Given the urban environment of the Proposed Scheme, and the fact that artificial lighting is already present along the footprint of the proposed scheme, the effects of displacement as a result of the artificial lighting along existing road networks are not considered to be significant at any geographical scale. This is because the lighting strategy involves the use and upgrade of existing lighting infrastructure and given that artificial lighting is

already in place along the proposed scheme, bat species who utilise the area would already be habituated to some level of artificial lighting." [Page 114 EIAR] Given the identification of potential bat roosts by the project team within this area of Tymon Park makes the lack of bat survey transects all the more puzzling."

The submission includes several drawings of bat roost potential from Appendix A12.7 in Volume 3 of the EIAR.

The submission believes that the applicant should carry out further bat survey work along the proposed route between Bancroft Park and Tymon Park, in discussion with SDCC and assess the findings against the proposals.

The submission also notes that location of the new road link connecting Greenhills Road to Ballymount Avenue (SDCC Road reservation) is an under-maintained area at the moment, and acts as a green corridor. The submission recommends bat surveys for this location as well.

The submission also states that there are no bat survey transects recorded where the development is adjacent to the Grand Canal stating that SDCC would expect, given the proximity of the site at this location to the PNHA at the Grand Canal, and the linear nature of the Grand Canal ecological corridor (A Green Infrastructure Core Area in the SDCC County Development Plan) that is of national importance, that the applicant would have chosen this location as one of the locations to survey for bats, to ensure potential impacts are properly assessed.

The submission requests that the applicant carry out further bat survey work at the location of the proposals adjacent to the Grand Canal pNHA in discussions with SDCC and assess the findings against the proposals.

Aquatic and Riparian Survey Sites

The submission comments that regarding the surveys marked Aquatic and Riparian Survey Sites, given the importance of the Grand Canal as an ecological corridor, otter and kingfisher surveys along its length should be carried out where the scheme runs adjacent to it. The submission states that there are proposals to carry out works within the buffer zone of the pNHA and even within the pNHA area itself. The submission requests that the applicant further assess the habitats within the Grand Canal pNHA area and submit proposals to enhance and connect the ecological habitats along this section of the route for agreement with SDCC.

Response to Concerns

The survey methodologies adopted in the preparation of the EIA are documented in Section 12.2.3.5.1 of Chapter 12 Biodiversity of the EIAR for the Proposed Scheme. The survey methodologies employed were based on recommendations contained within *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*[4] and comprised:

- Walked transect surveys. The principal purpose of the transect surveys were to determine:
    - What bat species are present within the Proposed Scheme boundaries and immediate vicinity;
    - What bats are using the Proposed Scheme boundaries for (e.g. commuting and/or foraging);
    - The activity levels of bats within the Proposed Scheme boundaries and general vicinity; and,
    - How the bats within the Proposed Scheme boundaries use connecting habitats in the immediate vicinity.
- Appraisal of trees for potential roost features (PRF) for bats. The purpose of this survey was to identify PRFs, which may be utilised by roosting bats, and to enable the preparation of a mitigation strategy with regards to the potential loss of these features.

With regards to the walked transects, the scoping of their locations was based on an initial review of aerial imagery to identify habitats that are likely to be of greatest suitability for foraging, commuting

[4] Collins, J. (ed.) (2016). Bat *Surveys for Professional Ecologists: Good Practice Guidelines (3rd ed).* The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1

and roosting bat species. Ireland's bat species are strongly associated with woodland habitats[5] including hedgerows and treelines. The selection of transect locations also considered the likely impact of the Proposed Scheme on the receiving environment and focussed on areas of highest potential for bats e.g., whether interventions were proposed at those high suitability habitats which could significantly affect their suitability for commuting and foraging bats.

With respect to the section between Bancroft Park and Tymon Park, the habitats in this section of the Proposed Scheme are generally open grassy habitats that are of negligible to low suitability[6] for bats and, therefore in accordance with the methodology a transect was not considered necessary in this section of the Proposed Scheme. The section of remnant hedgerow between the Greenhills Road junctions with Mayberry Road and Castletymon Road is geographically isolated from other areas of high suitability bat foraging and commuting habitat. The intervening open space is also heavily illuminated by existing public street lighting. All Irish bat species are sensitive to light and many tend to avoid heavily lit areas[5]. The only species that are likely to regularly be encountered in heavily lit landscapes are Leisler's bat *Nyctalus leisleri*, common pipistrelle bat *Pipistrellus* and soprano pipistrelle bat *Pipistrellus pygmaeus*. These species tend to forage above / in proximity to the area of illumination and they are also less strongly associated with woodland habitats than other Irish bat species and, therefore, at lower risk of impact of loss of such habitat. The results of the bat activity surveys as reported in Section 12.3.8.1 of Chapter 12 of the EIAR support this, with Leisler's bat, common pipistrelle bat, soprano pipistrelle bat and 'unidentified pipistrelle species'[7] being the only bat species recorded during project surveys.

With respect to the new link connecting Greenhills Road to Ballymount Avenue, this is a small area of scrub and grassland that is surrounded on three sides by industrial warehousing. While the area contains low suitability habitat[8] for foraging bats, its functionality as a 'green corridor' or connecting feature for commuting and foraging bats is likely to be limited given the absence of high suitability foraging habitats for bats north of the Greenhills Road (e.g. the Ballymount Industrial Estate). For this reason, a transect was not included at this location.

With respect to the Section referred to along the Grand Canal, the interventions arising from the Proposed Scheme are minimal here. The existing infrastructure in this area comprises a four lane road including bus lanes (with the exception of the M50 underpass where the road configuration is reduced to two lanes). The additional infrastructure arising from the Proposed Scheme will not alter the semi-natural vegetation along this section of the route in a way that would affect bat foraging or commuting activity, therefore in accordance with the methodology a transect was not considered necessary was at this location. It is worth noting that the treeline separating the Proposed Scheme from the Grand Canal towpath to the north is currently subject to illumination on both sides. On the south it is lit by public lighting from the New Nangor Road while on the North it is subject to illumination from lights associated with the Grand Canal Way. The presence of lighting along this section limits its suitability as bat foraging habitat, and the Proposed Scheme will not increase the level of illumination on this habitat or on the adjacent Grand Canal over the existing baseline.

With respect to SDCC's observation that "…*the proposal removes hedgerow from this location* [the proposed route between Bancroft Park and Tymon Park] *and encroaches into Tymon Park, introducing new lighting into this area. The EIAR does not consider this during the operational stage*…". The introduction of new lighting has been considered during the operational stage in the EIAR. Section 12.4.4.4.1.2 titled "*Indirect Disturbance of Light Patterns Due to Operation Lighting*"

[5] Roche, N., Aughney, T., Marnell, F., and Lundy, M. (2014). *Irish Bats in the 21st Century*. Published by Bat Conservation Ireland. ISBN 978-0-9930672-0-4

[6] According to Collins (ed.) (2016), the following descriptions are provided for:

Negligible suitability commuting and foraging habitats: "*Negligible habitat features on site likely ot be used by commuting or foraging bats*".

Low suitability commuting and foraging habitats: "*Habitats that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub*."

[7] This description has been applied following completion of bat call analysis, to calls with characteristics intermediate between common pipistrelle bat and soprano pipistrelle bat.

[8] According to Collins (ed.) (2016), the following description is provided for 'low suitability commuting and foraging habitats': "*Habitats that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub*."

includes consideration of the potential impacts of lighting during operation on bats, including lighting impacts arising from new road development, which encompasses the construction of additional infrastructure in the footprint of Tymon Park.

SDCC make reference to the term "*potential bat roosts*" in their observation and it is inferred that the absence of transect data for the section of the route between Tymon Park and Bancroft Park introduces significant limitations to the impact assessment with respect to bats.

We understand from this, that SDCC are referring to potential roost features (PRFs), the term used in the EIAR. Surveys were undertaken to identify and map PRFs along the Proposed Scheme, as documented in Figure 12.7.2 in Volume 3 of the EIAR (drawing references BCIDE-JAC-ENV_BD-0809_XX_00-DR-GG-0501 through BCIDE-JAC-ENV_BD-0809_XX_00-DR-GG-0511, inclusive). PRFs are features with the potential to support roosting bats and none of these features were confirmed as bat roosts as part of the survey work undertaken. The potential loss of these PRFs has been fully considered in Section 12.4.3.4.1.1 of the EIAR and appropriate mitigation measures have been adopted in Section 12.5.1.4.1.2 of the EIAR to reduce and avoid any impacts on bats arising from loss of PRFs.

In conclusion, the absence of transect data for the sections referred to by SDCC does not impose any limitation on the validity of the impact assessment or mitigation strategy with respect to bats presented within the EIAR.

Aquatic and Riparian Survey Sites

The surveys undertaken were designed to capture all areas of direct impact. The Proposed Scheme runs alongside the Grand Canal near the Nangor Road, and crosses the Grand Canal at Dolphins Barn Bridge, whilst another section further east along the Clogher Road stops short of the Grand Canal at Parnell Road and is in places within the mapped pNHA boundary. However, the works will not entail instream works nor altering the Dolphins Barn Bridge structure, merely local operations such as line marking for improved bus/cyclist flow. In addition, a small area of built pNHA territory will be altered at the junction of Yellow Meadows Road/Nangor road intersection to facilitate safe passage of bicycles. The Proposed Scheme is shown as being partially inside the pNHA corridor.

Furthermore, the Proposed Scheme will not impact on the Grand Canal ecological corridor (either up or downstream) as there are no works proposed within the Grand Canal at any location. Thus, no dedicated aquatic surveys were considered necessary at these areas, although it is noted that surveys elsewhere along the Grand Canal for other BusConnects Schemes where works are planned were undertaken. The multidisciplinary survey for the Proposed Scheme did record habitats, plant rarities and search for evidence of otter usage and kingfisher nesting suitability long the Grand Canal at areas intersected by the Proposed Scheme.

The mitigation strategy presented in the Chapter 12 Biodiversity of the EIAR in respect of Otter (Section 12.5.1.4.3) calls for a pre-construction survey by a suitably qualified and/or licensed ecologist. Where any new evidence of activity, in particular nesting, occurs the ecologist (subject to an appropriate licence as necessary) would review the contractors method statements; oversee works at all identified watercourses including the Grand Canal; and provide instruction to the appointed contractor(s) as necessary a required by the NRA 2006 guidance[9] and after consultation with the NPWS. The mitigation strategy also includes for measures to prevent mortality within the areas of works as well as lighting protocols applicable if night works are proposed.

The multidisciplinary surveys included kingfisher suitability assessment and the EIAR reported (Section 12.3.9.1) that while a number of records noted Kingfisher occurring along the Grand Canal, the multidisciplinary study for the Proposed Scheme recorded no suitable nesting habitat both up and downstream of the proposed Grand Canal bridge nor elsewhere e.g. New Nangor Road. Notwithstanding this fact, Kingfisher can and do commute along the Grand Canal and the construction mitigation strategy (Section 12.5.1.5.1.3) includes for appropriate mitigation so as to minimise excessive noise production in urban areas. With its inclusion, there would be no likely significant change along the flight corridor of kingfisher under the Canal bridge nor along the New Nangor road area as they are already busy transport corridors.

Habitat degradation, as a result of deteriorating water quality along the Grand Canal ecological corridor (and the potential impacts to species utilising the aquatic environment) has been considered and incorporated into the design mitigation through SuDS and construction mitigation (See Section

[9] NRA (Now TII) 2006. *Guidelines for the treatment of Otters prior to the construction of National Road Schemes.* Available at https://www.tii.ie/tii-library/environment/construction-guidelines/Guidelines-for-the-Treatment-of-Otters-prior-to-the-Construction-of-National-Road-Schemes.pdf

12.5.1.2.2 of the EIAR). Furthermore, there is a detailed surface water management plan, included as part of the Construction Environment Management Plan, in Appendix A5.1 of Volume 4 of the EIAR for the Proposed Scheme.

In terms of the habitats intersected by the Proposed Scheme boundary and the potential for enhancement of the ecological corridor, the following is noted. In the environs of the Grand Canal at the Dolphins Barn Bridge area, all the habitats within the Proposed Scheme boundary, with the exception of the green space for which Construction Compound TC10 is proposed to be located, is existing built ground.

The terrestrial territory alongside the Grand Canal along the Nangor Road already has established narrow linear band of shrubs and trees along most of its length separating the existing Nangor Road from the Grand Canal walkway. The landscaping design for the Proposed Scheme includes for the retention of the majority of trees and its understorey vegetation along the Grand Canal corridor adjacent to the Proposed Scheme. A limited number of trees are proposed to be removed at the western end of the Proposed Scheme at this point around the intersection with the Nangor Road and Yellow meadows to accommodate tie ins with the existing Grand Canal greenway. To offset the disturbance, additional planting includes a linear feature of species rich grassland alongside a narrow band of amenity grassland.

The enhancement and connection of the wider ecological habitats along this section of the route is outside the scope and objectives of the Proposed Scheme.

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

g) Public Realm Enhancement

Observations raised / clarifications sought

The submission notes the proposal for reinstatement of footpaths at Belgard Square West should include the same stone paving on both sides of the road to ensure consistency.

Response to Issue

The NTA notes the comment.

The NTA will continue to liaise closely with South Dublin County Council Public Realm Section and this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme taking their requirements into consideration, where aligned with and consistent with the EIAR.

2.8.11.8 Active Travel Section

Observations raised / clarifications sought

The SDCC Active Travel Team in their submission on page 27 acknowledge that they have met with the BusConnects team and discussed the boundary issues with the Tallaght [and Clondalkin] Public Realm Schemes, noting the interfaces have been considered and the level of abortive work has been minimised. Additionally, they note that significant early engagement on this route and around the area of the bus interchange in particular was undertaken.

Response to Issue

The NTA welcomes the acknowledgement by SDCC Active Travel Section that early and effective engagement has taken place minimising abortive work.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works.

2.8.11.9 Architectural Conservation Section

Observations raised / clarifications sought

a) Support for the scheme

The submission states on page 29: *"The EIAR completed for the BusConnects Scheme Route (Tallaght-City Centre) [and Clondalkin to Drimnagh] includes a very detailed and comprehensive overview of Protected Structures and Architectural Conservation Areas and Architectural features/ items located within the vicinity of the proposed route. A methodology has been developed and is included in the Appendices (A16.3).*

The methodology gives due consideration to architectural conservation principles in providing an overall approach"

Response

The NTA notes the view expressed by the submission.

b) Protection of architectural features

The submission makes three recommendations.

It notes indirect physical construction phase impacts are anticipated in three locations where protected structures share a boundary with the Proposed Scheme. Its states that while the protected structures will not be directly impacted by the Proposed Scheme, there is a potential for damage during construction. Therefore, SDCC considered that a Safety Statement and associated method statement should be completed detailing how shared boundary features which form part of a protected structure will be safeguarded during the construction of the Proposed Scheme, requesting that the safety statement be submitted for the agreement with SDCC's Architectural Conservation Officer.

SDCC recommends that all works within the Tallaght ACA should be included in method statement for works and how architectural sites / features / buildings will be protected during the construction phase.

SDCC also recommends that when works are due to commence the BusConnects project team should contact SDCC Architectural Conservation officer in order to discuss specifications for works / repairs where required. and to be submitted for agreement and approval of the SDCC's Architectural Conservation Officer.

Response

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised (relating to hours of operation, construction traffic and noise) can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

2.8.11.10 Water Services Section

Observations raised / clarifications sought

The Water Services Section have made the following two comments on page 29-30 of the submission.

1. All structures should have setback distance to the outside diameter of surface water sewers as provided as per an attached table.

2. The setback distance for foul and watermain should be as per Irish Water Standards.

Response

The NTA notes the above comments.

As noted in Section 10.2 of the Preliminary Design Report provided as part of the Supplementary Information, preliminary consultations have been undertaken with utility asset owners, including Irish Water, so that conflict can be resolved by relocating or diverting services where necessary and protecting in-situ where appropriate. Section 10.2 notes that *"The services conflicts and the associated diversions will need to be considered in the design and construction of the Proposed Scheme. The design considerations have been taken into account as much as practicable at this stage, but it is likely that design modifications will be required at detailed design stage when further site investigations have taken place."*

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works.

2.8.11.11 City Edge Section

Background

The City Edge Section note on page 30 of SDCC's submission that "A non-statutory Strategic Framework has been prepared for the area setting out a high level vision and identifying a number of critical infrastructure elements required to support this level of development."

It also notes that "The City Edge framework is a non-statutory framework and is not part of the development consent assessment process".

Observations raised / clarifications sought

a) Advocate for the Proposed Scheme

b) General comments

c) More detailed comments

   i) Naas Road bridge

   ii) New Nangor Road/ Oak Road/ Park West Avenue

   iii) Kileen Road/ New Nangor Road

   iv) Calmount Road

   v) Greenhills Road/ Ballymount Avenue

   vi) Ballymount Avenue/ Calmount Road

   vii) Calmount Avenue/ Greenhills Road

a) Advocate for the Proposed Scheme

The City Edge Section note the following on page 31 of their submission:

"South Dublin welcomes the proposals to introduce high quality public transport and safe segregated cycling facilities to the City Edge area via the Bus[]Connects project. This ties in with the strategic objectives of the City Edge to focus on compact growth, active travel, transport oriented development and 15-minute city principles."

The City Edge Section also note on page 31 of their submission that they intend to propose a variation to the South Dublin County Development Plan 2022-2028 as part of the second phase of the City Edge Project. It notes: "…In this context, the Tallaght/ Clondalkin to City Centre CBC proposals have arrived at a crucial time in terms of ensuring that the City Edge and BusConnects are aligned."

Response

The NTA welcomes the comment by SDCC that the City Edge Section welcomes the Proposed Scheme and its intention to provide high quality public transport and safe segregated cycling facilities to the City Edge area and that the Proposed Scheme is a key aspect of delivering on that remit.

b) General comments

The submission goes on to outline a number of general concerns from the perspective of the City Edge Project:

- *"To ensure that the detailed designs do not negatively impact on the urban design and layout of this new urban quarter;*
- *To ensure the detailed designs are consistent with providing attractive human-scale streetscapes and active frontages;*
- *That adequate and safe provision is made for pedestrians and cyclists and that the principles of universal design are adhered to;*
- *That greening is facilitated via appropriate green infrastructure such as street trees and SuDS measures for climate change adaptation and mitigation, that tree and green space removal is minimised and that a net green infrastructure gain occurs;*
- *Avoiding heavily-engineered solutions; and*
- *Ensuring alignment with other proposed infrastructure including underground utilities, such as ESB Networks/ Eirgrid 'Powering Up Dublin' proposals; and SDCC's Cycle South Dublin proposals"*

Response

The NTA notes the above comments.

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the SDCC comments as these matters were the subject of extensive liaison throughout the design development process.

NTA will continue the very positive and constructive liaison with SDCC throughout the procurement and construction process including in relation to co-ordination and interfacing with the City Edge Section.

c) Detailed comments

The City Edge submission gives a background to the Strategic Framework key infrastructure proposed to serve City Edge and comments on a number of elements of the Proposed Scheme that may affect the City Edge area. These include the following:

i) The Naas Road bridge

SDCC express the view that the design "*is a missed opportunity to create a landmark structure*" and that *"the current design responds to the current context and does not acknowledge the City Edge Strategic Framework context".*

SDCC request further consideration of the design and visual appearance of the bridge through condition with finishes, lighting and design to be agreed. A planning condition should be applied seeking detailed design and materials for the proposed bridge and approaches should be agreed with the local planning authority.

Response

The NTA notes the above comment.

As described in Section 4.5.5.1 of EIAR Chapter 4 Proposed Scheme Description, *"At the New Nangor Road (R134) / Naas Road (R810) junction a new pedestrian and cycling bridge with accessible ramps and stairs on all approaches to the junction has been proposed to provide*

increased pedestrian and cycling safety, permeability and accessibility at this junction. This will require land acquisition and boundary treatment on the periphery of the existing road boundary to accommodate the proposed bridge and ancillary ramp structures. A proposed continuous inbound bus lane with dedicated left turn bypass facility will provide enhanced bus priority between the New Nangor Road (R134) and the Naas Road (R810). This will require land acquisition and boundary modifications including new retaining structures in conjunction with the new bridge access ramps and steps."

Section 4.6.8.1.1.2 of Chapter 4 provides the following overview of the bridge: *"The bridge will be a five-span fully through warren truss structure. The bridge is formed of a central span (55.5m) over the R810 Naas Road and Red Line Luas and four arterial spans (ranging from 42m to 46m) spanning the outer corners of the junction. Where required, a steel mesh will be fitted to the vertical and horizontal bracing to create a fully enclosed superstructure. The north and south supports of the central span will consist of three steel piers in a triangular arrangement, diagonally braced for lateral stiffness and supported on in-situ concrete piled foundations. The arterial spans will be supported at these central supports and span to end supports formed from a pair of braced steel columns. Painted steel access ramps and stairs will be supported off landing structures at the end supports of each arterial span. Approach steps shall also be provided to arterial structure; these steps shall be formed in painted structural steel."*

Section 8.5 of the Preliminary Design Report (PDR) included as part of the Supplementary Information provides further details as follows: *"ST02 Naas Road Pedestrian and Cycle bridge will be a five-span fully through warren truss structure. The bridge is formed of a central span (55.5m) over the Naas Road and Red Line Luas and four arterial spans (ranging from 42.1m to 46.1m) spanning the outer corners of the junction. The bridge location and articulation has been developed with the aim of providing the optimal pedestrian link between the four corners of the Naas Road / Long Mile Road junction. The central span has been designed as single span over the main carriageways of the Naas Road and the Luas Red Line. The arterial link spans have also been designed as single spans to each corner of the junction. The support locations have been chosen with consideration of the sightlines of vehicles on approach and through the junction. The impact on traffic in an already congested junction during construction was also a factor in determining the optimum support locations.*

The bridge will be formed in painted structural steel, supported on braced steel supports located in the concrete islands to the north and south of the Naas Road. All spans will be fully articulated on a combination of pot, guided and fixed bearings allowing for expansion and contraction, and mitigating against excessive stresses in the supports. The truss will be designed with full-through construction where the superstructure is built up around the deck. Where required, a steel mesh will be fitted to the vertical and horizontal bracing to create a fully enclosed superstructure.

The north and south supports of the central span will consist of three steel piers in a triangular arrangement, diagonally braced for lateral stiffness and supported on insitu concrete piled foundations. The arterial spans will be supported at these central supports and span to end supports formed from a pair of braced steel columns.

Painted steel access ramps and stairs will be supported off landing structures at the end supports of each arterial span. The ramps will be formed of a ladder beam structure and will vary in overall length from 119m to 136m. The ramps will be designed in accordance with the requirements set out in DNSTR-03005."

Section 3.2 of PDR Appendix J2 (Preliminary Design report for ST02) states the following in respect of aesthetic considerations: *"The bridge design has been developed to take account of the basic principles of aesthetics and to respect the surrounding urban environment. The bridge form will be as simple as possible to ensure the bridge does not detract from the overriding function. The bridge function has been emphasized through careful consideration of the positioning of the bridge spans, tie-in points, and articulation of the ramps and arterial spans to satisfy the desired movement lines of the end user.*

The form of the bridge will be consistent over all five spans, with similar proportions, structural depths, parapets, and finishes. The bridge will be constructed in painted steel, with the choice of paint colour to be determined at detailed design. The choice of colour will be in accordance with DN-STR-03007 and BS4800."

Section 17.4.4.1.5 of EIAR Chapter 17 Landscape (Townscape) and Visual summarises the operational phase impact on the townscape and streetscape character for Section 5 of the Proposed

Scheme which runs from Woodford Walk (R113) / New Nangor Road (R134) to Long Mile Road (R110) / Naas Road (R810) / New Nangor Road (R134) junction. This Section states: "*The baseline townscape is of low / medium sensitivity and the operation of the Proposed Scheme involves modest changes along the road corridor, including at the Grand Canal and along industrial facilities on Nangor Road where permanent land acquisition will be required. The most substantial change is the provision of a new cycle and pedestrian / cycle overbridge, with ramps and steps spanning the Nangor Road / Naas Road / Long Mile Road junction. Although this will form a new detracting element, the streetscape character is composed of a large dual carriageway junction with low sensitivity.*

The operational phase will not appreciably alter the existing townscape character of this section of the Proposed Scheme but there will be localised improvements to streetscape amenity from provision of additional tree planting, most notably along New Nangor Road. The magnitude of change in the baseline environment is medium."

Section 17.4.4.1.5 goes on to state that: "*The potential townscape / streetscape and visual impact of the Operational Phase on this section is assessed to be* ***Negative, Slight / Moderate and Short-Term becoming Positive, Moderate, Long-Term****."*

In summary, the NTA note that The City Edge Framework is a non-statutory framework for the area setting out a high-level vision and is not part of the development consent assessment process. Consequently, the proposed bridge design responds to the existing townscape character of this section of the Proposed Scheme. The NTA is satisfied that the bridge as proposed is appropriate to achieve the objectives of the Proposed Scheme, while recognising the City Edge Strategic Framework.

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the SDCC comments as these matters were the subject of extensive liaison throughout the design development process.

The NTA will continue the very positive and constructive liaison with SDCC during the preparation of the construction-stage documents and during the construction works in relation to the detailed design of the Naas Road bridge and approaches.

ii) New Nangor Road/ Oak Road/ Park West Avenue junction

SDCC stated on page 36 of its submission that Oak Road forms part of a proposed north-south 'outer orbital' public transport route in the City Edge Strategic Framework and that it should be noted in the design that this junction will need to take more extensive traffic in the future.

Response

The NTA note the comment.

Section 4.2.3 of Appendix A6.1 Transport Impact Assessment contained in EIAR Volume 4 Part 2 of 4 describes how the methodology used for determining the predicted magnitude of impacts has considered the traffic and transport conditions of the environment before and after the Proposed Scheme is in place.

Section 4.2.3 states that *"The impact assessments have been carried out in relation to the following scenarios:*

- Do Minimum – The 'Do Minimum' scenario (Opening Year 2028, Design Year 2043) represents the likely traffic and transport conditions of the direct and indirect study areas including for any transportation schemes which have taken place, been approved or are planned for implementation, without the Proposed Scheme in place. This scenario forms the reference case by which to compare the Proposed Scheme ('Do Something') for the quantitative assessments.
- Do Something – The 'Do Something' scenario represents the likely traffic and transport conditions of the direct and indirect study areas including for any transportation schemes which have taken place, been approved or are planned for implementation, with the Proposed Scheme in place (i.e. the Do Minimum scenario with the addition of the Proposed Scheme). The Do Something scenario has been broken into two phases:
    - Construction Phase (Construction Year 2024) – This phase represents the single worst-case period which will occur during the construction of the Proposed Scheme.

- Operational Phase (Opening Year 2028, Design Year 2043) – This phase represents when the Proposed Scheme is fully operational."

Section 4.3.1 of Appendix A6.1 describes the range of modelling tools developed as part of the assessment which sit within the framework of the NTA's Eastern Regional Model (ERM). The ERM has been used as the primary source for multi-model demand and trip growth and Table 4.2 of Appendix A6.1 identifies the NTA Forecast Planning data (for 2020, 2028 and 2040) as one of the key inputs.

Section 6.1.3.2 of Appendix A6.1discusses future transport demand and sets out that:

"The transport demand changes for the 2028 and 2043 assessment years have been included in the analysis contained within this chapter, using travel demand forecasting, which accounts for increases in population and economic activity, in line with planned growth contained within the NPF, Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland region and the local development plans for the GDA local authorities.

It is envisaged that the population will grow by 11% up to 2028 and 25% by 2043 (above 2016 census data levels). Similarly, employment growth is due to increase by 22% by 2028 and 49% by 2043 (Source: NTA Reference Case Planning Sheets 2028, 2043). The assessment also assumes that goods vehicles (HGVs and LGVs) continue to grow in line with forecasted economic activity with patterns of travel remaining the same. For example, the assessment assumes a 45% and 77% increase in goods traffic versus the base year in 2028 and 2043 respectively."

Section 7.2 provides details of the cumulative assessment for the operational stage and Section 7.2.3 states that:

"Cumulative transport demand for the 2028 and 2043 assessment years have been included in the analysis contained within this chapter, using travel demand forecasting, which accounts for increases in population and economic activity, in line with planned growth contained within the NPF, Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland region and the local development plans for GDA local authorities.

It is envisaged that the population will grow by 11% up to 2028 and 25% by 2043 (above 2016 census data levels). Similarly, employment is due to grow by 22% by 2028 and 49% by 2043 (Source: NTA Reference Case Planning Sheets 2028, 2043)."

At a local level, in terms of the cumulative impact on transport demand of significant current / proposed developments in the SDCC area, the future year travel demand associated with these developments is included within the modelling as it is part of the planned growth contained within the NPF, Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland region and the local development plans for GDA local authorities.

The proposed layout of the New Nangor Road/ Oak Road/ Park West Avenue junction has been designed on the basis of the future transport demand determined as set out above. In respect of the junction, Appendix A6.3 Junction Design Report (JDR) of contained in EIAR Volume 4 Part 2 of 4 summarises the proposals as "*The existing 4 arm signalised junction is proposed to be upgraded as per the BusConnects Preliminary Design Guidance Booklet to enhance pedestrian, cyclist and bus priority infrastructure. The key design rationale was to provide a more compact junction, to reduce pedestrian and cyclist crossing distances. The existing left turn slips are also proposed to be omitted on all arms to achieve a more compact junction arrangement."*

In summary, the Junction Design Report for the Proposed Scheme at this location provides the optimum layout that balances the competing demands by enhancing bus priority, improving pedestrian and cyclist infrastructure whilst still retaining appropriate capacity for the forecast level of general traffic.

iii) Killeen Road/ New Nangor Road

The submission notes the design as proposed is hard in appearance, adding that more greening is encouraged along New Nangor Road.

Response

Section 4.6.11.3.1 of EIAR Chapter 4 Proposed Scheme Description details the softscape planting strategy as follows: *"The planting strategy has been developed in response to the objectives set out in both the South Dublin County Development Plan 2022 – 2028 (SDCC 2021)*

and the Dublin City Development Plan 2022 – 2028 (DCC 2021). The planting strategy is also in response to landscape and urban realm opportunities arising from the Proposed Scheme to integrate new infrastructure within the existing local context and to enhance the visual and amenity value of streets and spaces.

The planting strategy includes replacement of street trees and groups of trees that may be impacted by the Proposed Scheme, but also the introduction of new tree planting and street trees within other spaces and along streets. Reinforcement of green infrastructure along the route will improve the overall amenity, character and appeal of the route corridor and localities along it, as well as enhancing biodiversity.

In addition to trees and street trees, other vegetation is also proposed along the route including hedgerows, ornamental planting and amenity grassland, shrub and meadow grass areas. These will be utilised to reinstate property boundaries altered by the Proposed Scheme."

Section 17.4.1.4.5 of Chapter 17 (Landscape & Visual) notes the following proposed works at this location:

- *"Substantial replacement and additional tree planting to sections of New Nangor Road between Woodford Walk and Willow Road (Ch. F50 to Ch. F1400) and provision of replacement trees and beech hedge to tie in with existing boundary treatments at Toyota Ireland / Diageo and Kileen Road (Ch. F1400 to Ch. F1750)."*

Figure 2.8.11.40 shows an extract of Landscaping General Arrangement Drawings at the Killeen Road / New Nangor Road junction showing the provision of additional trees and proposed species rich grassland.



Figure 2.8.11.40: Extract of Landscaping General Arrangement Drawings at junction of Killeen Road and New Nangor Road

Section 17.4.4.1.5 of Chapter 17 (Landscape & Visual) notes the following operational phase impact for this section:

"The potential townscape / streetscape and visual impact of the Operational Phase on this section is assessed to be ***Negative, Slight / Moderate and Short-Term becoming Positive, Moderate, Long-Term."***

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the SDCC Public Realm Section comments as these matters were the subject of extensive liaison throughout the design development process.

NTA will continue the very positive and constructive liaison with SDCC throughout the procurement and construction process including in relation to the landscape strategy / Green Infrastructure Strategy.

iv) Calmount Road

The submission welcomes the proposal to route the Core Bus Corridor along Calmount Road in the context of this being identified as a future local high street within the City Edge Strategic Framework.

However SDDC note they would encourage more greening and SuDS in the design. Adding, that in the event of grant of planning permission the detailed design of this green space at junction of Calmount Road and Greenhills Road should be agreed with LA to address detailed concerns over active travel access between both roads and quality of the green open space and maintenance into the future.

Response

Support for scheme

The support for the scheme is noted and welcomed by the NTA.

Landscaping

Figure 2.8.11.41 is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed landscaping proposals to the green space between the extended Calmount Road and existing Greenhills Road.

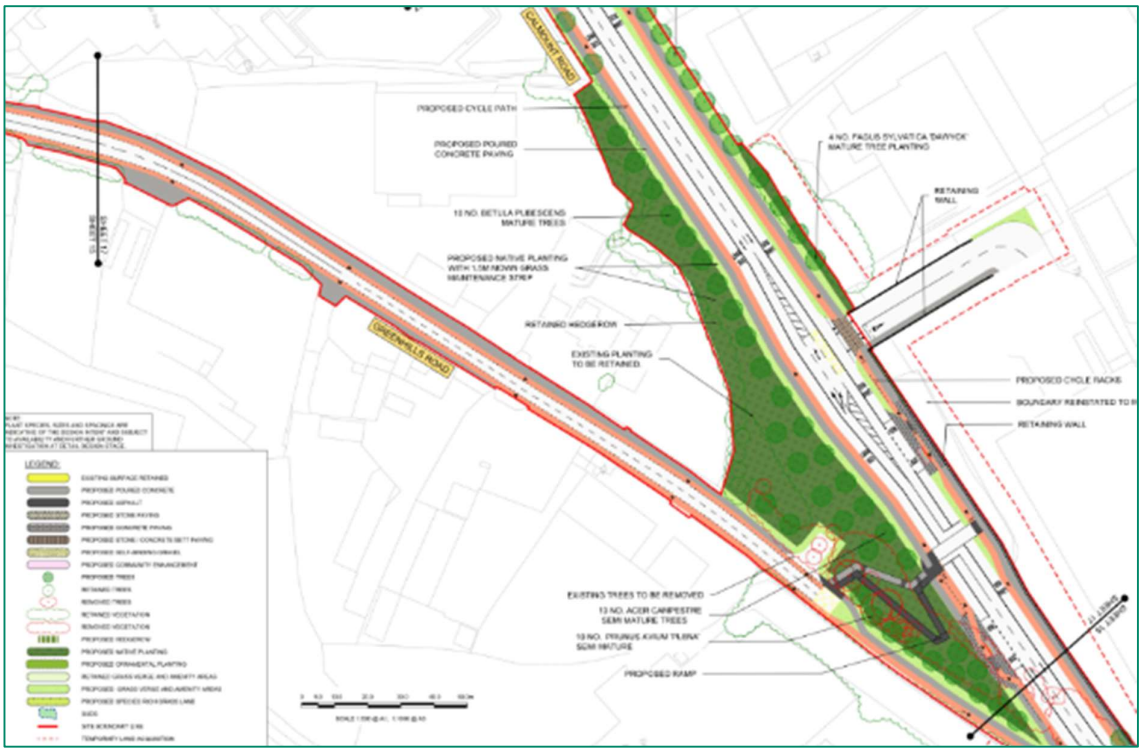


Figure 2.8.11.41: Extract of Landscaping General Arrangement Drawings between the extended Calmount Road and existing Greenhills Road

As set out in Section 4.6.11.1 of EIAR Chapter 4 Proposed Scheme Description, the landscape and urban realm proposals are derived from analysis of the existing urban realm, including existing street and public space character, heritage features, boundaries, tree planting and vegetation, and the range of contemporary and heritage materials in use that inform the quality and character of different parts of the overall route.

Section 4.6.11.3.1 of EIAR Chapter 4 Proposed Scheme Description details the softscape planting strategy as follows: *"The planting strategy has been developed in response to the objectives set out in both the South Dublin County Development Plan 2022 – 2028 (SDCC 2021) and the Dublin City Development Plan 2022 – 2028 (DCC 2021). The planting strategy is also in*

response to landscape and urban realm opportunities arising from the Proposed Scheme to integrate new infrastructure within the existing local context and to enhance the visual and amenity value of streets and spaces.

The planting strategy includes replacement of street trees and groups of trees that may be impacted by the Proposed Scheme, but also the introduction of new tree planting and street trees within other spaces and along streets. Reinforcement of green infrastructure along the route will improve the overall amenity, character and appeal of the route corridor and localities along it, as well as enhancing biodiversity.

In addition to trees and street trees, other vegetation is also proposed along the route including hedgerows, ornamental planting and amenity grassland, shrub and meadow grass areas. These will be utilised to reinstate property boundaries altered by the Proposed Scheme."

The landscaping proposals included in the Proposed Scheme at this location are in accordance with the scheme's planting strategy.

SuDS

As set out in Section 4.6.14 of EIAR Chapter 4 Proposed Scheme Description, the design basis statement was developed whilst taking cognisance of the Greater Dublin Regional Code of Practice (GDRCoP), Greater Dublin Strategic Drainage Study (GDSDS), planning requirements of Local Authorities within the Dublin region, Transport Infrastructure Ireland (TII) requirements and international best practices such as CIRIA The SuDS Manual (C753) (CIRIA 2015). Agencies consulted included SDCC, DCC and Irish Water where applicable.

Section 4.6.14.4 of Chapter 4 states: "The drainage design aims to sustain flow levels within the existing pipe network after a rainfall event by controlling the discharge rate within each catchment. Flows will be controlled by the implementation of SuDS techniques, where practicable. One of the principal objectives of the road drainage system is to minimise the impact of the runoff from the roadways on the surrounding environment via the position of: filter drains, swales, bio-retention areas, tree pits, silt traps and attenuation features if necessary."

Section 4.6.14.5 of Chapter describes the principal objectives of the proposed drainage design, noting that "A SuDS drainage strategy has been developed for all newly paved areas in accordance with the SuDS hierarchy. SuDS are provided to ensure no increase on existing runoff rates from new paved areas will also provide a level of treatment before discharging into the existing network system;"

The drainage proposals included in the Proposed Scheme at this location are in accordance with the scheme's SuDS drainage strategy.

v) Greenhills Road/ Ballymount Avenue

The submission encourages protection of trees along Greenhills Road, minimising tree removal, and to take the opportunity to provide more street trees. Additionally it suggests there is scope for reduction of land-take at Tymon Park.

Response

A detailed response to the impact on existing trees and the necessary land acquisition at Tymon Park has been provided in the response to the submission from the Parks & Landscape [Public Realm] Section in section 2.8.11.7 iii) c) above.

In summary, the detailed response in section 2.8.11.7 iii) c) set out that the Emerging Preferred Route was refined over the design phase to reduce the impact on Tymon Park as much as practicable and noted that the Proposed Scheme has a significantly reduced impact on Tymon Park compared to the Approved SDCC Greenhills Ballymount Reconfiguration scheme at this location. The design of the Proposed Scheme has made all reasonable efforts to reduce the impact on Tymon Park as much as practicable while still achieving the objectives of the Proposed Scheme.

vi) Ballymount Avenue/ Calmount Road

The submission suggests the opportunity for greening along east of Ballymount Road [Avenue] should be explored.

Response

Section 17.4.1.4.2 of Chapter 17 (Landscape & Visual) notes the following proposed works at this location:

- *Provision of tree planting, native woodland planting, boundary planting and species-rich grassland to open space areas surrounding new road sections and junctions at Ballymount Avenue, Calmount Avenue and Calmount Road (Ch. A4100 to Ch. A5500);*
- *Provision of replacement and new street trees along Ballymount Avenue, Calmount Road and Greenhills Road (Ch. A4300 to Ch. A5730);*

Figure 2.8.11.42 is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed landscaping proposals on Ballymount Avenue from its junction with Greenhills Road.

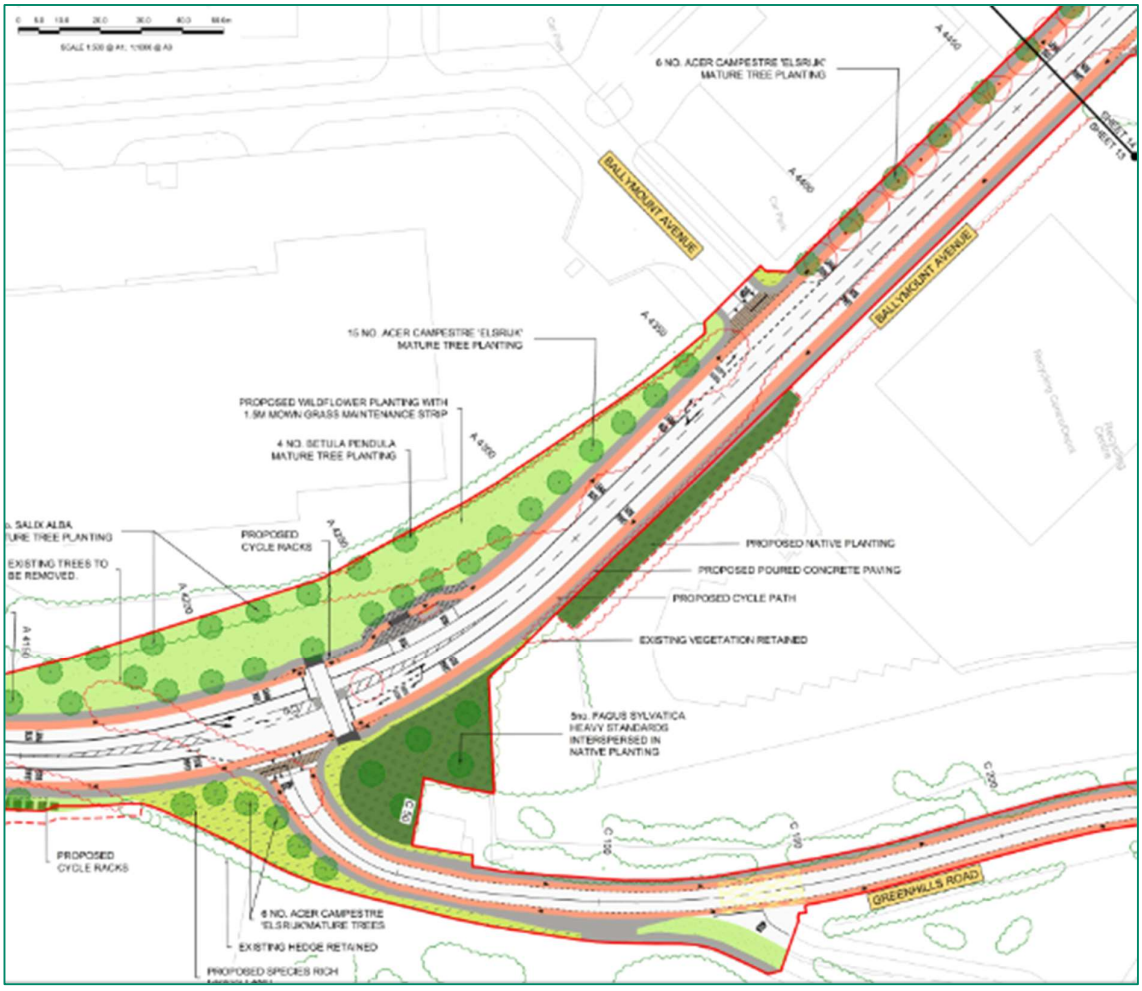


Figure 2.8.11.42: Extract of Landscaping General Arrangement Drawings along Ballymount Avenue from its junction with Greenhills Road

As set out in Section 4.6.11.1 of EIAR Chapter 4 Proposed Scheme Description, the landscape and urban realm proposals are derived from analysis of the existing urban realm, including existing street and public space character, heritage features, boundaries, tree planting and vegetation, and the range of contemporary and heritage materials in use that inform the quality and character of different parts of the overall route.

Section 4.6.11.3.1 of EIAR Chapter 4 Proposed Scheme Description details the softscape planting strategy as follows: *"The planting strategy has been developed in response to the objectives set out in both the South Dublin County Development Plan 2022 – 2028 (SDCC 2021) and the Dublin City Development Plan 2022 – 2028 (DCC 2021). The planting strategy is also in response to landscape and urban realm opportunities arising from the Proposed Scheme to integrate new infrastructure within the existing local context and to enhance the visual and amenity value of streets and spaces.*

The planting strategy includes replacement of street trees and groups of trees that may be impacted by the Proposed Scheme, but also the introduction of new tree planting and street trees within other spaces and along streets. Reinforcement of green infrastructure along the route will improve the overall amenity, character and appeal of the route corridor and localities along it, as well as enhancing biodiversity.

In addition to trees and street trees, other vegetation is also proposed along the route including hedgerows, ornamental planting and amenity grassland, shrub and meadow grass areas. These will be utilised to reinstate property boundaries altered by the Proposed Scheme."

The landscaping proposals included in the Proposed Scheme at this location are in accordance with the scheme's planting strategy.

vii) Calmount Avenue/ Greenhills Road

The submission welcomes the connecting up of Calmount Avenue to create a through-road linking to the future Calmount Local High Street. Additionally the submission advises tree removal should be minimised and proposals should result in a net greening.

Response

Support for scheme

The support for the scheme is noted and welcomed by the NTA.

Section 17.4.1.4.2 of Chapter 17 (Landscape & Visual) notes the following proposed works at this location:

- *Provision of tree planting, native woodland planting, boundary planting and species-rich grassland to open space areas surrounding new road sections and junctions at Ballymount Avenue, Calmount Avenue and Calmount Road (Ch. A4100 to Ch. A5500);*
- *Provision of replacement and new street trees along Ballymount Avenue, Calmount Road and Greenhills Road (Ch. A4300 to Ch. A5730);*

Figure 2.8.11.43 is an extract from Landscape General Arrangement Drawings from Figures: Part 1 of 3 of Volume 3 of the EIAR showing proposed landscaping proposals on Calmount Avenue from its junction with Greenhills Road.



Figure 2.8.11.43: Extract of Landscaping General Arrangement Drawings on Calmount Avenue from its junction with Greenhills Road

As set out in Section 4.6.11.1 of EIAR Chapter 4 Proposed Scheme Description, the landscape and urban realm proposals are derived from analysis of the existing urban realm, including existing street and public space character, heritage features, boundaries, tree planting and vegetation, and the range of contemporary and heritage materials in use that inform the quality and character of different parts of the overall route.

> Section 4.6.11.3.1 of EIAR Chapter 4 Proposed Scheme Description details the softscape planting strategy as follows: *"The planting strategy has been developed in response to the objectives set out in both the South Dublin County Development Plan 2022 – 2028 (SDCC 2021) and the Dublin City Development Plan 2022 – 2028 (DCC 2021). The planting strategy is also in response to landscape and urban realm opportunities arising from the Proposed Scheme to integrate new infrastructure within the existing local context and to enhance the visual and amenity value of streets and spaces.*
>
> *The planting strategy includes replacement of street trees and groups of trees that may be impacted by the Proposed Scheme, but also the introduction of new tree planting and street trees within other spaces and along streets. Reinforcement of green infrastructure along the route will improve the overall amenity, character and appeal of the route corridor and localities along it, as well as enhancing biodiversity.*
>
> *In addition to trees and street trees, other vegetation is also proposed along the route including hedgerows, ornamental planting and amenity grassland, shrub and meadow grass areas. These will be utilised to reinstate property boundaries altered by the Proposed Scheme."*

The landscaping proposals included in the Proposed Scheme at this location are in accordance with the scheme's planting strategy.

2.3.4.12 Conclusion

General Issues

In conclusion, SDCC's submission reiterates support for the scheme and reiterates 5 general issues that have been raised by the various sections within SDCC:

1. Avoiding an over-engineered approach
2. Adequate provision for walking and cycling
3. Ensuring adequate greening
4. Tying in with other proposed infrastructure
5. Consideration of operation of construction compounds on SDCC lands by agreement rather than by temporary CPO

Response

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

Specific Proposals

The submission repeats 13 specific concerns that have been raised by the various sections within SDCC:

1. Loss of Old Greenhills Road Public Realm
2. Tallaght bus interchange aligns with adjacent public plaza
3. Landscape enhancement plan at Bancroft Park following use as a compound
4. Minimisation of compounds located at Tymon Park
5. Detailed design of the pedestrian / cycle bridge at New Nangor Road / Naas Road / Long Mile Road
6. Landscaping plan for the green space between the extended Calmount road and Greenhills Road
7. Design of Oak Road / New Nangor Rod junction
8. Increased green infrastructure along the full length of the route
9. More natural based SuDS along the full length of the route
10. Reduced impact on trees on Greenhills Road
11. Completion of all necessary environmental and ecological surveys
12. Exploration for greening the eastern side of Ballymount Avenue
13. Safety and Method Statements in relation to protected structures and ACAs

Response

Detailed responses to each of the above concerns have been provided in the relevant sections above.

The NTA acknowledges the close liaison with SDCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within SDCC. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has

properly considered, and taken into account, the inputs from those sections during the design development process.

The NTA will continue the very positive and constructive liaison with SDCC throughout the preparation of the construction-stage documents and during the construction works. The NTA is satisfied that the matters raised can be successfully addressed between SDCC and the NTA, in the absence of any approval condition.

2.8.12 50 - DCC

2.8.12.1 Overview of submission

Dublin City Council's (DCC) submission comprised of 59 pages and is sectionalised numerically. For ease of reference the DCC section numbering, and sub-section numbering conventions have been retained throughout the NTA's response as set out in the following paragraphs.

The NTA's response to the submission is set out as follows:

A. Role of NTA and Liaison with DCC

B. DCC's Support for the Proposed Scheme

C. Certain Observations Raised/ Clarification Sought by DCC

- 3.0 Context of Development
  - a. Response to Section 3.1 Relevant Planning History
  - b. Response to Section 3.2 Policy Context (sub-sections 3.2.1 to 3.2.3)
- 4.0 Planning Assessment
  - c. Response to Section 4.1 Planning Policy
  - d. Response to Section 4.2 Environmental Impact Assessment Report (EIAR)
  - e. Response to Section 4.3 Natura 2000
  - f. Response to Section 4.4 Zoning and other designations (sub-sections 4.4.1 to 4.4.2)
  - g. Response to Section 4.5 Impact on Amenity
  - h. Response to Section 4.6 Forward Planning
  - i. Response to Section 4.7 Departmental Reports
  - j. Response to Section 4.8 City Archaeologists
  - k. Response to Section 4.9 City Architects Division
  - l. Response to Section 4.10 Conversation Section
  - m. Response to Section 4.11 Environment & Transportation Department (sub-sections 4.11.1 to 4.11.6)
  - n. Response to Section 4.12 Parks Department Comment regarding Bunting Park
- Response to Section 5.0 Conclusion
- Response to Appendix 1 Proposed Conditions and Departmental Recommendations

2.8.12.2 Introduction

The Tallaght/ Clondalkin to City Centre Core Bus Corridor Scheme (hereinafter referred to as the "Proposed Scheme") within the Dublin City Council area is one of 12 schemes to be delivered under the BusConnects Dublin - Core Bus Corridors Infrastructure Works (hereinafter referred to as the "CBC Infrastructure Works"). The CBC Infrastructure Works is one of the initiatives within the NTA's overall BusConnects Programme.

2.8.12.3 A – Role of the National Transport Authority (NTA) and Liaison with Dublin City Council (DCC)

For context, the Environmental Impact Assessment Report (EIAR) Chapter 1 Introduction, Section 1.4, Role of the National Transport Authority, of the Tallaght/ Clondalkin to City Centre Core Bus Corridor Scheme EIAR (Volume 2 of 4) states:

"The NTA is responsible for the development and implementation of strategies to provide high quality, accessible and sustainable transport across Ireland. The NTA has a number of statutory functions including the following which are relevant to the Proposed Scheme:

- Develop an integrated, accessible public transport network;

- Provide bus infrastructure and fleet and cycling facilities and schemes; and
- Invest in all public transport infrastructure.

Specifically, under Section 44(1) of the 2008 Act (as amended), 'in relation to public transport infrastructure in the GDA, the Authority shall have the following functions:

a. to secure the provision of, or to provide, public transport infrastructure;

b. to enter into agreements with other persons in order to secure the provision of such public transport infrastructure, whether by means of a concession, joint venture, public private partnership or any other means; and

c. to acquire and facilitate the development of land adjacent to any public transport infrastructure where such acquisition and development contribute to the economic viability of the said infrastructure whether by agreement or by means of a compulsory purchase order made by the Authority in accordance with Part XIV of the Act of 2000.

The Board of the NTA, at its meeting on 18 October 2019, considered whether the function of providing the public transport infrastructure comprising of the CBC Infrastructure Works should be performed by the NTA itself under the provisions of Section 44(2)(b) of the 2008 Act. Following consideration, the Board of the NTA decided that the functions in relation to securing the provision of public transport infrastructure falling within Section 44(2)(a) of the 2008 Act (as amended) in relation to the CBC Infrastructure Works, should be performed by the NTA.

The NTA established a dedicated BusConnects Infrastructure team to advance the planning and construction of the CBC Infrastructure Works, including technical and communications resources and external service providers procured in the planning and design of the 12 Proposed Schemes."

In early 2019, as indicated by Dublin City Council (DCC) in its submission, a multi-disciplinary corporate team (the DCC BusConnects Liaison Office) was established to provide a liaison role with the NTA. The purpose of this team/office is to effectively manage the communications and act as the primary conduit for information exchange between DCC and the NTA in relation to the BusConnects Programme.

As DCC states in its submission, this dedicated DCC BusConnects Liaison Office has facilitated the exchange of information and engagement with other departments and sections within DCC regarding the design of the Proposed Scheme.

The NTA is grateful for the positive and constructive liaison that has occurred with the DCC BusConnects Liaison Office throughout the design and planning process to date, and through that liaison office with other Departments and Sections within DCC regarding the progression of the Proposed Scheme.

2.8.12.4 B – DCC's Support for the Proposed Scheme

In its submission, DCC confirmed its support for the Proposed Scheme, and stated in their section 5.0 Conclusion on page 49 of the submission:

"The proposed Tallaght/ Clondalkin to City Centre Core Bus Corridor Scheme is supported and welcomed by Dublin City Council as it will ensure the delivery of a number of key policies and objectives of the Dublin City Development Plan 2022-2028."

DCC further confirmed (at page 49 of its submission) that the development of the Proposed Scheme will provide an upgraded and expanded bus network and quality of service together with better quality cycling and pedestrian facilities and DCC acknowledged that these improvements will make it easier for people to access and use public transport. It also acknowledged that the Proposed Scheme will, in turn, promote modal shift from the private car to more sustainable forms of transport including walking, cycling and public transport, ultimately contributing to the creation of a greener and more sustainable city.

In relation to planning policy, the NTA welcomes the acknowledgement by DCC (at page 17 of its submission) that, in terms of Regional Policy, the Proposed Scheme is supported by the Regional Spatial and Economic Strategy (RSES) and that DCC is of the view that the Proposed Scheme will contribute to, and support, continued improved integration of transport with land use planning and the delivery of improved high-capacity Core Bus Corridors will enable and support the delivery of both residential and economic development opportunities, facilitating the sustainable growth of Dublin City and its metropolitan area, not only seeking an improved and enhanced bus network but also places cycling at the core of its transport objectives.

In relation to the Dublin City Development Plan 2022-2028, the DCC submission (page 13) states that: "*Dublin City Council (DCC) supports the improvement of public transport and cycling which will allow*

for higher density development, thereby creating a more sustainable interaction between land-use and transport."

Equally, on page 15 of its submission, DCC noted that *'Chapter 8 of the current Dublin City Plan (2022-2028) 'Movement and Transport' "sets out the Council's policies and objectives which are relevant to Bus Connects.* In relation to the EIAR, DCC stated (at page 17 of its submission) that: *"A comprehensive EIAR is provided with the application examining the project under all relevant impacts and finds generally that the development would not adversely impact on existing environmental amenities"* and they go on to say that *"the content [of the EIAR] points generally to the development having negligible impact on the existing environment".*

In relation to the Natura Impact Statement (NIS), DCC stated (at page 19 of its submission) that the NIS submitted is generally satisfactory in terms of identifying the relevant European sites and the potential adverse impacts on the integrity of designated European sites along the Dublin coastline in view of their conservation objectives. DCC go on to state in its submission that: *"the avoidance, design requirements and mitigation measures set out in the NIS will ensure that any impacts on the conservation objectives of European Sites will be avoided during the construction and operation of the proposed scheme such there will be no adverse effects on any European sites."*

In relation to zoning, the NTA notes that DCC set out the view on page 19 of its submission that the area along the proposed route includes land with the following land-use zoning objectives:

- Z1 (Sustainable Residential Neighbourhoods);
- Z2 (Residential Neighbourhoods (Conservation Areas));
- Z3 (Neighbourhood Centres);
- Z4 (Key Urban Villages/ Urban Villages);
- Z5 (City Centre);
- Z6 (Employment/ Enterprise);
- Z8 (Georgian Conservation Area);
- Z9 (Open Space);
- Z10 (Inner Suburban and Inner City Sustainable Mixed Uses);
- Z14 (Strategic Development and Regeneration Areas (SDRA's)) and
- Z15 (Community and Social Infrastructure)

It states that "The proposed scheme will, for the most part, comprise lands within the existing public road and pedestrian pavement area where there is no specific zoning objective." The submission goes on to state: "The areas required for Construction Compounds will be for a temporary period. Reinstatement works will be carried out following construction."
On page 20 of its submission, in relation to amenities, DCC stated: *"Dublin City Council is satisfied that the elements of the proposed development which fall within the Council boundary would not have any excessive or undue impact on the amenities of the area".*

The Environment and Transportation Department of DCC set out (at page 41 of its submission) that: *"The Department is generally supportive of the improvements to bus and cycling infrastructure proposed in the overall context of encouraging a shift to sustainable mobility. In this regard the proposal generally aligns with the policies expressed in the Dublin City current and draft Development Plans".*

DCC stated further that, *"[t]he commitment by the NTA within the BusConnects project to increase the level of priority afforded to the bus service is very much welcomed. The introduction of, for the most part, separated and segregated cycle ways is again welcomed as providing the opportunities:*

- To provide better and safer cycling environment for all ages and abilities,
- Help the bus maintain a steady speed and so achieve its journey times and even headways by removing bicycles from potentially being a source of delay in the bus lane."

Also, on page 41 of its submission, DCC stated: *"The Traffic Section is supportive of the integrated sustainable transport proposals and recognises the significant improvements that they will bring in terms of safe cycling measures and in enabling an efficient public transportation service along these routes".*

On page 43 of the DCC submission, the Roads Department stated: *"The Roads Department is generally supportive of the scheme and its intention to improve bus and cycling provision".*

On page 36 of the DCC submission, the Conservation Section stated that: *"The comprehensive assessment on architectural heritage, streetscape and the urban environment submitted as part of the EIAR and the proposed mitigation measures across the scheme is generally welcomed."*

On page 24 of the DCC submission, the City Architects Department *"welcomes in principle the objectives of the Proposed Scheme to support integrated sustainable transport use through infrastructure improvements for active travel (both walking and cycling), and the provision of enhanced bus priority measures."* It goes on to state that the Proposed Scheme *"will facilitate the modal shift from car dependency through the provision of walking, cycle, and bus infrastructure enhancements thereby contributing to an efficient, integrated transport system and facilitating a shift to a low carbon and climate resilient City."*

2.8.12.5 C – Certain Observations / Clarifications Sought by DCC

While, as is evidenced from the DCC submission itself, and from the extracts from the DCC submission as outlined above in section 2.8.12.3 - DCC's support for the Scheme, DCC is supportive of the Proposed Scheme and its improvements to public transport and the shift to sustainable mobility, DCC has also raised certain queries and observations that the NTA has now considered and responds to below.

These queries and observations are enclosed in section 3 of the DCC submission, (entitled *"Context of Development"*) and section 4 of the DCC submission, (entitled *"Planning Assessment"*). The queries and observations are included under a number of sub-headings and for ease of reference the DCC sub-section numbering convention has been retained throughout the following paragraphs.

2.8.12.6 DCC Section 3.1 Relevant Planning History

Observations raised / clarifications sought

DCC, in this section 3.1 of its submission, lists twenty seven significant planning applications along, and adjacent to, the Proposed Scheme.

Response

Appendix A21.1 Summary of Stages 1 and 2 Shortlisting, in EIAR Volume 4 Appendices Part 4 of 4, provides a record of the outcomes of Stage 1 and 2 of the CEA. At Stage 1 a preliminary long list of other projects was reviewed and distances from the Proposed Scheme mapped against zones of influence (ZoI) for different topics used in the EIAR. Projects which fell within a ZoI for topic were included as part of the long list for review at Stage 2. Some projects were kept on the long list for further consideration at Stage 2 even if they were outside of the ZoI if the topic specialist felt there was a potential pathway to likely significant cumulative impacts with the scheme. At Stage 2 topic specialists considered each project on the long list further in relation to whether there were likely significant effects for further consideration. If it was considered that there could be likely significant cumulative impacts, the project was shortlisted for further information gathering (Stage 3) and assessment (Stage 4).

The NTA notes that three of the planning applications listed by DCC are identified in Appendix A21.1.

- **Site to east of Walkinstown Avenue at the junction of Walkinstown Avenue and Naas Road:** ten Year permission granted for a mixed use development including part Build to Rent development in thirteen no. blocks ranging in height from four to fifteen storeys over three no. basements The application includes part of the Nissan site for accommodation works. (Reg Ref: 3228/20);
- **Site beside The Assumption Girls National School, Long Mile Road, Walkinstown, Dublin 12:** An Bord Pleanála granted permission (overturning a DCC refusal) for sixty one no. residential units comprising twenty two no. houses and thirty nine no. apartments. (Reg Ref: 2571/15);
- **IDA Ireland Small Business Centre, Newmarket Industrial Estate, Newmarket, Dublin 8:** An Bord Pleanála granted permission for demolition of existing buildings on site and the redevelopment of the site for mixed use purposes. The development includes four blocks over double basement, with the western block a part five, part seven and part eight storey hotel the southern block a part five, part six storey building with retail at ground floor level and 34 residential units on the upper floors, the northern block a part seven and part eight storey providing 58 residential units, the eastern block a part four, part five, part six storey building providing office space. (Reg Ref: 3323/17);

The other twenty four planning applications that DCC refer to are:

- **Kestrel House, 157 Walkinstown Road, Dublin 12:** Appeal pending on a DCC grant for demolition of existing two storey building and construction of a part four, part five and part six storey

over basement mixed use development of forty two no. apartments with three retail units and a public house at ground floor level. (Reg Ref: 3193/22);

- **41 Bunting Road, Walkinstown, Dublin 12, D12 RY61:** Permission granted for a proposed new ground floor only garage and home office to the rear of the existing site (Reg Ref: 3037/21);
- **7 St. Marys Road, Crumlin Dublin 12, D12 R7W8:** Permission Granted for new dwelling. (Reg Ref: 3193/22);
- **Motor Distributors Ltd, Long Mile Road, Dublin 12:** Permission granted for removal of existing sales building and construction of new single storey commercial vehicle sales and display building. (Reg Ref: 2855/16);
- **Lands & Buildings adjoining, & formerly, Part Of 'The Halfway House' public house, located at the junction of the Long Mile Road and Walkinstown Road, Dublin 12.** An Bord Pleanála granted permission (overturning a DCC refusal) for demolition of existing buildings/ structures on site and construction of a three storey office building. (Reg Ref: 4390/17);
- **Same address as above:** An Bord Pleanála granted permission (overturning a DCC refusal) for demolition of existing buildings/ structures on site and construction of a new building of seven no. apartments. (Reg Ref: 2759/20);
- **88-89 Drimnagh Road, Drimnagh, Dublin 12:** Permission granted for demolition of existing detached dwelling and construction of a mixed use development of a ground floor retail unit with six no. apartments on three floors. (Reg Ref: 3472/18);
- **The Black Forge Inn, No's. 161, 163/165 Drimnagh Road and to the rear of No. 159 Drimnagh Road, Dublin 12:** Permission granted for single-storey extension to east of existing public house, provision of outdoor dining area, first floor extension at rear of no. 161 Drimnagh Road and internal alterations and all ancillary works. (Reg Ref: 3612/21);
- **152 Drimnagh Road, Walkinstown, Dublin 12:** Permission granted for two storey home office over garage to rear of property with access off laneway. (Reg Ref: 2212/16);
- **119 Drimnagh Road, Dublin 12:** An Bord Pleanála granted permission for provision of a four storey mixed use building which will include 1 no. retail unit at ground level and 14 no. residential units at the upper levels. (Reg Ref: 2326/17);
- **Our Lady's Children's Hospital, Cooley Road, Dublin 12:** Permission granted for a three-storey extension to the hybrid cardiac catheterisation laboratory (planning ref 3533/13). (Reg Ref: 2604/15);
- **Rear of 57 Crumlin Road, Dublin 12:** Permission granted for an independent 23 sqm single storey facility for GAA club. (Reg Ref: 4062/18);
- **31a Crumlin Road, Crumlin, Dublin 12, D12 VP99;** Permission granted for erection of 1no. outdoor open plan activity area. (Reg Ref: 3736/21);
- **16 Crumlin Road, Dolphins Road Junction, Dublin 12;** Permission granted for redevelopment of existing filing station and vacant public house to include erection of a part one storey, part two storey building to include retail and café, new forecourt and associated filing station works and access modifications. (Reg Ref: 3429/17);
- **Marist National School, Clogher Road, Dublin 12, D12 YP98:** Permission granted for the demolition of existing play-shed annex construction of single storey 2 classroom extension, new stand-alone play-shed, and car park reconfiguration. (Reg Ref: 3590/22);
- **42 Dolphins Barn Street, Dublin 8:** Permission granted for a two-storey commercial rear extension. Permission refused for second floor/ attic level residence. (Reg Ref: 4056/18);
- **Corner of South Circular Road, 33-**37 Dolphins Barn Street, Dublin 8. Permission granted for demolition of existing derelict buildings and provision of a part three storey part six storey mixed use building, with restaurants at ground floor and 12 no. residential units at upper levels. (Reg Ref: 3618/15);
- **23 Dolphin's Barn Street, with frontage on to Reilly's Avenue, Dublin 8:** Permission granted for demolition of existing single storey structure to the rear of the previously used commercial residential unit and construction of three no. three storey units and one no. two storey residential unit. (Reg Ref: 2483/19);

- **43-50 Dolphin's Barn Street, Dublin 8:** Permission granted for demolition of existing former factory building to the rear of the site and construction of part four to part seven storey residential building over basement and ground floor retail and car park. The proposed development comprises 1 no. retail unit at ground floor level and 70 no. apartments from first to sixth floor level. (Reg Ref: 3853/17);
- **The Coombe Women & Infants Hospital, Dolphin's Barn Street, Dublin 8, D08 XW7X:** Permission granted for single storey extension to side of existing mortuary and alterations to the existing mortuary building. (Reg Ref: 3493/17);
- **Same address as above:** Permission granted for two storey emergency department building located to the north west of the wider Coombe Women & Infants Hospital site, including minor remodelling of the existing building to the south and all associated ancillary works. (Reg Ref: 2013/20);
- **75-78 Cork Street, Dublin:** Permission granted for demolition of existing former factory building on the site and construction of a six storey residential building (reducing to part five, part four storey to rear) over basement and ground floor retail and car park. The proposed development comprises 1 no. retail/ office unit at ground floor level and 39 no. apartments from ground to fifth floor level. (Reg Ref: 3086/17);
- **110-111 Cork Street, Dublin 8:** Permission granted for demolition of existing buildings on the site and construction of a building (c. 17.025m max) incorporating 2 no. retail units at ground floor level and 19 no. apartments over five floors. (Reg Ref: 4334/18); and
- **72-74 Francis Street, Dublin 8:** Planning Permission for demolition of existing buildings and provision of a seven storey over basement level mixed use building comprising 24 no. apartments above a café, 3 no. retail units, co-working space and multipurpose community/ education space at ground floor level. (Reg Ref: 2587/21).

The NTA notes these 24 planning applications adjacent to the route identified by DCC. No significant residual cumulative impacts are considered likely from any of the developments identified, in cumulation with the Tallaght / Clondalkin to City Centre scheme. Should the developments begin construction prior or during the Construction Phase of the Proposed Scheme as acknowledged in Section 5.9 of Chapter 5 of Volume 2 of the EIAR interface liaison will be undertaken on a case-by-case basis with other projects if required to ensure that cumulative impacts are managed appropriately:

"Interface liaison will take place on a case-by-case basis through the NTA, as will be set out in the Construction Contract, to ensure that there is coordination between projects, that construction access locations remain unobstructed by the Proposed Scheme works and that any additional construction traffic mitigation measures required to deal with cumulative impacts are managed appropriately".

2.8.12.7 DCC Section 3.2 Policy Content

Observations raised / clarifications sought

In their submission DCC set out the Policy Context.

Response

In its submission, DCC confirmed its support for the Proposed Scheme, and stated in their conclusion on page 39 of the submission:

"The proposed Tallaght/ Clondalkin to City Centre Core Bus Corridor Scheme is supported and welcomed by Dublin City Council as it will ensure the delivery of a number of key policies and objectives of the Dublin City Development Plan 2022-2028."

In relation to planning policy, the NTA welcomes (at page 17 of the submission) that, in terms of Regional Policy, the Proposed Scheme is supported by the Regional Spatial and Economic Strategy (RSES) and that DCC is of the view that the Proposed Scheme will contribute to, and support, continued improved integration of transport with land use planning and the delivery of improved high-capacity Core Bus Corridors will enable and support the delivery of both residential and economic development opportunities, facilitating the sustainable growth of Dublin City and its metropolitan area, not only seeking an improved and enhanced bus network but also places cycling at the core of its transport objectives.

The NTA acknowledges the commentary in section 3.2 of the DCC submission in relation to Policy Context and notes that it generally aligns with the policy context set out within the application documents namely EIAR Volume 4 Appendices Part 1 of 4, A2.1 Planning Report.

The NTA notes that the Draft Dublin City Development Plan 2022 - 2028 was adopted in December 2022 and that the EIA had regard to the draft plan.

The Draft Dublin City Development Plan 2022 – 2028 was considered within EIAR Volume 4 Appendices Part 1 of 2, Appendix A2.1 Planning Report. The Planning Report outlines some of its key objectives from Chapter 8 (Sustainable Movement and Transport) including the following key excerpts:

- *'Sustainable and efficient movement of people and goods is crucial for the success and vitality of the city,'*
- *'This policy approach promotes the integration of land use and transportation, improved public transport and active travel infrastructure, an increased shift towards sustainable modes of travel and an increased focus on public realm and healthy placemaking, while tackling congestion and reducing transport related CO2 emissions';*

Chapter 8 of the Development Plan under the heading 'Sustainable Modes' comments that *'Key strategic transport projects such as the proposed Metrolink, DART+, BusConnects programme and further LUAS Line and rail construction and extension will continue the expansion of an integrated public transport system for the Dublin region and have the potential for a transformative impact on travel modes over the coming years. Dublin City Council actively supports all measures being implemented or proposed by other transport agencies to enhance capacity on existing lines/services and provide new infrastructure.'*

It is noted that the Dublin City Development Plan 2022 – 2028 is supportive of BusConnects. The adopted Plan includes the Proposed Scheme at Figure 8-3 'BusConnects' in which it outlines each of the BusConnects 'Radial Core Bus Corridors'. It also refers to BusConnects as a '*Key strategic transport project'* that forms part of the '*expansion of an integrated public transport system for the Dublin region*.' It goes on to state that '*Dublin City Council actively supports all measures being implemented or proposed by other transport agencies to enhance capacity on existing lines/services and provide new infrastructure.*'

In the context of the above, the Dublin City Development Plan 2022 – 2028 supports the Proposed Scheme.

Some additional observations by DCC over and above those already provided within Table 3.13 of the Planning Report in relation to the Dublin City Development Plan 2022-2028 are welcomed, including that the Proposed Scheme is consistent with Policy SMT1 of the Dublin City Development Plan 2022 – 2028, which sets out the necessity to continue to promote modal shift from private car use towards more sustainable forms of transport such as cycling, walking and public transport, which directly aligns with the Proposed Scheme objectives.

Similarly, it is acknowledged that Policy SMT1, SMT3, SMT4, SMT8, SMT11, SMT12, SMT14, SMT19, SMT22 of the Development Plan have a direct correlation with the Proposed Scheme's objectives given the various improvements to thoroughfares and junctions, the implementation of parts of the Greater Dublin Area cycle network and improved pedestrian facilities which will provide for the needs of people with mobility impairment and/or disabilities including the elderly and parents with children.

The DCC submission notes the Strategic Development and Regeneration Areas (Section 3.2.3.3) that the Core Bus Corridor passes within or alongside. The NTA notes that the Proposed Scheme aligns with the objectives for SDRA 12 (Dolphin House) as set out with EIAR Volume 4 Appendices Part 1 of 2, A2.1 Planning Report for the Proposed Scheme.

The DCC submission also highlights SDRA 5 (Naas Road) and SDRA 15 (Liberties and Newmarket Square) have objectives/ principles of note for the Proposed Scheme.

2.8.12.8 DCC Section 4.1 Planning Policy

Observations raised / clarifications sought

The submission notes that the Proposed Scheme is supported by the RSES, stating that it not only seeks an improved and enhanced bus network but also places cycling at the core of its transport objectives. The submission also makes reference to the policies and objectives of Dublin City Development Plan 2022-2028.

Response

This is responded to in section 2.8.12.4.2 of this report above.

2.8.12.9 DCC Section 4.2 EIAR

Observations raised / clarifications sought

The submission states that: *"A comprehensive EIAR is provided with the application examining the project under all relevant impacts and finds generally that the development would not adversely impact on existing environmental amenities"* and goes on to say that *"the content [of the EIAR] points generally to the development having negligible impact on the existing environment".*

Response

The NTA notes the view expressed by the submission.

2.8.12.10 DCC Section 4.3 natura 2000

In relation to the Natura Impact Statement (NIS), DCC stated (at page 19 of its submission) that the NIS submitted is *"generally satisfactory in terms of identifying the relevant Natura 2000 sites and the potential adverse impacts on the integrity of designated Natura 2000 sites along the Dublin coastline in view of their conservation objectives."* DCC go on to state in its submission that: *"the avoidance, design requirements and mitigation measures set out in the NIS will ensure that any impacts on the conservation objectives of European Sites will be avoided during the construction and operation of the proposed scheme such there will be no adverse effects on any European sites."*

Response

The NTA notes the view expressed by the submission.

The North-West Irish Sea candidate Special Protection Area (cSPA site code 004236) was announced since the submission of the planning application for the Proposed Scheme. This cSPA adjoins twelve existing SPAs along the eastern seaboard, the majority of which e.g. South Dublin Bay and River Tolka Estuary SPA, North Bull Island SPA, Baldoyle Bay SPA, Howth Head Coast SPA, Ireland's Eye SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, Lambay Island SPA, Skerries Islands SPA, Rockabill SPA are included within the assessment for the Proposed Scheme. While the majority of the listed Special Conservation Interests (SCIs) for the cSPA are largely coastal, a number can venture inland. However, their inclusion as part of the Appropriate Assessment would not alter the outcome of the assessment presented in respect of the Proposed Scheme, as the SCIs and potential impacts from within the vicinity of the Proposed Scheme have effectively been captured in the NIS submitted in support of the planning application. This does not change the outcome of the NIS.

2.8.12.11 DCC Section 4.4 Zoning and Other Designations

Observations raised / clarifications sought

In relation to zoning, the NTA notes that DCC set out the view on page 19 of its submission that the area along the proposed route includes land with the following land-use zoning objectives:

- Z1 (Sustainable Residential Neighbourhoods);
- Z2 (Residential Neighbourhoods (Conservation Areas));
- Z3 (Neighbourhood Centres);
- Z4 (Key Urban Villages/ Urban Villages);
- Z5 (City Centre);
- Z6 (Employment/ Enterprise);
- Z8 (Georgian Conservation Area);
- Z9 (Open Space);
- Z10 (Inner Suburban and Inner City Sustainable Mixed Uses);
- Z14 (Strategic Development and Regeneration Areas (SDRA's)) and

- Z15 (Community and Social Infrastructure)

It states that *"The proposed scheme will, for the most part, comprise lands within the existing public road and pedestrian pavement area where there is no specific zoning objective."*

The submission highlights that the secondary elements associated with the Proposed Scheme, such as bus shelters, stops and real time information signage fall within the definition of *"public service installation"* as defined in the Dublin City Development Plan 2022-2028.

The closing sentence of this section of the submission states: *"Overall, [it] is considered that the proposals would be compatible and consistent with the zoning objectives for the area."*

Response

The NTA notes the view expressed by the submission.

2.8.12.12 DCC Section 4.5 Impact on Amenity

Observations raised / clarifications sought

On page 20 of its submission, in relation to amenities, DCC stated: *"Dublin City Council is satisfied that the elements of the proposed development which fall within the Council boundary would not have any excessive or undue impact on the amenities of the area".*

Response

The NTA notes the view expressed by the submission.

2.8.12.13 DCC Section 4.6 Strategic Observations from the Forward Planning Department

Observations raised / clarifications sought

The submission states *"In general, the Proposed Scheme is supported by the high level policies in place [in] the current Dublin City Development Plan 2022-2028."*

Response

The NTA notes the view expressed by the submission.

2.8.12.14 DCC Section 4.7 Departmental Reports

The NTA responses to Departmental Reports are set out in the following sections including reference, as appropriate, to the submission's Appendix: "Recommendations/Conditions". The NTA is grateful for the positive and constructive liaison that has occurred with the DCC BusConnects Liaison Office throughout the design and planning process to date, and through that liaison office with the other Departments and Sections within DCC regarding the progression of the Proposed Scheme.

2.8.12.15 DCC Section 4.8 City Archaeologist

Observations raised / clarifications sought

i. The submission provides background policy context.

ii. The submission summarises the findings of Chapter 15 of the EIAR and seeks no further clarifications.

iii. The submission makes 9 recommendations in Appendix 1.

Response

i. Background & Policy

The City Archaeologist sets out that the Proposed Scheme traverses the Zone of Archaeological Constraint for Recorded Monument DU018-020 (Historic City) from the junction of South Circular Road and Dolphin Barn Street until the termination of the scheme at Christchurch Place.

This is acknowledged in baseline environment description contained in Section 15.3.1.1 in Chapter 15 of Volume 2 of the EIAR and the potential impacts are assessed in Section 15.4.3.

The City Archaeologist goes on to reference policies in the Dublin City Development Plan 2022 – 2028 (specifically policy BHA26 related to the protection and preservation of monuments and policy BHA16 related to Industrial Heritage). The Dublin City Development Plan has been considered in the EIAR. It is acknowledged as a data source in Section 15.2.4.1 of Volume 2 of the EIAR.

The policies referenced by the City Archaeologist have been considered in the EIAR and have been set out in Appendix A15.4 in Volume 4 of the EIAR.

The City Archaeologist summarises the findings of the EIAR and goes on to state that *"…A detailed proposed archaeological mitigation is provided in the EIAR for all groundworks that may impact National Monuments, Recorded Monuments, Non-Designated Archaeological Sites and sites of cultural hermitage…."*.

ii. Review of EIAR Chapter 15

The NTA notes DCC's summary of Chapter 15 of the EIAR.

The NTA notes that on page 24 DCC acknowledge that as per Section 15.5.1 of the EIAR archaeological monitoring under licence will take place, where any preparatory ground breaking or ground reduction works are required (as defined in section 15.4.1), at all sites of archaeological and cultural heritage along the proposed route, including National Monuments, Recorded Monuments and sites listed in the DCIHR.

The NTA notes DCC's comment that: *"It is in these areas that there is possibility to disturb intact archaeological layers and material. Licensed archaeological excavation, in full or in part, of any identified archaeological remain(preservation by record) or preservation in situ will be undertaken*."

iii. Recommendations

a) The NTA's response to the recommendations included in Appendix 1 is set out in section 2.8.12.4.16 of this report below.

2.8.12.16 DCC Section 4.9 City Architects Division Comments

Observations raised / clarifications sought

Introduction (4.9.1)

On page 24 of the DCC submission, the City Architects Division welcomed the Proposed Scheme to support integrated sustainable transport use through infrastructure improvements for active travel (both walking and cycling), and the provision of enhanced bus priority measures. It went on to state that the Proposed Scheme will facilitate the modal shift from car dependency through the provision of walking, cycle, and bus infrastructure enhancements thereby contributing to an efficient, integrated transport system and facilitating a shift to a low carbon and climate resilient City.

Public Realm

The City Architects Division also noted that proposals for public realm upgrades, including widened footpaths, high quality hard and soft landscaping contribute towards a safer, more attractive environment for pedestrians are included, and that the Proposed Scheme has been developed having regard to relevant accessibility guidance and universal design principles so as to provide access for all users.

The City Architects Department notes the design of the public realm will be fundamental to success of the Proposed Scheme and comments that the design needs to be supported by pedestrian traffic counts to ensure that footpaths are of sufficient width to safely accommodate anticipated pedestrian volumes.

Historic Features

The submissions comments that all historic fabric and features should be retained and protected and the settings of protected structures and buildings within Architectural Conservation Areas should be respected insofar as possible within the Proposed Scheme.

Compliance with Building Conservation Legislation (4.9.2)

The DCC submission states on page 25 the applicant is to confirm that all works must comply with Part IV of the Planning Development Act 2000, citing S.52 (1) and guidelines published thereunder in 2004.

Previous Commentary (4.9.3)

The DCC submission notes previous commentary provided by the City Architect's Division.

Commentary (4.9.4)

The City Architects Department goes on to provide commentary on fifteen specific elements. These are summarised and responded to below.

Response

Public Realm

The NTA notes the view expressed by the submission.

The introduction of appropriate public ream improvements has been considered fully in the scheme design and in the EIAR. The overall approach to Landscape and Public Realm is set out in Section 4.6.11 of Chapter 4 in Volume 2 of the EIAR. The specific landscape and urban realm design works are set out for each section of the scheme (refer to the following sections in Chapter 4 of Volume 2 of the EIAR – Section 4.5.1.9, Section 4.5.2.9, Section 4.5.3.9, Section 4.5.4.9, Section 4.5.5.9 and Section 4.5.6.9). In addition the landscaping and public realm proposals are shown in the Landscape General Arrangement drawings in Part 1, Volume 3 of the EIAR.

The response to the comment in relation to pedestrian traffic counts and footpath widths is provided below in relation to the 15 specific elements raised.

Historic Features

The NTA notes the comments that all historic fabric and features should be retained and protected and the settings of protected structures and buildings within Architectural Conservation Areas should be respected insofar as possible within the Proposed Scheme.

The potential for impacts on architectural heritage has been considered in Chapter 16 in Volume 2 of the EIAR.

Proposed mitigation measures for architectural heritage features are outlined in Section 16.5 of Chapter 16 and detailed in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. The methodology has been prepared in accordance with the Department of Arts, Heritage and the Gaeltacht (DAHG) Architectural Heritage Protection: Guidelines for Planning Authorities (DAHG 2011) and Paving: the conservation Environmental Impact Assessment Report (EIAR) of historic ground surfaces (McLoughlin, DAHG 2017).

Compliance with Building Conservation Legislation (4.9.2)

The DCC submission states on page 25 the applicant is to confirm that all works must comply with Part IV of the Planning Development Act 2000, citing S.52 (1) and guidelines published thereunder in 2004.

Section 16.2.4 of Chapter 16 in Volume 2 of the EIAR states that:

"In light of the legislative protection afforded to the architectural and landscape heritage resource this study considers the various categories of special interest and significance as defined by the statutory architectural heritage guidelines. The architectural heritage assessment is guided by the provisions of the relevant statutory instruments and relevant guidelines for the protection of the architectural heritage including:

"• Department of Arts, Heritage and the Gaeltacht (DAHG) Architectural Heritage Protection: Guidelines for Planning Authorities (DAHG 2011a);"

Note that the Guidelines were published in 2004 and were then updated in 2011.

Previous Commentary (4.9.3)

The DCC submission notes previous commentary provided by the City Architect's Division.

Commentary (4.9.4)

1. Footpath Widths

The DCC submission notes on page 26 the provision of footpaths designed to the minimum width may not be sufficient in areas of high pedestrian traffic, in urban villages and along tourist routes where large groups of tourists may congregate e.g. Sheet 33 & 34 Nicholas Street. Additionally, its notes the need for adequate widths for passengers in the vicinity of bus stops.

Pedestrian and Cycle counts were undertaken at all Junction Turning Count (JTC) sites to inform the micro-simulation modelling which informed the design of the Proposed Scheme.

Table 4-2 of the Junction Design Report in the Supplementary Information

Section 4.6.2.1 of EIAR Chapter 4 Proposed Scheme Description states: *"the desirable minimum width for a footpath is 2.0m. This width should be increased in areas catering for significant pedestrian volumes where space permits. DMURS defines the absolute minimum footpath width for road sections as 1.8m based on the width required for two wheelchairs to pass each other. Building for Everyone: A Universal Design Approach (NDA 2020), defines acceptable minimum footpath widths at specific pinch points as being 1.2m wide over a two-metre length of path.*

In line with the Road User Hierarchy designated within DMURS, at pinch points the width of the general traffic lane should be reduced first, then the width of the cycle track should be reduced before the width of the footpath is reduced, where practicable.

Throughout the Proposed Scheme, footpath widths of two metres or wider have been proposed, however where this has not been achieved, deviations from standard have been required as outlined in Section 4.5."

As noted in Section 14.7.4.4: in the Preliminary Design Report "*Between Dean Street Junction and Christchurch Place, it is proposed to maintain the central median and retain the existing trees, some of which are mature. Additional crossing points will be added to improve the permeability of this busy tourist area.*

Realignment of the junction at Christchurch Place/ Winetavern Street/High Street will increase pavement width and improve pedestrian accessibility and frontage at the Peace Park to the south, and Christchurch Cathedral to the north."

The submission also notes it is preferable for cycle paths to be located at the edge of the footpath rather than running through them creating unusable/ rarely used pedestrian spaces e.g. Sheet 24 junction of Drimnagh Rd & Kildare Rd, Sheet 33 junction of Patrick Street & Dean Street, Sheet 34 junction of High Street Christchurch Place & Nicholas Street.

The NTA notes these comments. This arrangement reduces conflict between cyclists and vehicles at junctions. Additionally, the crossing point has been set back from the junction to provide a landing buffer area.

In relation to the Patrick Street and Dean Street junction, the left turn cycle slip lane provides efficiencies for left turning cyclists travelling from Dean Street onto Patrick Street. The proposed cycle track runs along the existing outer edge of the paved footway within the existing left-turn traffic slip lane, the remainder of this road slip lane will be converted to a built-out for a pedestrian crossing so reducing the pedestrian crossing distance on Dean Street and converting the two-stage pedestrian crossing to a single stage pedestrian crossing. This left-turn cycle lane effectively converts the existing left-turn general traffic lane to a cycle track.

At the junction of High Street / Christchurch Place / Nicholas Street, cycle lanes are generally located on the edge of the road carriageway with buffer protection islands for cyclists.

2. Local Public Realm Improvement Schemes

DCC noted that the Proposed Scheme includes images and plan drawings of proposed public realm improvements at the following locations:

1. Longmile Road & Walkinstown Road Junction (Sheet 22)
2. Christchurch Place (Sheet 34)

3. Longmile Road Cycle Lane & enhanced planting with medians (Sheet 55 & 56)
4. New pedestrian crossing along Longmile Road (Sheet 55 & 56)

DCC submission asserts that the information provided is insufficient to facilitate proper assessment of the proposals and additional information is required including visualisations of the proposals.

The NTA notes this comment. EIAR Volume 2 Main Chapters, Chapter 4 Proposed Scheme Description, Section 4.6.11 provides details in relation to the proposed Landscape and Urban Realm Design, including at the specific locations referenced by DCC above (note that for the other geographic sections, similar descriptions are also provided in EIAR Volume 2 Chapter 4 Proposed Scheme Description).

Section 4.6.11 of EIAR Chapter 4 also describes how the landscape and urban realm proposals are derived from analysis of the existing urban realm which allowed the designers to consider appropriate enhancement opportunities along the route. The enhancement opportunities include key nodal locations which focus on locally upgrading the quality of the paving materials, extending planting, decluttering of streetscape and general placemaking along the route.

Descriptions of the landscape proposals for each of the 6 sections of the Proposed Scheme are provided in Sections 4.5.1.9, 4.5.2.9, 4.5.3.9, 4.5.4.9, 4.5.5.9 and 4.5.6.9 of EIAR Chapter 4, and comprehensive details of the landscape proposals are shown on the Landscaping General Arrangement drawings in EIAR Volume 3 Part 1 of 3. In addition, the key landscape measures proposed in each geographic section is set out in EIAR Volume 2 Main Chapters, Chapter 17 Landscape (Townscape) and Visual, Section 17.4.

Figure 17.2 of EIAR Volume 3 Part 3 of 3 includes photo-montages at 19 locations along the Tallaght to City Centre section of the Proposed Scheme and at 6 locations along the Clondalkin to Drimnagh section of the Proposed Scheme.

Section 1 of EIAR Chapter 17 Landscape (Townscape) and Visual provides details of how the potential landscape (townscape) and visual impacts associated with changes to the physical layout of the street, alteration of views and the visual character and changes to the urban realm have been assessed, and confirms that the assessment has been carried out according to best practice and guidelines relating to landscape (townscape) and visual assessment, and in the context of similar large-scale infrastructural projects. The various sections of Chapter 17 provide comprehensive details of the assessment of the landscape (townscape) and visual impacts.

3. Land Acquisition by NTA & Taking In Charge

DCC note on page 27 of their submission:

***"**Where it is proposed to CPO or acquire lands as part of the Proposed Scheme, confirmation is sought as to whether ownership of these lands will be transferred to the relevant local authority or will these lands be retained by the NTA but taken in charge by the relevant local authority for maintenance purposes."*

Under the provisions of the relevant legislation, the NTA has exercised certain powers under Section 44(2)(b) of the 2008 Act to the effect that the functions in relation to securing the provision of public transport infrastructure falling within Section 44(2)(a) of the 2008 Act (as amended) in relation to the CBC Infrastructure Works, should be performed by the NTA. Those functions include the design and construction of the Proposed Scheme and, effectively, the NTA becomes the road authority in respect of the exercise of those functions.

Under the relevant legislation, upon the completion of the construction of the Proposed Scheme the NTA automatically ceases to be the road authority and the status of DCC as the relevant road authority is automatically restored – it does not require the operation of the conventional "taking-in-charge" arrangements provided for elsewhere in legislation. Accordingly, the legislative provisions appropriately govern the arrangements for the NTA to commence the construction of the Proposed Scheme, subject to the necessary planning and environmental consents, and govern the restoration of the road authority function to the relevant local authority, in this case being Dublin City Council. Consequently all CPO lands acquired by NTA for purposes of the Proposed Scheme will be transferred to the relevant local authority.

4. Bus Shelter Design

DCC note on pages 27-28 of their submission: *"Bus shelters impact on the width of footpaths and should only be proposed where there is sufficient space to physically accommodate them and passengers congregating in their vicinity. Bus shelter locations are Indicated on the drawings but information on their proposed design, size and type is not provided.*

The proposed location of new bus shelters in the vicinity of buildings of architectural Importance and in Conservation Areas needs to be considered carefully. For example a bus shelter[s] is proposed in the scheme along Nicholas St where currently none exist. However no bus shelters in these locations is preferable as the streets are located within Conservation Area and the footpaths are narrow. Bus stops only rather than bus shelters would be preferable. The vistas and Protected Structures will also be impacted by the proposed siting of bus shelters in their vicinity.

In the Interest of visual amenity and having regard to protected structures and their settings, advertisements should preferably not be permitted on bus shelters In Architectural Conservation Areas (ACA) or Special Planning Control Schemes (SPCS)."

The NTA notes these comments. Section 4.14.7 of the Preliminary Design Report, included in the Supplementary Information, outlines the proposals for bus shelters, as follows: *"Bus shelters provide an important function in design of bus stops. The shelter will offer protection for people from poor weather, with lighting to help them feel more secure. Seating will be provided to assist ambulant disabled and older passengers and accompanied with Real Time Passenger Information (RTPI) signage to provide information on the bus services. The locations of the bus shelters are presented on the General Arrangement drawing series in Appendix B. The optimum configuration that provides maximum comfort and protection from the elements to the travelling public is the 3-Bay Reliance 'mark' configuration with full width roof. This shelter is a relatively new arrangement which has been developed by JCDecaux in conjunction with the NTA. The shelter consists mainly of a stainless-steel structure with toughened safety glass and extruded aluminium roof beams."* Figure 2.8.12.1 below provides an example image of the preferred full end panel shelter arrangement.



Figure 2.8.12.1: Standard 3 Bay Reliance Mark Shelter with full width advertising panel

Section 4.14.7 of the Preliminary Design Report goes on to state that: *"The desirable minimum footpath/island widths required to accommodate the full end panel shelter is 3.3m with an absolute minimum width of 3m to facilitate a minimum 1.2m clearance at the end panel for pedestrians. Alternative arrangements for more constrained footpath widths are considered in the following sections.*

The cantilever shelter using full width roof and half end panel arrangement provides a second alternative solution for bus shelters in constrained footpath locations." Figure 2.8.12.2 provides an example of this type of shelter. *"Advertising panels in this arrangement are normally located on the back façade of the shelter compared to the full end panel arrangement.*

The desirable minimum footpath/island widths required to accommodate the full end panel shelter is 2.75m with an absolute minimum width of 2.4m to facilitate a minimum 1.2m clearance at the end panels for pedestrians."



Figure 2.8.12.2: Example of a 3-Bay Reliance Cantilever Shelter with full width roof and half end panels (source: JC Decaux)

Section 4.14.7 of the Preliminary Design Report also states that *"Two alternative narrow roof shelter configurations are also available which offer reduced protection against the elements compared to the full width roof arrangements. These shelter configurations are not preferred but do provide an alternative solution for particularly constrained locations where cycle track narrowing to min 1m width has already been considered and 2.4m widths cannot be achieved to facilitate the full width roof with half end panel shelter. The desirable minimum footpath widths for the narrow roof configuration are 2.75m (with end panel) and 2.1m (no end panel). The absolute minimum footpath widths for these shelters are 2.4m (with end panel) and 1.8m (no end panel) to allow for boarding and alighting passengers in consideration of wheelchair, pram, luggage and other such similar spatial requirements."* See Figure 2.8.12.3.



Figure 2.8.12.3: Example of a 3-Bay Reliance Cantilever shelter with a narrow roof configuration with and without half end

The provision of bus shelters in proximity to buildings of architectural significance, has been assessed in EIAR Volume 2, Chapter 16 Architectural Heritage. Within Section 16.4.4.1 three locations were identified where the Proposed Scheme will have an indirect visual impact on a Protected Structure during the Operational Phase, in front of St. Mary's Dominican Priory on the Greenhills Road Tallaght (RMP DU021-037020, SDCC RPS 273), in front of St. Basils Training Centre on the Greenhills Road Tallaght (SDCC RPS 268) and in front of St. Mary's Church of Ireland church on St. Mary's Road Crumlin (DU018-038004, DCC RPS 7719). St. Mary's Church of Ireland church on St. Mary's Road Crumlin is located within DCC's administrative area and Section 16.4.4.1 (Structures) notes as follows.

"A bus shelter is proposed in front of St. Mary's Church of Ireland church St. Mary's Road Crumlin (DU018-038004, DCC RPS 7719). There is a bus shelter in front of the church which is to be moved to the west of the entrance gates. The Magnitude of impact will be Low. The potential Operational Phase impact is an Indirect, Negative, Slight, Long-term visual impact on the Protected Structures and the streetscape as it will be screened by the boundary wall and an existing tree in the grounds of the church."

Nicholas Street Flats (NIAH 50080691) is a National Inventory of Architectural Heritage Structures (NIAH) structure of Regional Importance and Medium Sensitivity which fronts directly onto the Proposed Scheme, and existing outbound bus stop is located here and replacement bus stop at this location is proposed to have a bus shelter. On the opposite side of Nicholas Street outside St. Benedicts Youth Club a new inbound bus stop is proposed with the proposed bus shelter at this location offset northwards in the direction of High Street to minimise impact on the narrow footpath at the pedestrian ramp to St. Benedicts House. This bus shelter is placed on a section of footpath which is approximately 3m wide

Section 16.4.4.2 notes the following with respect to Architectural Conservation Areas (ACA) and Conservation Areas within DCC's administrative area:

"A bus shelter is proposed in front of St. Mary's Church of Ireland church St. Mary's Road Crumlin (DU018-038004, DCC RPS 7719) will directly adjoin the Agnes Road Architectural Conservation Area which encompasses the church grounds, and which is also a red hatched conservation area both of which are Regional Importance and Medium Sensitivity. The Magnitude of impact will be Low. The potential Operational Phase impact is an Indirect, Negative, Slight, Long-term visual impact on the streetscape of the Architectural Conservation Area during the Operational Phase."

Section 16.4.4.3 notes the following with respect to all the other structures within DCC's administrative area and note these all have the following potential operational phase impact of Indirect, Negative, Slight and Long-Term, they are listed below:

- *A bus shelter at a 2m wide footpath is proposed at 209 Crumlin Road (CBC0809BTH086) which is of local importance and low sensitivity, there is a fingerpost bus stop in this location currently. The Magnitude of impact has been assessed Low and the potential Operational Phase Impact is an Indirect, Negative, Slight, Long-term visual impact on the structures and the streetscape;*
- *A bus shelter is proposed at 351 (new paved build-out), 263 (new paved build-out), 193 (3.5m footpath) and 125 (3.5m footpath) Kildare Road Crumlin (CBC0809BTH055) which are of local importance and low sensitivity. There are fingerpost bus stops in these locations currently. The Magnitude of impact has been assessed as Low. The potential Operational Phase Impact is an Indirect, Negative, Slight, Long-term visual impact on the structures and the streetscape;*
- *A bus shelter at a 2.4m wide footpath is proposed at 348 Kildare Road Crumlin (CBC0809BTH048) which is of local importance and low sensitivity, there is currently a bus shelter bus shelter in front of adjoining 248a Kildare Road. The Magnitude of impact has been assessed Low and the potential Operational Phase Impact is an Indirect, Negative, Slight, Long-term visual impact on the structures and the streetscape;*
- *A bus shelter is proposed at 96 and 272 (3.4m wide footpath) Kildare Road (Crumlin CBC0809BTH054) which are of local importance and low sensitivity. There are fingerpost bus stops in these locations currently. The Magnitude of Impact has been assessed as Low. The potential Operational Phase impact is an Indirect, Negative, Slight, Long-term visual impact on the structures and the streetscape;*
- *A bus shelter is proposed at 43 (3.9m wide footpath), 317 (4.4m wide footpath), 391 (4.4m wide footpath) and 402 (4.4m wide footpath) Clogher Road Crumlin (CBC0809BTH056) which are of local importance and low sensitivity. There are fingerpost bus stops in these locations currently. The Magnitude of Impact has been assessed as Low. The potential Operational Phase impact is an Indirect, Negative, Slight, Long-term visual impact on the structures and the streetscape; and*
- *A bus shelter at a 2.9m wide footpath is proposed in front of Goldstone Court Apartments Clogher Road Crumlin (CBC0809BTH057) There is a fingerpost bus stop in this location currently. The Magnitude of impact is assessed as Low. The potential Operational Phase impact is an Indirect, Negative, Slight, Long-term visual impact on the structures and the streetscape.*

5. Siting of utility cabinets and above-ground utility infrastructure

DCC noted that the siting of utility cabinets, poles and other above-ground utility infrastructure may have significant impacts on the space, visual impact and quality of the public realm. Adding this has been a significant problem on previous transport infrastructure projects.

The NTA notes this comment. Significant efforts have been made during the design process to minimise above-ground utility infrastructure where practicable. Where such infrastructure is necessary, it has been sited in appropriate locations, and rationalised where practicable.

6. On-street Parking

DCC noted that the roll-out of electric charging points for electric vehicles is required if national carbon emission plans are to be met and requested that the NTA engage with electrical charging operators to co-ordinate the roll out of electrical charging points to on-street parking areas as part of the works along the route of the Proposed Scheme.

The NTA notes this comment. The provision of vehicle charging points is not in the remit of the NTA. However, the NTA is responsible for the upgrade of the public transport bus fleet and as noted in section 9.4.4.1.1.4 of Chapter 9 of Volume 2 of the EIAR:

"The NTA forecast for the year 2028 is for 94% of the city bus fleet to be electric vehicles (EVs) or hybrid electric vehicles (HEVs). For the design year 2043, the city bus fleet is forecast to be 100% electric."

7. Palette of Materials

Extent of replacement of existing surfaces

DCC noted that the Landscape General Arrangement drawings, Volume 3, Figures 4.5 appear to indicate that all the existing hard landscape surfaces along the proposed surfaces along the Proposed Scheme are to be replaced with new as the symbol in the legend for 'Existing Surfaces Retained' is only present in small areas on the proposed drawings, adding that the replacement of all existing hard landscape surfaces with new may not be required, nor may it be financially feasible or sustainable.

The NTA notes this comment. Section 7.1.3.3.2 of the Preliminary Design Report in the Supplementary Information notes the following:

"To greater understand the pavement structural condition and more accurately determine strengthening requirements in terms of extents and depth, additional surveys will be required for the detailed pavement design."

"A summary of the overall assessment in Figure 7-18 indicates just 10% of the pavement on the route needs further intervention than resurfacing."

"For the Clondalkin to Drimnagh section …A summary of the overall assessment in Figure 7-19 indicates just 4.4% of the pavement on the route needs further intervention than resurfacing."

Section 7.2.2.2 of the Preliminary Design Report in the Supplementary Information notes the following regarding Footways & Paved Areas:

"For the planning application the preliminary design has estimated where the full depth footway or cycle track reconstruction is required. It has assumed full depth carriageway construction at cycle lanes. At Specimen Design stage, the 3D geometry model will be further analysed to identify footways and segregated cycle tracks requiring full depth reconstruction and those that can be maintained in place."

Section 7.2.2.3 of the Preliminary Design Report in the Supplementary Information notes the following regarding Footways & Paved Areas:

"If some existing footways and cycle tracks are proposed to be maintained (no impact from utilities etc), their condition will be assessed visually before proposing any potential rehabilitation works."

Section 11.1 of the Preliminary Design Report in the Supplementary Information notes the following regarding prevention and minimization of waste:

"The principles of prevention and minimisation will be further considered in detailed design/construction stages through value engineering, substitution or reuse of materials, and effective methods or control systems (e.g. just in time deliveries/ effective spoil management) so that waste production is minimised."

Material approval

DCC noted that stone or concrete sett paving is proposed for the raised tables at side road entries, requesting that all materials will need to be agreed and approved with DCC Roads Maintenance Division.

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC City Architects Department comments as these matters were the subject of extensive liaison throughout the design development process.

NTA will however continue the very positive and constructive liaison with DCC throughout the procurement and construction process including in relation to the material selection.

Historic fabric

DCC noted that the 'Typical Material Typologies' in section 4.6.11.2.1 of Volume 2, Chapter 4 Proposed Scheme Description and the Landscape General Arrangement Drawings, do not appear to include or refer to existing historic fabric such as historic granite paving and historic granite kerbs within the Proposed Scheme.

Heritage features to be retained are noted on the General Arrangement Drawings in Volume 3 of the EIAR, where applicable. Figure 2.8.12.4 shows an extract of Sheet 33 at Patrick Street where heritage features to be retained or relocated are noted.



Figure 2.8.12.4: Heritage Notes on Sheet 31 of the General Arrangement Drawings

Paving and surface treatments of architectural heritage value were identified at 4 locations as indicated in Chapter 16 (Table 16.16) in Volume 2 of the EIAR. Further information is provided in Appendix A16.2 Inventory of Architectural Heritage Sites in Volume 4 of the EIAR.

Proposed mitigation measures for architectural heritage features (including historic paving) are outlined below and detailed in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of the EIAR. The methodology has been prepared in accordance with the Architectural Heritage Protection: Guidelines for Planning Authorities (DAHG 2011a) and Paving: the conservation of historic ground surfaces (McLoughlin 2017).

Section 17.4.1.4.6 of Chapter 17 Landscape and Visual notes that, inter alia, the following specific landscape / townscape and visual measures are included within the Proposed Scheme:

"Proposals for the treatment of the urban realm within the streetscape impacted by the Proposed Scheme will have regard to the existing character of the street or location, to emerging policies, objectives and proposals for the urban realm and to opportunities for mitigation of impact on the urban

realm and the streetscape. Proposals will have regard to historic details and features, to the quality of existing and proposed materials, to the reduction of clutter, ease of legibility, and management and maintenance requirements."

8. Palette of street furniture

DCC noted that a full palette of street furniture is required, and seek confirmation as to whether an identical palette is to be used for the proposed scheme across all local authority areas or whether each local authority (and perhaps specific urban villages) will have a specific palette. It is further requested that confirmation be provided on whether there will be uniformity in the palette of street furniture across all BusConnects Core Bus Corridor Schemes.

The NTA notes this comment. Sections 16.4.3.8 and 16.4.4.4 of EIAR Volume 2 Chapter 16 Architectural Heritage includes details of the impacts, in the Construction Phase and Operational Phase respectively, on existing street furniture of heritage value due to the Proposed Scheme, including post boxes, lamp posts and statuary and other street furniture. The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC City Architects Department comments as these matters were the subject of extensive liaison throughout the design development process.

NTA will however continue the very positive and constructive liaison with DCC throughout the procurement and construction process including in relation to consideration of new street furniture.

9. Boundary Treatments

DCC noted that where property boundaries are to be relocated to facilitate land acquisition, the fabric of existing boundaries should be assessed for their architectural conservation value and cultural value. DCC also suggest that this assessment should consider whether the fabric, which may include railings, walls etc. is suitable for repair and reuse for sustainability reasons in the new boundaries rather than replaced with new.

The NTA notes this comment. Section 13.5 of the Preliminary Design Report notes the following: *"To maintain the character and setting of the Proposed Scheme, the approach to undertaking the new boundary treatment works along the corridor is replacement on a 'like for like' basis in terms of material selection and general aesthetics unless otherwise noted on the drawings."*

As stated in Chapter 16 (section 16.1) in Volume 2 of the EIAR, the impacts on boundary treatments have been assessed as part of the Architectural Heritage assessment, with appropriate mitigation measures outlined where necessary.

The potential impact on the boundaries associated with structures of architectural heritage importance is addressed in Chapter 16 (Section 16.4), in Volume 2 of the EIAR. Mitigation measures for impacts of boundaries is set out in Section 16.5.1.1 which notes:

"….The proposed mitigation is the recording, overseeing of protective measures and monitoring of sensitive fabric by an appropriate architectural heritage specialist engaged by the appointed contractor, prior to of the Construction Phase, in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. A similar boundary treatment will be reinstated on the new alignment.".

10. Percent for Art Strategy

DCC noted that (on page 30 of their submission) *"It is not clear where the Percent for Art Strategy is to be Incorporated into this project."*

The NTA will continue the very positive and constructive liaison with DCC City Architects Department throughout the procurement and construction process including consideration of the provision of potential items of public art where appropriate.

11. Water Drinking Fountains

The DCC submission describes a recently adopted new policy to provide public drinking water fountains across the city, which could potentially be included in the Proposed Scheme.

The NTA can liaise further with DCC on this matter to explore the possibility of inclusion of public drinking water fountains in the Proposed Scheme where appropriate.

12. Street Trees & Planting

DCC noted that the Proposed Scheme includes new street trees in footpaths that appear to be below the minimum width, adding that the inclusion of new trees in suitable locations is welcomed but trees should only be indicated on drawings where there is sufficient width available to provide them.

The NTA notes this comment. As stated in Section 17.4.1.4 Chapter 17 Volume 2 of the EIAR, the following general landscape / townscape and visual measures are included within the Proposed Scheme:

- *"Where paving, existing trees, hedges, and/or plantings are removed from temporary acquisition areas, new planting and paving replacements will be provided as appropriate. Where practicable, new plants will be the same species to those removed. Replacement plant sizes will be those that are readily available and therefore, will be unlikely to match the maturity of plants removed (especially in the case of larger trees). However, where practicable, semi-mature trees will be used in the replanting works throughout the scheme. Where the same or similar species are provided, maturity similar to that of the existing can be achieved in time;*

- *New boundaries will be established on the setback line to match the existing boundary. The construction and provision of the new boundaries will take account of the location of existing trees, other plantings, gradients, drainage, property features and access arrangements so as to minimise additional indirect effects. Where practicable, existing railings, gates, cut stone walls and/or piers (or where appropriate, elements of same) to be removed will be reinstated on the new setback boundary line subject to discussion between the landowner and the NTA;*

- *The Proposed Scheme will provide for the planting of new semi-mature street trees to replace removed trees, where practicable, and for improvement of the streetscape environment. Species selected shall be appropriate to the urban street environment and to the characteristics of the specific location;*

- *Proposals for the treatment of the urban realm within the streetscape impacted by the Proposed Scheme will have regard to the existing character of the street or location, to emerging policies, objectives and proposals for the urban realm and to opportunities for mitigation of impact on the urban realm and the streetscape. Proposals will have regard to historic details and features, to the quality of existing and proposed materials, to the reduction of clutter, ease of legibility, and management and maintenance requirements;*

- *Landscape proposals will have regard to the recommendations of Chapter 12 (Biodiversity) in relation to opportunities for provision of biodiversity and of Chapter 13 (Water) in relation to opportunities for incorporation of Sustainable Urban Drainage Systems (SuDS); • All aspects of the Proposed Scheme within public areas will revert to on-going management and maintenance in accordance with normal operational practices. This will include hard and soft landscape works and townscape measures, new and reinstated tree and other planting, and new and reinstated surfacing and paving, etc.; and*

- *Maintenance and monitoring of reinstatement and other works in private areas (e.g., temporary acquisition areas) will ensure that any defective materials or workmanship will be made good within a period of 12 months following completion of Construction Phase."*

Section 4.6.2.1 of EIAR Chapter 4 Proposed Scheme Description states: *"the desirable minimum width for a footpath is 2.0m. This width should be increased in areas catering for significant pedestrian volumes where space permits. DMURS defines the absolute minimum footpath width for road sections as 1.8m based on the width required for two wheelchairs to pass each other. Building for Everyone: A Universal Design Approach (NDA 2020), defines acceptable minimum footpath widths at specific pinch points as being 1.2m wide over a two-metre length of path.*

In line with the Road User Hierarchy designated within DMURS, at pinch points the width of the general traffic lane should be reduced first, then the width of the cycle track should be reduced before the width of the footpath is reduced, where practicable.

Throughout the Proposed Scheme, footpath widths of two metres or wider have been proposed, however where this has not been achieved, deviations from standard have been required as outlined in Section 4.5."

13. Traffic Signal Poles

DCC noted the number of poles at each junction that are required to provide enhanced public lighting and traffic signals for pedestrians, cyclists, buses and other vehicles needs to be rationalised to the minimum number of required poles. Adding, the large increase in poles proposed is evident from visualisation, View 02 as proposed, Sheet 10 of 28, View from West along Nangor Rd (towards Willow Road/ Diageo entrance junction), Volume 3, Figures, Part 3, Chapter 17.2 Visualisations.

The NTA notes this comment. Significant efforts have been made during the design process to minimise above-ground utility infrastructure where practicable. Where such infrastructure is necessary, it has been sited in appropriate locations, and rationalised where practicable.

14. Gantry Signage – Traffic Signals

DCC asserted that there is a discrepancy in the documents submitted in relation to Chapter 4 Scheme Description, Section 4.6.10 Other Street Infrastructure and Section 4.6.9.1.2 Gantry Signage where it states *that "No new gantry signage is included in the proposed scheme"*, adding, it is considered that gantry signage is not suitable in low speed residential areas particularly Conservation Areas due to their high visual impact. The submission notes some locations where gantry signage is indicated in the Proposed Scheme, including:

- Christchurch junction, sheet 53, Junction Systems Design, Volume 3, Figures, Part 2, Chapter 4.10 Junction Systems Design and As proposed Figures 17.2.19.2 and 17.2.19.4. Noting this junction is adjacent to Christchurch Cathedral, a national monument and is within a Conservation Area.
- Junction of Dean Street & Patrick Street, sheet 50, Junction Systems Design, Volume 3, Figures, Part 2, Chapter 4.10 Junction Systems Design. Noting this junction is adjacent to Saint Patricks Cathedral, a national monument.

The NTA notes this comment. Section 4.6.9.1.2 is correct to state that no new gantry signage in included in the Proposed Scheme, whereas the Proposed Scheme does include the provision of some cantilever traffic signal poles.

As set out in Section 12.9.2 of the Preliminary Design report provided as part of the Supplementary Information, all traffic signal equipment is designed in accordance with Chapter 9 (Traffic Signals) of the Traffic Signs Manual (TSM). Traffic signal modelling, including LinSig models, determines the phasing and staging of the traffic signals which determines the design and positioning of the traffic signal heads. The TSM clearly defines the requirements and positioning of traffic signal heads, detection equipment, and associated traffic signal poles.

Section 12.9.2.2 states that: *"Cantilever poles will be installed on multi-lane approaches where there is a potential for a high sided vehicle, including buses, to block the clear visibility of the primary traffic signal of vehicles in the outer lanes. They will also be installed at locations where a median island is not available to mount a second primary, required to control separate streams on a particular arm of a junction.*

Cantilever poles may also be used to provide a mounting structure for secondary signals, where a median is not available and a position on opposing primary pole is outside the required line of sight."

Significant efforts have been made during the design process to minimise cantilever traffic signal poles where practicable. Where such infrastructure is necessary, it has been sited in appropriate locations, and rationalised where practicable. The NTA recognises the importance of the rationalisation of street furniture across the Proposed Scheme to reduce visual clutter and of particular importance in relation to the siting of associated utilities and traffic management signage in the vicinity of Protected Structures and Conservation Areas, historic paving and historic street furniture.

EIAR Chapter 17 Landscape (Townscape) and Visual sets out the visual impact assessment of the Proposed Scheme. Section 17.4.4 of Chapter 17 states: *"The Operational Phase of the Proposed Scheme will give rise to townscape streetscape and visual effects through the following:*

- *Alterations in the physical and visual character of the corridor of the existing road / street;*
- *Introduction of new sections of public road and associated built elements;*
- *Changes in traffic, pedestrian and cycle movements;*
- *Modification of areas of private property / gardens / boundaries; and*
- *Adjustments to other areas / boundaries.*

These effects may be temporary, Short-Term, Medium-Term, Long-Term or Permanent.

While alterations in the road corridor and changes in traffic, pedestrian and cycle movements are features of the Proposed Scheme, it is not anticipated that these aspects in themselves will give rise to significant landscape, townscape or visual effects. Changes in road corridors, including in traffic signalisation, signage and in carriageway / parking allocation and traffic movements are a common and regular aspect of active road and traffic management for urban roads and streets. Therefore, these changes may be considered part and parcel of on-going or regular changes that may be expected to occur, and do occur, from time to time in any urban streetscape environment and such changes are considered as a low or negligible magnitude of change."

The visual impact assessment of the Proposed Scheme does not identify any location specific adverse visual impact associated with the provision of cantilever traffic signal poles.

15. Village Signage

DCC noted that existing 'Welcome to Village xxx' signage should be retained as part of the Proposed Scheme.

It is the intention of the Proposed Scheme to retain all such signage.

Conclusion

The NTA notes the general comments on the Proposed Scheme in this section and the recommendations in the Appendix.

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC City Architects Department comments as these matters were the subject of extensive liaison throughout the design development process. NTA will however continue the very positive and constructive liaison with DCC throughout the procurement and construction process.

2.8.12.17 DCC Section 4.10 Conservation Section Comments

Observations raised / clarifications sought

The submission is structured as follows:

i. Introduction [Policies & provisions to be taken into consideration].

ii. Policies
   - Dublin City Development Plan 2022-2028
   - Dublin City Tree Strategy 2016 to 2020.
   - Architectural Heritage Protection Guidelines for Planning Authorities 2011.
   - Department of Culture, Heritage and the Gaeltacht – Technical Advice Series

iii. Findings of the Conservation assessment
   - General
   - The submission identifies 10 'key impacts' as considered by DCC
     a) Protected Structures and their settings
     b) NIAH Structures and their Settings
     c) Architectural Conservation Areas, Conservation Areas, Z2 and Z8 Zonings
     d) Industrial Heritage Sites
     e) Potential impacts on historic paving and kerbing, historic street furniture, lamp standards and other features

f) Proposed Tree Removal and Provision of New Trees

g) Boundary Treatments

h) Cycle Lanes

i) New Traffic Semaphore & Signage

j) Proposed Bus Stops [Mitigation measures]

iv. Recommendations

Response

i. Introduction

The Conservation Section submission listed a number of particular policies in the Dublin City Development Plan 2022 – 2028 that they believe should be taken account of in the consideration of all proposed routes and their impacts on the architectural and built heritage.

The Dublin City Development Plan has been considered in the EIAR. It is acknowledged as a data source in Chapter 16 (Section 16.2.4) of Volume 2 of the EIAR:

"….In light of the legislative protection afforded to the architectural and landscape heritage resource this study considers the various categories of special interest and significance as defined by the statutory architectural heritage guidelines. The architectural heritage assessment is guided by the provisions of the relevant statutory instruments and relevant guidelines for the protection of the architectural heritage including:

- *The Dublin City Development Plan 2022-2028 (DCC 2022);…"*

ii. Policies

Dublin City Development Plan 2022-2028

The Conservation Section references a number of policies from the Dublin City Development Plan 2022-2028:

- *BHA2: Regarding Development of Protected Structures*
- *BHA7: Regarding Architectural Conservation Areas*
- *BHA8: Regarding Demolition in an ACA*
- *BHA9: Regarding Conservation Areas*
- *BHA10: Regarding Demolition in a Conservation Area*
- *BHA 15: Regarding Twentieth Century Buildings and Structures*
- *BHA16: Regarding Industrial Heritage*
- *BHA18: Regarding Historic Ground Surfaces*
- *BHA24: Regarding the Reuse and Refurbishment of Historic Buildings*
- *BHA26: Regarding Archaeological Heritage.*

Section 16.3.1 in Volume 2 of the EIAR sets out summary of the architectural heritage assets in the receiving environment of the Proposed Scheme and references the relevant policy from the DCC Development Plan as appropriate. All of the above policies (except BHA24) mentioned by the Conservation Section in their response are referenced in Section 16.3.1 of the EIAR. BHA24 relates to the reuse and any refurbishment of historic buildings. It is not considered that the works proposed as part of the scheme will give rise to non-compliance with this policy.

Dublin City Tree Strategy 2016 to 2020.

DCC quotes the Dublin City Tree Strategy 2016 to 2020. This document is referenced in EIAR Volume 2 Main Chapters, Chapter 17 Landscape (Townscape) and Visual (in Section 17.2.2.2 and 17.2.3).

The Conservation section says that where there is an unavoidable loss of historic trees, the NTA shall ensure that these are replaced with new semi-mature trees to the satisfaction of DCC.

Section 4.6.11.4 states that an Arboricultural Impact Assessment (AIA) Report is included in Appendix A17.1 in Volume 4 of the EIAR. This identifies the likely direct and indirect impacts to trees of the Proposed Scheme along with suitable mitigation measures, as appropriate to allow for the successful retention of significant trees, or to compensate for trees to be removed.

Section 4.6.11.5 describes the typical planting typologies that will be employed on the Proposed Scheme. With regard to new street trees, in Section 4.6.11.5.1, it states that: *"Typically, trees will be semi-mature and where appropriate, selected for having a clear stem height to facilitate visual permeability*.". With regard to new woodland/parkland areas and tree groups, Section 4.6.11.5.2 states: *"…..Elsewhere along the Proposed Scheme, there are smaller areas of existing and proposed woodlands and tree groups that will be retained, reinstated or established in order to provide appropriate landscaping connectivity and design interventions at a range of different spaces, including carriageway boundaries, new landscape spaces arising from junction reconfiguration, reinforcement of established vegetation areas, and also establishing new public realm and landscape opportunity areas. Tree species will be determined by location and will comprise either native woodland trees as set out above, or selected street trees. Additionally, understory planting, long grass and swathes of bulbs will be provided to reinforce the character of landscaped areas along the scheme corridor. A number of different landscaped central median areas exist along the Proposed Scheme, including those within high-capacity dual carriageway and smaller scale medians within suburban and urban settings. Landscaping proposals respond to the different localities and may include grass planting, hedgerows and trees as appropriate in medians within the larger scale roadways, and grasses, ornamental planting, hedgerows and trees within the suburban and urban medians…."*

Architectural Heritage Protection Guidelines for Planning Authorities 2011 [4.10.2.3]

The Conservation Section references the Architectural Heritage Protection Guidelines for Planning Authorities 2011 with regard to consideration of proposals affecting boundary features.

These guidelines are referenced in the EIAR Volume 2 (Main Chapters, Chapter 16 Architectural Heritage). For instance, in Section 16.5 (Mitigation), it is acknowledged that EIAR Volume 4 Appendices Part 4 of 4, Appendix A16.3 (Methodology for Works Affecting Sensitive and Historic Fabric), has been prepared in accordance with the above guidelines.

Department of Culture, Heritage and the Gaeltacht – Technical Advice Series [4.10.2.4]

The Conservation Section references the following guidelines - Paving: The Conservation of Historic Ground Surfaces (2015) and that these should be used to guide any interventions.

These guidelines are referenced in EIAR Volume 2 Main Chapters, Chapter 16 Architectural Heritage. For instance, in Section 16.5 (Mitigation), it is acknowledged that EIAR Volume 4 Appendices Part 4 of 4, Appendix A16.3 (Methodology for Works Affecting Sensitive and Historic Fabric), has been prepared in accordance with these guidelines.

The Conservation Section also references the guidelines: Iron – the repair of wrought and cast iron. These guidelines are included in the reference list in Appendix A16.3 (Methodology for Works Affecting Sensitive Fabric) and have informed the preparation of the appendix.

iii. Findings of the Conservation assessment

General response [4.10.3.1]

The NTA acknowledge that the Conservation Section submission generally welcomes the *"comprehensive assessment of architectural heritage, streetscape and urban environment submitted as part of the EIAR and the proposed mitigation measures across the scheme".* It is noted that the Conservation Section finds the inventory of architectural heritage sites recorded in Appendix A16.2 in Volume 4 of the EIAR to be comprehensive and accurately describes the quality and status of the heritage structures along the proposed route. The NTA further acknowledge the finding of the Conservation Section that a very thorough study of the receiving environment has been carried out.

The Conservation Section generally agrees with the EAIR findings regarding mitigation and protection measures and that once these measures have been carried out there will be no significant adverse residual impacts on the architectural heritage resource.

Key Impacts [4.10.3.2]

9. a) Protected Structures and their setting

The Conservation Section has set out what it considers the key impacts in relation to architectural heritage. Responses are provided to address those instances where the Conservation Section has queried the impacts stated:

- The Conservation Section lists a number of protected structures, and these are all considered in EIAR Chapter 16 Archaeological and Cultural Heritage;
- Southern Boundary of 314 Crumlin Road.

b) Section 16.4.3.4 of EIAR Chapter 16 Archaeological and Cultural Heritage assesses the potential impact associated with the proposed land take which will result in the removal of the boundary walls of Ardscoil Éanna Crumlin Road (NIAH 50080190).

c)Section 16.4.3.4 notes that the pre-mitigation Construction Phase impact will be *"Direct, Negative, Significant, Long-term"* on the boundary and setting of the building. Section 16.5.1.4 notes that *"the proposed mitigation is the recording of the boundary wall detail and the labelling of the various elements before they are carefully taken down, prior to removal to safe storage, and reinstatement on new lines. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee any labelling, taking down and reinstatement of the affected wall. A rendered wall, similar to the existing will be reinstated on the new alignment as per the detailed survey. Works to historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Environmental Impact Assessment Report (EIAR) Volume 2 of 4 Main Report Tallaght / Clondalkin to City Centre Core Bus Corridor Scheme Chapter 16 Page 53 Volume 4 of this EIAR. The curtilage of the house will still be reduced but the Negative impact on setting will be lessened. The mitigation will reduce the magnitude of the impact from high to Low. The predicted post-mitigation impact is Direct, Negative, Slight and Long-term."*

- Bus Shelter at St. Patricks Park

The Conservation Section queried the location of a bus shelter located at St. Patricks Park in close proximity to St. Patricks Cathedral.

The NTA can confirm that there it is not proposed to be a bus shelter at this location. The proposal is to install a finger post bus stop.

Section 17.4.3.2.7 of Chapter 17 Landscape (Townscape) & Visual of Volume 2 of the EIAR notes the following:

"Views are identified for protection north along Patrick Street towards Christchurch. The Proposed Scheme involves modest works along Patrick Street and Nicholas Street. While these will be visible in the protected view they will not detract from the overall view. The sensitivity is high and the magnitude of change is medium / high.

The potential townscape / streetscape and visual impact of the Construction Phase on preserved views / scenic views is assessed to be Negative, Moderate and Temporary / Short-Term"

Figure 2.8.12.5 below is an extract from Figure 17.2 of EIAR Volume 3 Part 3 of 3 shows the existing view looking north at this location and Figure 2.8.12.6 below shows the proposed photomontage view looking north at the same location with fingerpost type bus stop.



Figure 2.8.12.5: Extract from Photomontage View 18 As Existing View from South along Patrick Street (Figure 17.2.18.1)



Figure 2.8.12.6: Extract from Photomontage View 18 As Proposed View from South along Patrick Street (Figure 17.2.18.2)

Bus Shelter outside the wall of St. Mary's Church of Ireland

The Conservation Section queried whether the bus stop at Stop at St. Marys Church was to be retained at the current location or relocated to the west of the entrance gate.

The NTA can confirm that the existing bus shelter is being retained at its current location. Section 16.4.4.1 in Chapter 16 of the EIAR incorrectly gives the impression that the bus shelter is being moved.

The provision of bus shelters in proximity to buildings of architectural significance has been assessed in EIAR Volume 2, Chapter 16 Architectural Heritage. Section 16.4.4.2 notes the following with respect to Architectural Conservation Areas (ACA) and Conservation Areas within DCC's administrative area:

"A bus shelter is proposed in front of St. Mary's Church of Ireland church St. Mary's Road Crumlin (DU018-038004, DCC RPS 7719) will directly adjoin the Agnes Road Architectural Conservation Area which encompasses the church grounds, and which is also a red hatched conservation area both of which are Regional Importance and Medium Sensitivity. The Magnitude of impact will be Low. The potential Operational Phase impact is an Indirect, Negative, Slight, Long-term visual impact on the streetscape of the Architectural Conservation Area during the Operational Phase."

Revised Bus stop arrangement at the former Volkswagen Building

The Conservation Section queried the land take to facilitate a revised bus stop arrangement the former Volkswagen premises on the Naas Road stating that the proposed changes in boundary treatments may have a visual impact on the Protected Structure.

Section 17.4.4.2.4 in Chapter 17 addresses the potential impact on protected structures. With respect to the Volkswagen premises (termed the MDL premises in the assessment it states:

"….Modest changes are required at the MDL building on the corner of Naas Road / Walkinstown Avenue and along the road corridor adjacent to Protected Structures. There will be very minor regrading to the road entrance to Drimnagh Castle but no direct impacts on the protected structure. The sensitivity is very high and the magnitude of change is low (refer also to Chapter 16 (Architectural Heritage)). The potential townscape / streetscape and visual impact of the Operational Phase on Protected Structures is assessed to be Negative, Slight and Long-Term…..".

10.b) NIAH Structures and their Settings

The submission notes believes that the removal of the boundary features at the Crumlin Health Centre will impact the curtilage of the Protected Structure.

Section 16.5.1.4 of Chapter 16 of the EIAR notes that the "*pre-mitigation Construction Phase impact at this location will be Direct Negative, Moderate and Temporary. The proposed mitigation is the recording the of the boundary wall detail and the labelling of the various elements before they are carefully taken down, prior to removal to safe storage, and reinstatement on new lines. Recording is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor. The architectural heritage specialist will oversee any labelling, taking down and reinstatement of the affected boundary treatment. It is proposed that a similar boundary treatment which is sympathetic to the associated clinic be reinstated on the new alignment, reusing the existing materials, where practicable. Works to historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. The curtilage of the house will still be reduced but the Negative impact on setting will be lessened. The mitigation will reduce the magnitude of the impact from Medium to Low. The predicted post-mitigation impact is Direct, Negative, Slight and Long-term."*

The Conservation Section requests that all NIAH structures in close proximity are to be adequately protected and all proximate works are to be supervised by a conservation professional.

As set out in in Section 16.5.1.4 in Chapter 16 of Volume 2 of the EIAR, mitigation will be implemented which will typically be the recording, protection and monitoring of the adjoining structures or boundaries prior to, and for the duration of the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR.

11.c) Architectural Conservation Areas, Conservation Areas, Z2 and Z8 Zonings

The Conservation Section describes the works/routing of the Proposed Scheme in and adjoining the ACAs. They acknowledge that the installation of works will not directly impact the buildings within the ACA but there is potential for damage during construction but that mitigation is proposed.

The NTA confirm that the mitigation described by the Conservation Section is as per the EIAR, particularly as described in Sections 16.5.1.2/16.5.1.3 of Chapter 16 of Volume 2 of the EIAR.

The NTA notes that the Conservation Section sets out the elements of the Proposed Scheme that interact with the Conservation Areas. Mitigation measures for affected Conservations Areas is set out in Section 16.5.1.3 of Chapter 16 of Volume 2 of the EIAR.

12. d) Industrial Heritage Sites

The Conservation Section lists a number of Industrial Heritage Sites

Industrial heritage is considered in Chapter 16 of the EIAR (Section 16.3.1.8). The typical mitigation which would be implemented where necessary is the recording, protection and monitoring of the adjoining structures or boundaries prior to, and for the duration of the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. No significant residual impacts are predicted in the EIAR.

13. e) Potential impacts on historic paving and kerbing, historic street furniture, lamp standards and other features

Paving

The Conservation Section notes kerb re-alignments at three locations.

These are described in Section 16.5.1.7.4 of Chapter 16 of the EIAR with the proposed mitigation to be implemented also outlined in DCC's submission.

Lamp Posts/Post Box

The Conservation Section states that the exact details of the proposed relocation of the historic lamp standards must be provided and supervision of the work by a conservation professional will be required.

Section 16.5.1.7.2 in Chapter 16, Volume 2 of the EIAR states:

"…. The proposed mitigation is the recording of the lamp posts in position prior to the works, the labelling of the affected fabric prior to its careful removal to safe storage, and their reinstatement in new positions in close proximity (within 2m) of their existing positions. Recording, overseeing of protective measures and monitoring is to be undertaken by a suitably qualified architectural heritage specialist engaged by the appointed contractor. The works to the historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR……

The Conservation Section notes a cast iron post box at the junction of Francis Street and Dean Street (NIAH 50080638) and states that the exact details of the proposed relocation of the post box must be provided and supervision of the work by a conservation professional will be required.

Section 16.4.3.7.1 in Chapter 16, Volume 2 of the EIAR states the following with respect to a number of cast iron post boxes (including the one referenced by the Conservation Section):

"…They will be retained in position and will not be directly impacted by the Proposed Scheme during the Construction Phase. Indirect impacts are anticipated during the Construction Phase due to the potential for disruption of the use of the post boxes, the potential for damage of the fabric of the post boxes, and the adverse visual impact of the construction works on their settings…."

In Section 16.5.1.7.1 in Chapter 16, Volume 2 of the EIAR, mitigation is set out so as to mitigate the potential for damage to sensitive fabric during construction:

"….The proposed mitigation is the recording, protection and monitoring prior to and during the Construction Phase. Recording, overseeing of protective measures and monitoring is to be undertaken by an appropriate architectural heritage specialist engaged by the appointed contractor and in accordance with the methodology provided in Appendix A.16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of the EIAR….."

Other Street Furniture/Finishes

The Conservation Section notes a milestone on the Walkinstown Road (NIAH 500804055) and states that the exact details of the proposed relocation of the post box must be provided and supervision of the work by a conservation professional will be required.

Section 16.5.1.7.3 in Chapter 16, Volume 2 of the EIAR states the following with respect to the milestone:

"…It will be temporarily removed to ensure its protection, before being reinstated within the vicinity of the existing. There is potential for damage of the sensitive fabric during its removal, transport, storage, and reassembly. The predicted pre-mitigation Construction Phase Impact is Direct Negative, Significant and Temporary. The proposed mitigation is the recording of the milestone in position prior to the works, labelling the affected fabric prior to its careful dismantling and removal to safe storage, and the reinstatement of the milestone. Recording, overseeing of protective measures and monitoring is to be undertaken by a suitably qualified architectural heritage specialist engaged by the appointed contractor…."

14.f) Proposed Tree Removal and Provision of New Trees

The Conservation Section notes three locations where there is the requirement to remove trees/vegetation at:

- Ardscoil Eanna;
- the Volkswagen premises on the Naas Road;
- Guinness Rugby Club.

Section 4.6.11.3.1 of EIAR Chapter 4 Proposed Scheme Description details the softscape planting strategy as follows: *"The planting strategy has been developed in response to the objectives set out in both the South Dublin County Development Plan 2022 – 2028 (SDCC 2021) and the Dublin City Development Plan 2022 – 2028 (DCC 2021). The planting strategy is also in response to landscape and urban realm opportunities arising from the Proposed Scheme to integrate new infrastructure within the existing local context and to enhance the visual and amenity value of streets and spaces.*

The planting strategy includes replacement of street trees and groups of trees that may be impacted by the Proposed Scheme, but also the introduction of new tree planting and street trees within other spaces and along streets. Reinforcement of green infrastructure along the route will improve the overall amenity, character and appeal of the route corridor and localities along it, as well as enhancing biodiversity.

In addition to trees and street trees, other vegetation is also proposed along the route including hedgerows, ornamental planting and amenity grassland, shrub and meadow grass areas. These will be utilised to reinstate property boundaries altered by the Proposed Scheme."

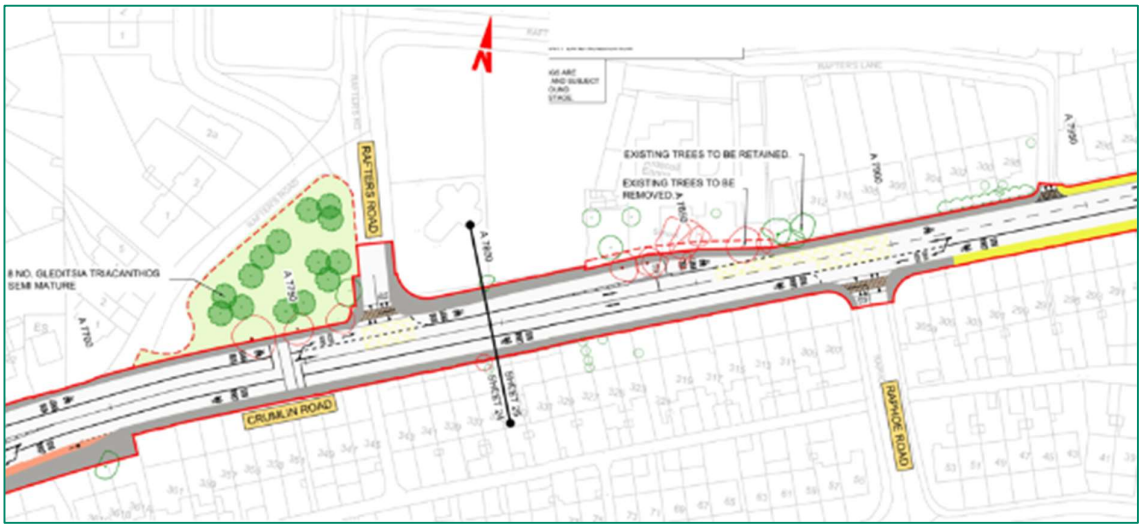


Figure 2.8.12.7: Extract from Landscaping General Arrangement Drawings at Ardscoil Éanna, EIAR Volume 3 part 1 of 3 (Sheet 24 and Sheet 25)

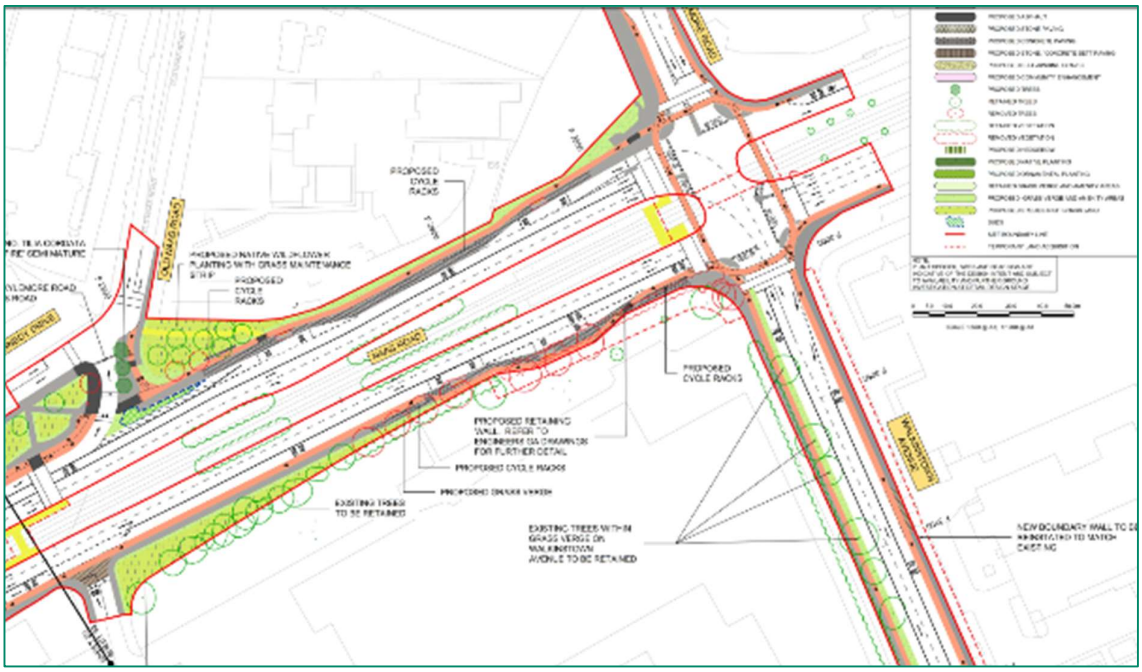


Figure 2.8.12.8: Extract from Landscaping General Arrangement Drawings at Motor Distributers Limited (formerly Volkswagen) at Naas Road / Walkinstown Avenue junction, EIAR Volume 3 part 1 of 3 (Sheet 53)

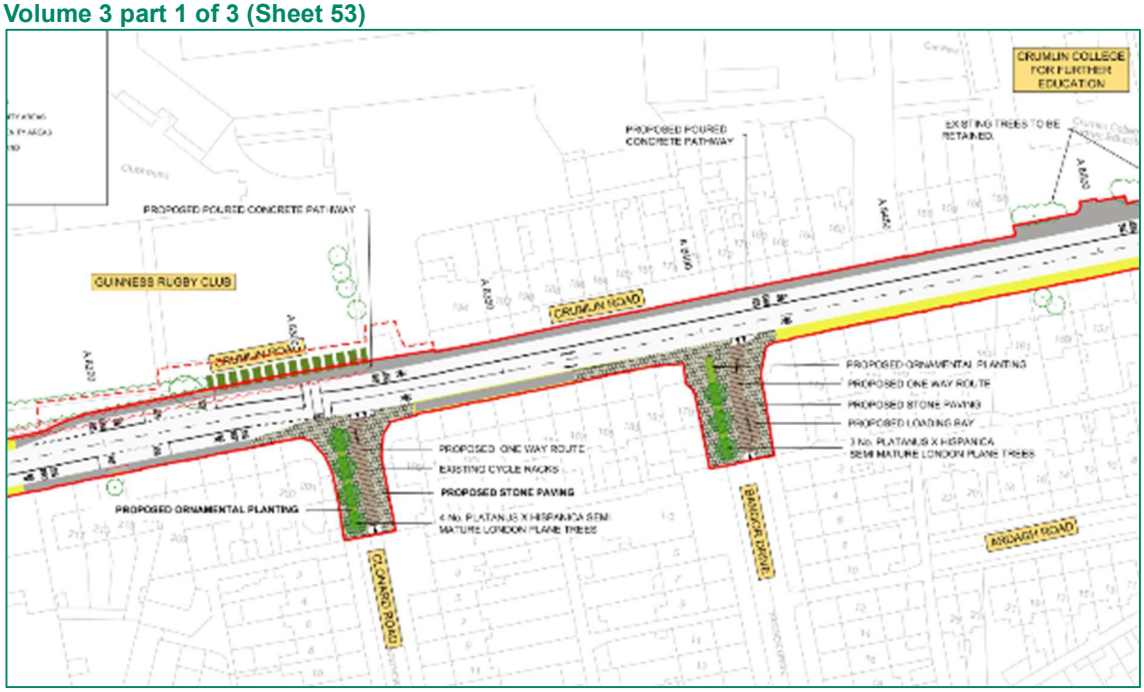


Figure 2.8.12.9: Extract from Landscaping General Arrangement Drawings at Guinness Rugby Club on Crumlin Road, EIAR Volume 3 part 1 of 3 (Sheet 26)

15.g) Boundary Treatments

The Conservation Section requests that where works may be required to boundary wall, railings, garden plantings etc, new boundary walls etc shall be reinstated at setback location, pending agreement on more detailed design with the Conservation Section and having regard to the provisions of the Architectural Heritage protection Guidelines for Planning Authorities (2011) and relevant DHLGH Advice series publications.

Section 1.1.1 General Principles of Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric of Volume 4 part 4 of 4 of the EIAR notes the following:

"Where conservation works to features are required as a result of the construction of the Proposed Scheme it will be carried out by the Contractor in accordance with the principles of the ICOMOS Venice Charter (ICOMOS 1964) and Burra Charter produced by ICOMOS Australia in 1979 and amended in 1981, 1988, 1999 and 2013 (Australia/ICOMOS 2013). The Contractor will also adhere to the conservation principles set out in the Department of Arts Heritage the Gaeltacht's 'Architectural Heritage Protection Guidelines for Planning Authorities (DAHG 2011a) and the Departments advice series publications on various elements. Conservation work will be based on an understanding of the historic built environment and its development as described in Section A16.1, and with respect the features identified and described in Appendix A16.2."

Section 1.1.2 Consultation notes the following:

"The guidelines recommend that consultation with the planning authority and relevant stakeholders should be carried out in advance of proposed road works to ensure that agreement is reached in the approach architectural heritage features including buildings, protected structures located in architectural conservation areas. This is particularly the case with regard to street furniture and historic surface treatments and works to the public realm since local authorities are responsible for the public realm (McLoughlin, DAHG 2015, DELG 2002). Consultation has been carried out with both Dublin City Council and South Dublin County Council, and with the Development Applications Unit of the Department of Culture, Heritage, and the Gaeltacht."

The potential impact on the boundaries associated with structures of architectural heritage importance is addressed in Chapter 16 (Section 16.4), in Volume 2 of the EIAR. Mitigation measures for impacts of boundaries is set out in Section 16.5.1.1 which notes:

"….The proposed mitigation is the recording, overseeing of protective measures and monitoring of sensitive fabric by an appropriate architectural heritage specialist engaged by the appointed contractor, prior to of the Construction Phase, in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR. A similar boundary treatment will be reinstated on the new alignment….."

The Conservation Section references the Architectural Heritage Protection Guidelines for Planning Authorities 2011. These guidelines are referenced in the EIAR Volume 2 (Main Chapters, Chapter 16 Architectural Heritage). For instance, in Section 16.5 (Mitigation), it is acknowledged that EIAR Volume 4 Appendices Part 4 of 4, Appendix A16.3 (Methodology for Works Affecting Sensitive and Historic Fabric), has been prepared in accordance with the above guidelines.

The Conservation Section references the relevant DHLGH Advice series publications. The following guidelines - Paving: The Conservation of Historic Ground Surfaces (2015) are referenced in EIAR Volume 2 Main Chapters, Chapter 16 Architectural Heritage. For instance, in Section 16.5 (Mitigation), it is acknowledged that EIAR Volume 4 Appendices Part 4 of 4, Appendix A16.3 (Methodology for Works Affecting Sensitive and Historic Fabric), has been prepared in accordance with these guidelines.

The Conservation Section also references the guidelines: Iron – the repair of wrought and cast iron. These guidelines are included in the reference list in Appendix A16.3 (Methodology for Works Affecting Sensitive Fabric) and have informed the preparation of the appendix.

16.h) Cycle Lanes

The Conservation section requests that where cycleways are in close proximity to protected structures and within ACAs that an alternative high quality surface in lieu of red tarmacadam is provided.

The NTA notes this comment. Section 5.5 of the BusConnects Preliminary Design Guidance Booklet, included in Appendix A4.1 of the EIAR Volume 4 Part 1 of 4 states the following in relation to the proposed cycle track material:

"As illustrated in Figure 8, the use of machine laid asphalt for the cycle track has proven to be an effective way of providing a high level of service with a safe, smooth and continuous surface. This, however, offers very little contrast to the adjacent carriageway, and depends on the type of edge kerb and the presence of road markings to offer a visual differentiation between the carriageway and the cycle track. Consideration should be given to including an additional colour contrast to the cycle track in the form of an alternative-coloured asphalt (e.g. red, buff, etc) or adding coloured chips to the asphalt surface during installation (e.g. red chip). Designers should refer to section 5.6 of the NCM for further

guidance on appropriate cycle track materials.

At junctions, the chosen cycle track material should be continued (as a surface course layer) through the junction for consistency. Alternatively, coloured epoxy resin (cold-applied anti-skid layer) is a robust alternative measure in terms of longevity and maintenance for making cycle lanes more conspicuous at junctions."

In summary, the use of red coloured asphalt, or red coloured epoxy resin has been specified for all cycle tracks across the BusConnects Infrastructure Works to ensure legibility and conspicuity of the proposed cycle tracks and to ensure safety for vulnerable road users.

17.i) New Traffic Semaphore & Signage

DCC noted that careful consideration should be given to the siting of associated utilities and traffic management signage in relation to Protected Structures and Conservation Area, historic paving and historic street furniture. DCC requested that signage should be kept to the necessary minimum. DCC's conservation section recommended that consideration is given to the rationalisation of all signage across the BusConnects routes to reduce visual clutter.

The NTA notes these comments. Significant efforts have been made during the design process to minimise above-ground utility infrastructure where practicable. Where such infrastructure is necessary, it has been sited in appropriate locations, and rationalised where practicable.

The NTA notes the reference to recommendations in the Appendix. NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Conservation Section comments as these matters were the subject of extensive liaison throughout the design development process. NTA will however continue the very positive and constructive liaison with DCC throughout the procurement and construction process.

18.j) Proposed Bus Stops [Mitigation measures]

The Conservation Section expresses the view that mitigation is required to mitigate visual impact of bus stops/shelters/information post sited near or fronting protected structures and ACAs.

Palette of Materials

Please refer to response to Point 7. DCC Section 2.4.10 *City Architects Division Comments* immediately preceding this section.

Bus Shelters

Please refer to response to Point 4. DCC Section 2.4.10 *City Architects Division Comments* immediately preceding this section.

Further, a comprehensive review of existing bus stops along the route of the Proposed Scheme has been carried out and is documented in Appendix H of the Preliminary Design Report contained in the Supplementary Information. Refer to Chapter 4 in Volume 2 of the EIAR (Section 4.5) for the location of bus stops.

iv. Conservation – Recommendations

The NTA's response to the recommendations included in Appendix 1 is set out in section 2.8.12.4.16 of this report below.

2.8.12.18 DCC Section 4.11 Environment and Transportation Department Comments

DCC Section 4.11.1 General Comments

Observations raised / clarifications sought

The Environment and Transportation Department of DCC set out (at page 41 of its submission) that: *"The Department is generally supportive of the improvements to bus and cycling infrastructure proposed in the overall context of encouraging a shift to sustainable mobility. In this regard the proposal generally aligns with the policies expressed in the Dublin City current and draft Development Plans".*

DCC stated further that: *"[t]he commitment by the NTA within the BusConnects project to increase the level of priority afforded to the bus service is very much welcomed. The introduction of, for the most part, separated and segregated cycle ways is again welcomed".*

Dublin City Council went on to state that the Proposed Scheme will provide better and safer cycling environment and help the bus maintain a steady speed and achieve its journey times.

Response

The NTA notes the view expressed by the submission.

DCC Section 4.11.2 Traffic Division

Observations raised / clarifications sought

i. The submissions asserts that the corridor cannot be operated in isolation and must be a managed corridor under the DCC traffic control system.

ii. DCC expresses the opinion that the Proposed Scheme needs to be implemented in as full a manner as possible to avoid "*watering down*" the benefits of this scheme by making localised changes to the design.

iii. For the objective of ensuring bus priority at Walkinstown Roundabout junction DCC believed there was a need for a possible requirement for specific synchronising of various traffic signals arms on the approach and departures. Additionally, DCC commented that the option of removing the existing roundabout and replacing with fully signalised junction should be explored as an alternative.

iv. In respect of the Patrick Street / Dean Street junction, DCC noted that this junction overlaps two different Core Bus Corridor schemes and requested that consideration be given to ensure that it is viewed as one junction.

v. DCC makes some observations on the Project Delivery Mechanism and the role of Road Authority.

Response

i) Traffic Control System

On page 41 of its submission, DCC stated:

"The Traffic Section is supportive of the integrated sustainable transport proposals and recognizes the significant improvements that they will bring in terms of safe cycling measures and in enabling an efficient public transportation service along these routes".

DCC's Traffic Department acknowledged that the modelling work, which was carried out on the corridor of the real-life operation of a full corridor management system using an adaptive traffic control system, allows for a firm basis for how the corridor can be evaluated and to determine its benefits. As set out in the EIAR Volume 2 - Main Chapters - Section 6.4.6.3 of Chapter 6 Traffic and Transport, the micro-simulation modelling demonstrates that bus journey times will improve between 8% and 12% during the AM and PM Peak hours of the 2028 Opening Year and 2043 Design Year. On an annual basis this equates to 5,750 hours of bus vehicle savings in 2028 and 5,450 hours in 2043.

Similarly, bus network resilience is a key performance criteria as set out in the EIAR Section 6.4.6.2.7.2 of Chapter 6 Traffic and Transport wherein the Proposed Scheme was tested with an additional 10 buses per hour (from 33 to 43 inbound and 33 to 43 outbound) at the busiest section. As can be seen from Table 6.71 (Figure 2.8.12.10) and Diagram 6.38 of the above referenced chapter (Figure 2.8.12.11), the results indicate that a high level of journey time reliability is maintained. This highlights the benefit that the Proposed Scheme infrastructure improvements can provide in protecting bus journey time reliability and consistency, as passenger demand continues to grow into the future.

Table 6.71: D2 Service – Average Bus Journey Times

Direction	Do Minimum (minutes)	Do Minimum (Additional Services) (minutes)	% Difference	Do Something (minutes)	Do Something - Additional Services (minutes)	% Difference
2028 Inbound AM	52.7	59.0	12.0%	45.7	48.0	5.1%
2028 Outbound PM	56.4	62.9	11.5%	47.2	48.3	2.3%

Figure 2.8.12.10 Average Bus Journey Times from Chapter 6 of EIAR Volume 2

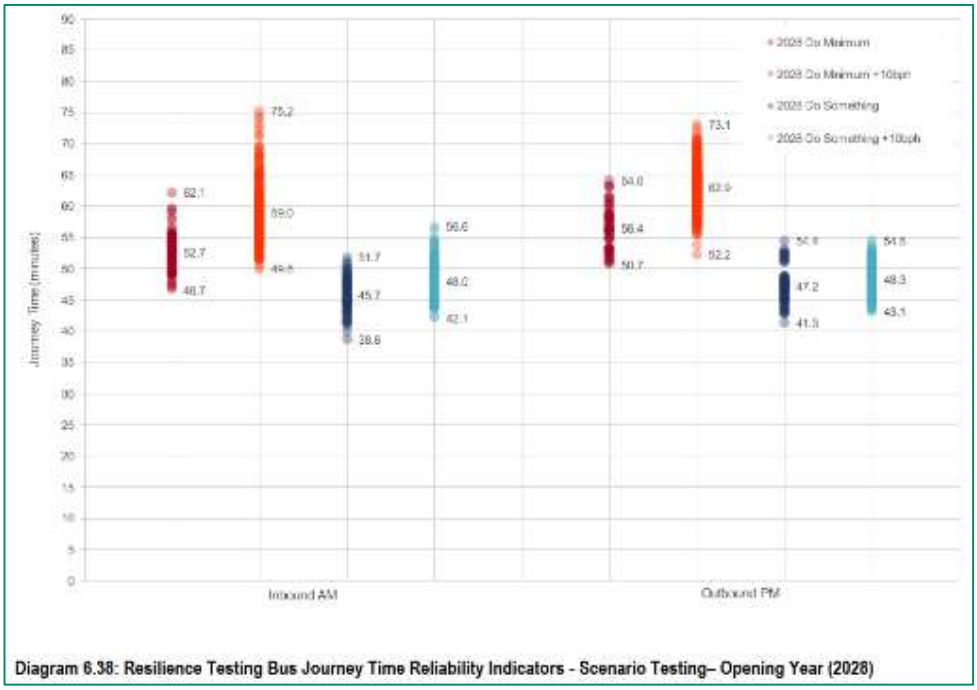


Diagram 6.38: Resilience Testing Bus Journey Time Reliability Indicators - Scenario Testing– Opening Year (2028)

Figure 2.8.12.11 Resilience Testing Bus Journey Time Reliability Indicators from Chapter 6 of EIAR Volume 2

The approach to incorporating the SCATS (Sydney Coordinated Adaptive Traffic System) bus priority measures is set out in Section 12.9.4 of the Preliminary Design Report provided as part of the Supplementary Information. Through the very positive and constructive liaison with the DCC BusConnects Liaison Office throughout the design and planning process, DCC's Traffic Department is confirming that DCC will utilise its adaptive traffic control system SCATS to undertake the required traffic management on the corridor to enable the public transport corridor to perform as per the requirements.

DCC note that because of the use of a real-world system which has multiple inputs from the Bus AVL system, cycle and pedestrian detection as well as vehicle actuated sensors, the signals will be running multiple sets of timings across the day rather than a fixed set of timings and the use of this technology will facilitate improved corridor operation. This digital infrastructure, along with the proposed civil infrastructure, combine for the Proposed Scheme to meet its objectives.

The NTA notes these observations and the NTA will continue the very positive and constructive liaison with DCC throughout the procurement and construction process.

ii) Implementation of the scheme in as full a manner as possible

DCC note the following on page 42 of its submission;

"The design of this scheme in the Dublin City Council Area is difficult and complex and has called for multiple interventions along the road network in order to achieve its objectives. The use of bus priority signals, bus gates and a combination of one [way] systems and turn bans are all intended to alter the current traffic situation along the route and ensure that Public Transport, walking and cycling can be prioritised over the private car.

It should be noted that this corridor needs to be considered as a whole and that the various different measures to prioritise public transport walking and cycling, need to be implemented in as full a manner as possible to avoid "watering down" the benefits of this scheme by making localised changes to the design."

The NTA notes and concurs with the above comment. Throughout the design development process and the assessment of the Proposed Scheme, as submitted to An Bord Pleanála, the NTA has had extensive liaison with DCC Roads Division and the NTA will continue the very positive and constructive liaison with DCC during preparation of the construction-stage documents and during the construction works.

iii. Walkinstown Roundabout

For the objective of ensuring bus priority at Walkinstown Roundabout junction DCC note on pages 42-43, the possible requirement for specific synchronising of various traffic signals arms on the approach and departures which DCC would welcome discussion during detailed design as per agreed conditions. Additionally, DCC note, the option of removing the existing roundabout and replacing with fully signalised junction should be explored as an alternative.

The Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Roads Division comments as these matters were the subject of extensive liaison throughout the design development process. The NTA will however continue the very positive and constructive liaison with DCC throughout preparation of the construction-stage documents and during the construction works.

Walkinstown Roundabout Options Assessment was carried out as outlined in Appendix I1 Feasibility and Options Assessment Report included in the Supplementary Information submitted with the application provides the adopted footway design width parameters.

As noted in Page 9 of the Feasibility and Options Assessment Report: *"A number of traffic management and junction arrangement options for Walkinstown Roundabout were assessed as part of the options assessment process. The assessment built on some preliminary junction upgrade assessment work undertaken by Arup on behalf of South Dublin County Council and the NTA in 2013. Following the stage 1 sift of junction and traffic management options, the following scheme options were assessed in further detail (see Figure (vii)):"*

Figure 2.8.12.12 below is an extract from the Feasibility and Options Assessment Report showing the six options considered at this stage.

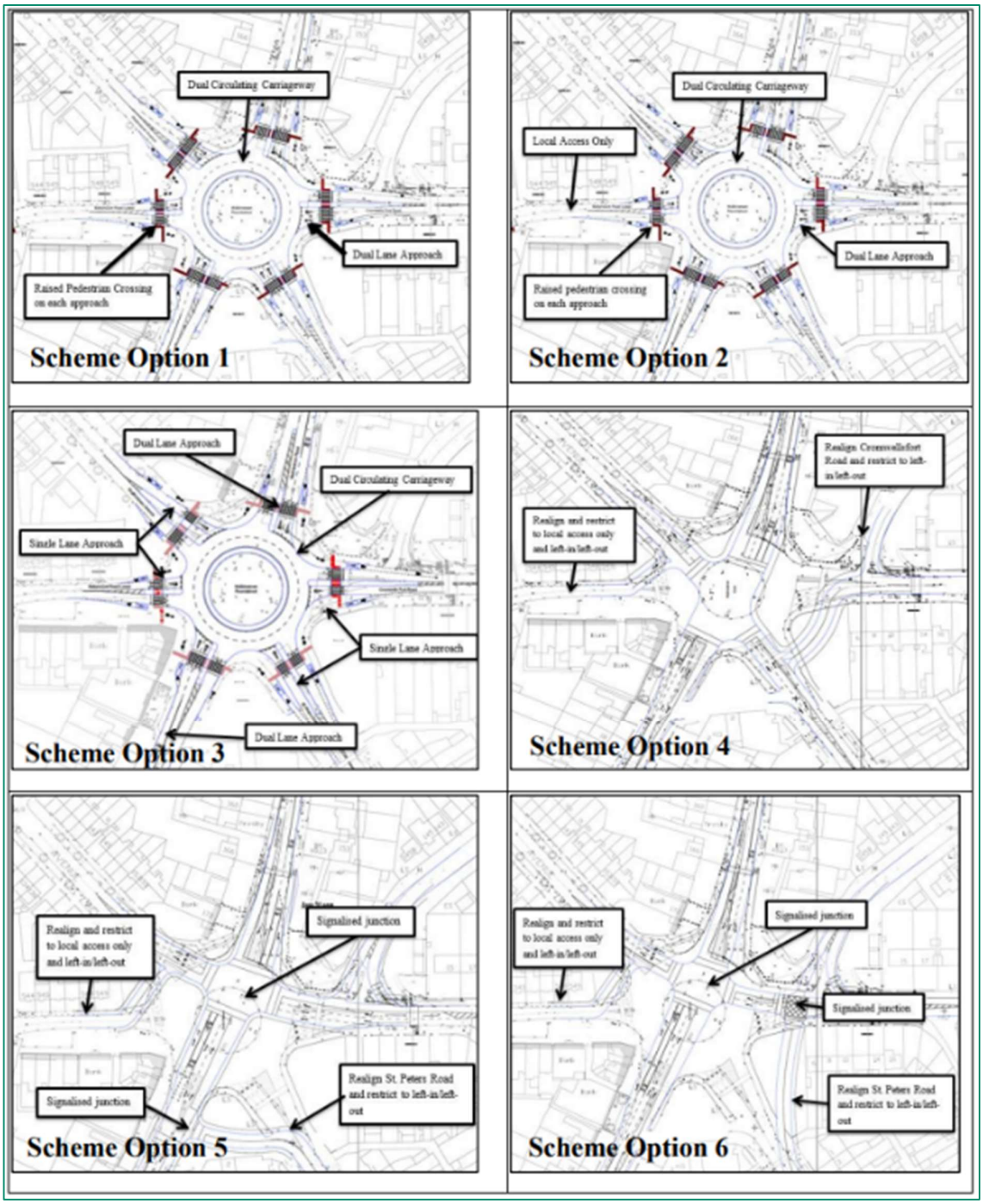


Figure 2.8.12.12: Figure (viii) of the Feasibility and Options Assessment Report

Section 6.3.6 Multi Criteria Analysis (MCA) summary of the assessment and relative ranking of these route options against the four main assessment criteria is shown below in Figure 2.8.12.13, Table 6.10 extract from the Feasibility and Options Assessment Report

Assessment Criteria	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Economy						
Integration						
Safety						
Environment						

Figure 2.8.12.13: Walkinstown Roundabout Options Assessment Summary (Main Criteria) (Table 6.10)

Section 6.3.6 of the Feasibility and Options Assessment Report summarises the MCA assessment as follows:

"As can be seen in Table 6.9 and Table 6.10, there is relatively little to distinguish between the junction arrangement options explored. While the signalised junction arrangement options appear to have a greater impact, particularly on traffic movements, further assessment is required at the next design stage to fully understand the impact of traffic diversions and signalisation, as these changes would likely offer better reliability for buses passing through the junction.

However, on the basis of this assessment, Option 1 (Dual Lane Roundabout) is considered to be the preferred roundabout option for Walkinstown Roundabout for the following reasons:

- *It allows good bus lane provision on both the northern and southern approaches to the junction, stopping only 35m in advance of the yield line to accommodate left turners;*
- *It negates the need for buses to switch lanes to pass through the roundabout (currently identified as a major issue for buses progressing through the 3 lane roundabout);*
- *It is considerably cheaper than options to signalise the junction;*
- *It provides improved facilities for cyclists and pedestrians;*
- *It requires no land take and would actually create some additional public space; and*
- *Although it reduces capacity for general traffic, all existing traffic movements are catered for."*

Section 3.4.1.1.1 of EIAR Chapter 3 Consideration of Reasonable Alternatives notes that the draft Preferred Route Option proposed for Section 2: Ballymount to Crumlin, proposed that Walkinstown Roundabout, where Walkinstown Roundabout maintained roundabout control at the junction with a reduction of the internal circulating carriageway from three lanes to two lanes, be altered to include a segregated two-way cycle track around the junction. This will reduce conflicts with pedestrians and allow the cyclists to take the shortest route around. Parallel signal-controlled pedestrian / cycle crossings on all arms of the roundabout are also provided.

Section 3.3.3.1 of the Preferred Route Option (PRO) Report, provided as part of the Supplementary Information, provides details of the consideration of the option for the proposed Walkinstown Roundabout junction options. Section 3.3.3.1 states: "*At Walkinstown Roundabout, an in-depth assessment of various junction options, taking into consideration multiple factors such as traffic movement counts, traffic management and junction operations and subsequent MCA, determined that the modified dual lane roundabout was the optimum solution for this location."*

Section 3.5.4 of the PRO Report states: *"The EPR design for Walkinstown Roundabout has been revised to improve cycle and pedestrian connectivity around this busy junction. A two-way segregated cycle track has been proposed around the junction to adopt the most direct route around the roundabout (i.e both directions) and to reduce interactions with motor vehicles. Parallel pedestrian/cyclist raised table crossings have been implemented on all arms to improve pedestrian*

and cyclist safety. City bound cyclists will be directed to the offline cycle route along Bunting Road and St. Mary's Road providing a more direct route linking Walkinstown Roundabout with Kildare Road."

Section 4.5.2.1 of Chapter 4 of Volume 2 of the EIAR states:

"The layout of Walkinstown Roundabout has been designed to provide enhanced cycle and pedestrian connectivity around this busy junction as well as improving safety for pedestrians, cyclists, bus and general traffic. A two-way segregated cycle track has been proposed around the junction to allow cyclists to adopt the most direct route around the roundabout (i.e., both directions) and to reduce interactions with motor vehicles. Parallel pedestrian / cyclist raised table crossings have been implemented on all arms to improve pedestrian and cyclist safety. Set back crossings have been used on all arms to promote pedestrian / cyclist desire lines with consideration for vehicle exit lane storage off the roundabout. Cycle detection loops have also been implemented on the two-way segments on approach to the crossings to help promote cycling journey time efficiencies and minimise delays for cyclists crossing multiple arms of the junction. The number of general traffic entry lanes / flares, circulation lanes and angle of entry have been reconfigured to promote safer vehicle movements. Landscaping proposals and revised parking arrangements are also proposed to enhance the area. City bound cyclists will be directed to the offline cycle route along Bunting Road and St. Mary's Road, providing a more direct route linking Walkinstown Roundabout with Kildare Road."

Figure 2.8.12.14 below extract from the General Arrangement Drawings from Volume 3 Part 1 of 3 of the EIAR shows the Proposed Scheme Layout at Walkinstown Roundabout.

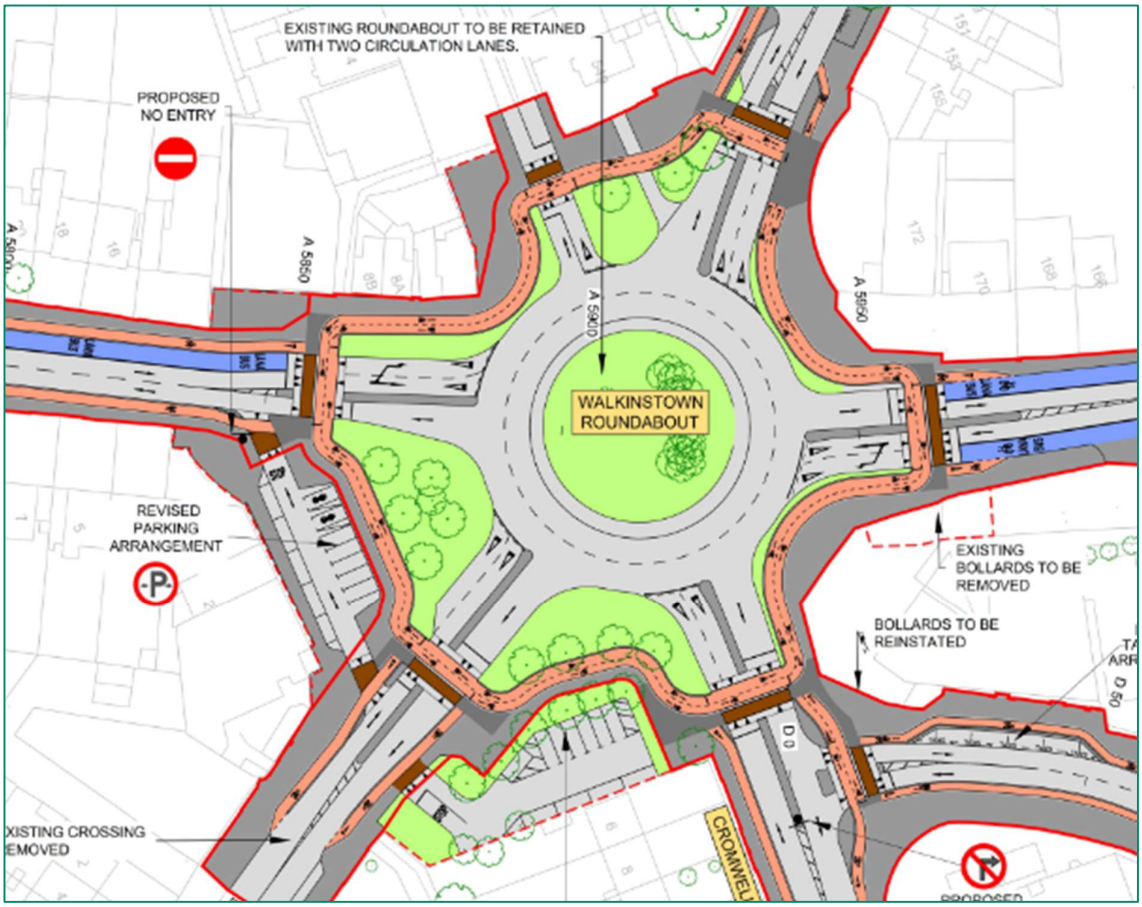


Figure 2.8.12.14: Extract from General Arrangement Drawings (Sheet 19)

iv. Patrick Street/ Dean Street

DCC note as this junction overlaps two different schemes consideration must be given to ensure that it is viewed as one junction.

Section 21.2.7 Operational Scenario for Assessment of Chapter 21 of Volume 2 of the EIAR notes:

"For operational cumulative effects including the Proposed Scheme, the assessment has been undertaken based on a scenario where all the other 11 Core Bus Corridor schemes are also operational. This has been done for the following reasons:

- It is the NTA's intention that all Core Bus Corridor schemes would be completed by 2028, therefore the scenario is considered to be reasonable; and
- It is the largest scale option and therefore represents a reasonable worst case for operational effects in terms of redistribution of traffic and traffic related effects."

Section 21.3.2. Traffic and Transport of Chapter 21 of Volume 2 of the EIAR notes the following:

"A detailed assessment of cumulative impacts on Traffic and Transport is set out in Appendix A6.1 in Volume 4 of this EIAR (Traffic Impact Assessment Report). Reference should be made to that appendix for details on cumulative transport demand, and the cumulative impacts on People Movement. A summary of the findings is set out in this section of the EIAR.

*….. **Traffic Related Cumulative Effects***

To examine the potential cumulative traffic effects that the Proposed Scheme may have in combination with any of the other Core Bus Corridor schemes, an area of influence for each scheme was determined to understand the scale of traffic displacement and its interactions with other schemes. The 'area of influence' is the area in which traffic flows are likely to change as a result of the Proposed Scheme measures as indicated by the transport modelling. The outcome of this assessment revealed that the Proposed Scheme has direct and indirect interface with the proposed Kimmage, Liffey Valley and Templeogue / Rathfarnham to City Centre Core Bus Corridor Schemes."

Figure 2.8.12.15 below is an extract from Appendix A6.3 Junction Design Report of Volume 4 Part 2 of 4 of the EIAR which shows indicative method of control for this junction. This shows that consideration of the full junction has been included in the design of the Proposed Scheme, including analysis of the Kevin Street Upper parallel side road left turn onto New Street South.

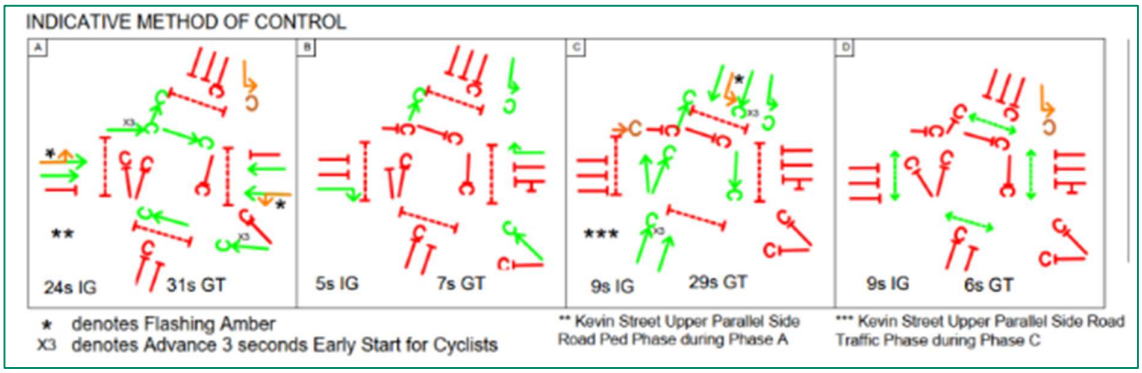


Figure 2.8.12.15: Extract from EIAR Junction Design Report (Page 183)

The Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Roads Division comments as these matters were the subject of extensive liaison throughout the design development process. The NTA will however continue the very positive and constructive liaison with DCC throughout preparation of the construction-stage documents and during the construction works.

v. Project Delivery Mechanism

NTA notes that on page 43 of their submission DCC's Traffic Department recognised that the *"NTA is taking over the role of the Road Authority for the purposes of obtaining planning permission for the corridors and that the subsequent construction of the corridors will be undertaken directly by the NTA via their contractors".*

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Traffic Division additional comments provided in the Appendix as these matters were the subject of extensive liaison throughout the design development process including consideration of the traffic management equipment that is necessary for the safe and efficient operation of this Public Transport corridor, and including all traffic signal equipment, and the relevant DCC specification. NTA is aware of, and acknowledges, the important role of the relevant DCC maintenance contractor, and their continued role on both the existing and new traffic signals.

DCC Section 4.11.3 Roads Department

Observations raised / clarifications sought

i. General support for the scheme
ii. Facilities for Cyclists & Pedestrians
iii. Reallocation of kerbside space to buses and cyclists
iv. Inadequate buffer space provided between parking/loading and cycle lanes
v. Trees and heritage features within footpaths causing obstructions
vi. Existing street furniture not shown throughout
vii. Temporary land acquisition impact on access and parking
viii. Walkinstown Roundabout
ix. Francis St/Dean St/ Patrick St Junction
x. Scheme wide - Numerous permitted developments should be considered

Response

The Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Roads Division comments as these matters were the subject of extensive liaison throughout the design development process. The NTA will however continue the very positive and constructive liaison with DCC during preparation of the construction-stage documents and during the construction works. Responses to the detailed queries raised are provided as follows:

i. General support for the scheme

The NTA welcomes the comment by DCC that the Roads Department is generally supportive of the scheme and its intention to provide bus and cycling provision.

ii. Facilities for Cyclists & Pedestrians

The submission raised a number of queries in respect of facilities for cyclists and pedestrians.

Pedestrian & Cyclist Provision

The NTA notes the request by the Roads Division that, across the scheme area, pedestrians should be ensured priority through signage and other appropriate measures, further requesting that this be made a condition.

With regard to ensuring Pedestrian Priority, additional physical interventions along the Proposed Scheme, such as enhanced/additional pedestrian crossings, raised table side entry treatments, and enhanced cycling infrastructure, have been assessed in the EIAR (Volume 4 Appendices Part 1 of 2, Chapter 6 Traffic and Transport Appendices) Appendix 04 and summarised in Appendix A6.1 Traffic Impact Assessment Report, Section 8. These interventions, which form part of the Proposed Scheme, further enhance the movement hierarchy emphasis in line with the Proposed Scheme Objectives.

EIAR Volume 2 Main Chapter, Chapter 6 Traffic and Transport, Section 6.4.6.1.8.1 describes that the Proposed Scheme will increase the number of controlled pedestrian crossings from 135 in the Do Minimum to 181 in the Do Something scenario. Additionally, there will be an increase in the number of raised table crossings on side roads from 29 in the Do Minimum to 159 in the Do Something scenario, representing a significant increase.

Pedestrian Priority at Bus Stops

The DCC submission states user priority is unclear where cycle tracks cross footpaths at bus stops scheme wide.

The NTA welcomes DCC's comments in relation to the importance of considering the pedestrian/cyclist interaction at bus stops and notes that EIAR Volume 2 Main Chapters, Chapter 4, Proposed Scheme Description and Appendix A4.1 Preliminary Design Guidance Booklet (PDGB) for BusConnects Core Bus Corridor, Section 11, set out the key measures to address the concerns raised in relation to vulnerable users at these locations which is further elaborated in Section 4.11 PDR Chapter 4 Preliminary Design, in the Supplementary Information. These details were developed as a result of direct consultation between the NTA and representative mobility groups.

These measures will reduce the potential for conflict between pedestrians, cyclists and stopping buses by deflecting cyclists behind the bus stop, thus creating an island area for boarding and alighting passengers.

On approach to the bus stop island the cycle track is intentionally narrowed with yellow bar markings also used to promote a low-speed single file cycling arrangement on approach to the bus stop. Similarly, a 1 in 1.5 typical cycle track deflection is implemented on the approach to the island to reduce speeds for cyclists on approach to the controlled pedestrian crossing point on the island.

To address the potential pedestrian/cyclist conflict, a pedestrian priority crossing point is provided for pedestrians accessing the bus stop island area. At these locations a 'nested Pelican' sequence similar to what has been provided on the Grand Canal Cycle Route will be introduced so that visually impaired or partially sighted pedestrians may call for a fixed green signal when necessary and the cycle signal will change to red. Where the pedestrian call button has not been actuated the cyclists will be given a flashing amber signal to enforce the requirement to give way to passing pedestrians. A 1:20 ramp is provided on the cycle track to raise the cycle track to the level of the footpath/island area onto a wide crossing. Suitable tactile paving is also provided at the crossing point in addition to a series of LED warning studs provided at the crossing location which are actuated by bus detector loops in the bus lane. The exit taper for the bus stop has been nominated at 1 in 3 to provide for a gradual transition to the cycle track.

iii. Reallocation of kerbside space to buses and cyclists

The DCC submission states the reallocation of kerbside space to buses and cyclists removes potential kerbside loading and servicing, noting that this activity is crucial for functionality of the city. DCC contend that the extent of loss of loading bays is not clearly quantified, nor is the adequacy of alternative provision demonstrated. DCC note that on street parking is also affected including at commercial units.

In developing the design of the Proposed Scheme, the NTA has balanced the need to provide parking / loading at local shops / services with the need to achieve the objectives of the Proposed Scheme to provide high quality public transport, cycling and walking facilities through the Proposed Scheme.

The impact on parking and loading is detailed in Chapter 6 of the EIAR, Traffic and Transport.

Section 6.4.6.1.8.4 states: "The total parking provision will be reduced along the Proposed Scheme. The majority of this reduction is removal of off-street private parking. A minor number of informal general residential, commercial and taxi spaces are bringing removed. Aspects of the Proposed Scheme and network proposals are expected to mitigate the reduction in parking by reducing reliance on private cars due to availability of an improved bus network with journey reliability, by availability of improved cycling infrastructure, and by continued and managed use of private off-street parking. Similarly, many properties along the Proposed Scheme have driveways, and residents should be encouraged to utilise their available off-road space for parking (rather than seek to park on-street). Improved compliance with parking and loading bay regulations, and management of loading activities will also assist in offsetting the reduction in on-street parking spaces. It is concluded that the overall impact of loss of parking space on these streets is limited and will be largely offset by the cumulative effect of mitigations."

Section 6.4.6.1.3.4 states: "Two loading bays have been provided on Walkinstown Avenue to mitigate design impacts at Walkinstown Roundabout. This is considered to have a **Positive, Slight and Long-term effect."**

Table 3.23 of Section 3.7.2 of Appendix G1 Parking Study Tallaght to City Centre provided in Supplementary Information included in this application notes that existing taxi rank on Bunting road will be available for four parallel parking spaces (five perpendicular parking spaces lost at same location).

Table 3.48 of Section 3.12.2 of Appendix G1 Parking Study Tallaght to City Centre provided in Supplementary Information included in this application notes that on Patrick Street of the ten existing loading/Unloading bays her only one will be lost with an alternative location proposed as outline below.

Section 6.4.6.1.5.4 states: "The removal of one loading bay space, with space for one vehicle, located on the west side of Patrick Street between Dillon Place South and Bride Road. The loading bay serves the commercial properties on the west side of the road. This is being removed for the provision of a northbound cycle track. Possible mitigation would be to provide alternative loading bay parking on St Patricks Close, therefore this has a **Negligible and Long-term effect."**

This moderate effect is considered acceptable in the context of the planned outcome of the Proposed Scheme, which is to improve accessibility to the proposed route (on foot, by bicycle and bus) for residents and visitors to local shops and businesses.

iv. Inadequate buffer space provided between parking/ loading and cycle lanes.

The DCC submission notes on page 44 that it appears that inadequate buffer space provided between parking/ loading and cycle lanes.

Figure 2.8.12.16 below is an extract from Appendix C Deviations from Standards in the Supplementary Information included in the application below notes locations where due to space constraints necessitated a deviation from the recommended buffer width between parking/loading and cycle lanes. At these locations traffic lanes, cycle tracks, loading bay and footpath widths are all provided to minimum requirements

Ch. A9650 – A9720	Cycle track (inbound)	2.0m NCM 1.5.2	Permitted Reduction	1.5m	Narrowing due to available road cross-section. Single file cycling minimum width provided.
Ch. A9650 – A9720	Parking bay buffer (inbound)	0.75m DMURS 4.3.5	Deviation	0.55m	Narrowing due to available road cross-section to provide minimum single file cycling width.
Ch. A9900 – A10850	Parking bay buffer (inbound)	0.75m DMURS 4.3.5	Deviation	0.50m	Narrowing to maintain existing parking bay kerb and to provide minimum single file cycling width.
Ch. A9870 – A10850	Cycle track (outbound)	2.0m NCM 1.5.2	Deviation	1.5m	Narrowing to maintain existing road kerb where possible. Single file cycling minimum width provided.
Ch. A10070 – A10100	Parking bay buffer (inbound)	0.75m DMURS 4.3.5	Deviation	0.50m	Narrowing to maintain existing parking bay kerb and to provide minimum single file cycling width.

Figure 2.8.12.16: Extract from Appendix C Supplementary Information

v. Trees and heritage features within footpaths causing obstructions /
vi. Existing street furniture not shown throughout.

DCC's submission states that trees and heritage features appear to be shown within footpaths thereby causing obstructions.

Figure 2.8.12.17 below extract from Figure 17.2 Chapter 17 Volume 3 Part 3 of 3 of the EIAR is an example of tree proposals on footpaths which would minimise impact on footpath width to meet DMURS requirements at localised width constrained sections of the Proposed Scheme.



Figure 2.8.12.17: Extract from Chapter 17 Figure 17.2 Volume 3 Part 3 of 3 Photomontage View 07 As Proposed View from West along Calmount Road (Figure 17.2.7.2)

As noted in section 4.11 of the Preliminary Design Report of the Supplementary Information:

"The design process has included an Accessibility Audit of the existing road corridor environment, which is enclosed in Appendix I. The audit provided a description of the key accessibility features and potential barriers to mobility impaired people based on good practice, and identified the following issues to be addressed in the design process:

- *Width of footpaths should be clear of clutter, such as street furniture, and allow unimpeded access for the mobility impaired, and in doing so, meet the minimum standards for widths.*
- *All poles for signs and street lighting should be carefully located to minimise the effect on the safe and convenient passage of pedestrians and cyclists, with due cognisance to the safe movement of mobility impaired users."*

Section 4.6.2.1 of Chapter 4 Proposed Scheme Description notes:

"As stated in Section 4.6.1, the desirable minimum width for a footpath is 2.0m. This width should be increased in areas catering for significant pedestrian volumes where space permits. DMURS defines the absolute minimum footpath width for road sections as 1.8m based on the width required for two wheelchairs to pass each other. Building for Everyone: A Universal Design Approach (NDA 2020), defines acceptable minimum footpath widths at specific pinch points as being 1.2m wide over a two-metre length of path.

In line with the Road User Hierarchy designated within DMURS, at pinch points the width of the general traffic lane should be reduced first, then the width of the cycle track should be reduced before the width of the footpath is reduced, where practicable.

Throughout the Proposed Scheme, footpath widths of two metres or wider have been proposed, however where this has not been achieved, deviations from standard have been required as outlined in Section 4.5."

The location and context of existing street furniture from topographical surveys and site walkovers has been considered in the development of the design as submitted to An Bord Pleanála. The existing street furniture has not been shown on the submitted General Arrangement drawings for clarity, but is shown in visualisations at key locations as appropriate.

The Proposed Scheme consists mainly of modifications to the traffic layout along existing streets and roads where the width is generally constrained. The details of the existing and proposed footpath widths are tabulated in the Table 4-2 of the Preliminary Design Report in the Supplementary Information included in the application for the scheme.

vii. Temporary land acquisition impact on access and parking

DCC submission notes it is not clear what impact temporary land acquisition will have on access and parking arrangements for the properties in question.

As noted in section 5.5.3.2 Parking and Access of Chapter 5 Construction of Volume 2 of the EIAR:

"When roads and streets are being upgraded, there will be some temporary disruption / alterations to on-street and off-street parking provision, and access to premises in certain locations along the Proposed Scheme. Local arrangements will be made on a case-by-case basis to maintain continued access to homes and businesses affected by the works, at all times, where practicable. Details regarding temporary access provisions will be discussed with residents and business owners prior to construction starting in the area. The duration of the works will vary from property to property, but access and egress will be maintained at all times.

viii. Walkinstown Roundabout

DCC's submission asserts that is not clear why two-way cycling is proposed or required around the roundabout, and expresses the view that consideration should be given for one-way cycling around the roundabout. The submission also believes it is not clear who will have priority at raised pedestrian and cycle tracks nor how this is to be managed.

Walkinstown Roundabout Options Assessment was carried out as outlined in Appendix I1 Feasibility and Options Assessment Report included in the Supplementary Information submitted with the application.

As noted in Page 9 of the Feasibility and Options Assessment Report: *"A number of traffic management and junction arrangement options for Walkinstown Roundabout were assessed as part of the options assessment process. The assessment built on some preliminary junction upgrade assessment work undertaken by Arup on behalf of South Dublin County Council and the NTA in 2013. Following the stage 1 sift of junction and traffic management options, the following scheme options were assessed in further detail (see Figure (vii)):"*

Figure 2.8.12.18 below is an extract from the Feasibility and Options Assessment Report showing the six options considered at this stage.

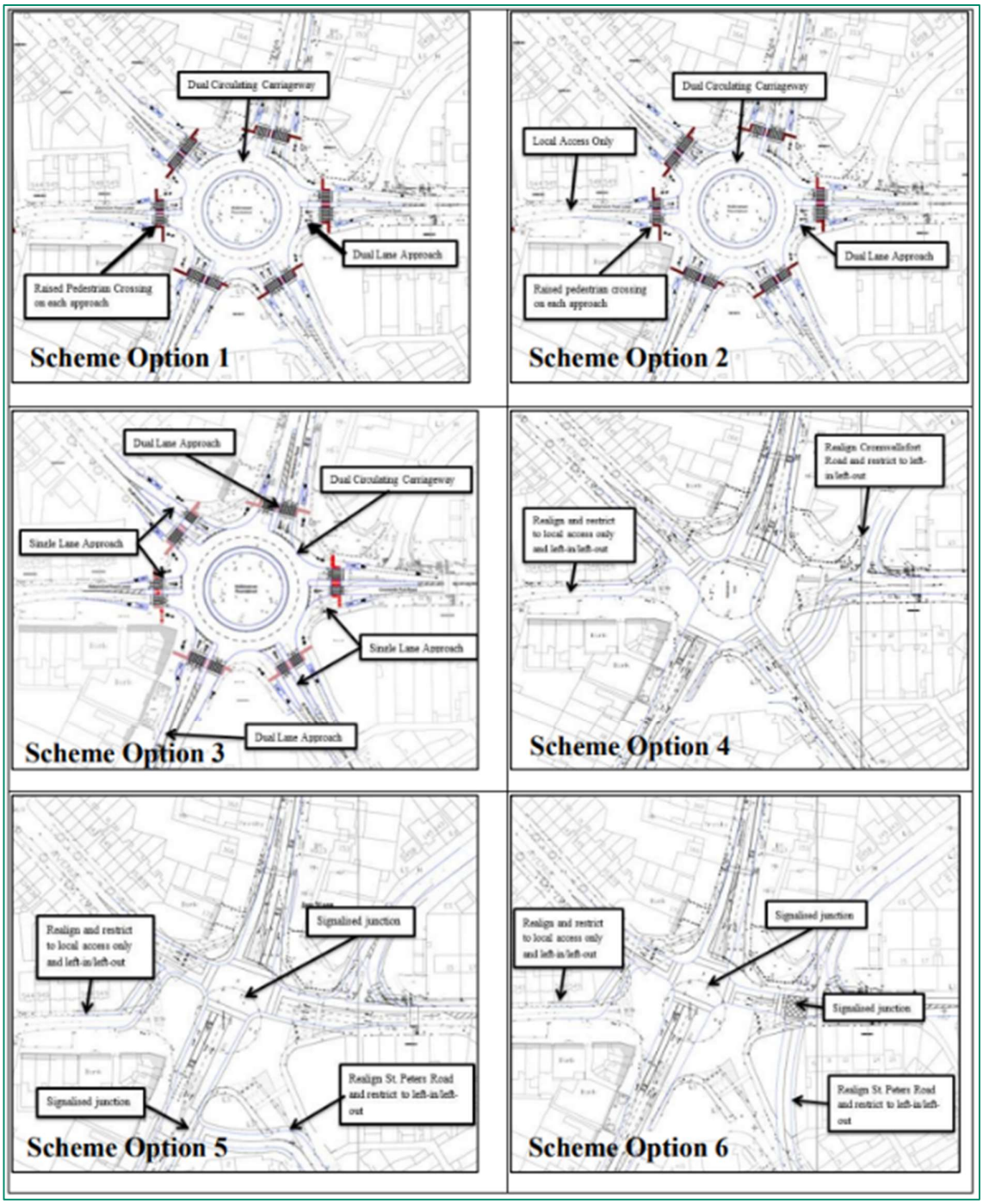


Figure 2.8.12.18: Figure (viii) of the Feasibility and Options Assessment Report

Section 6.3.6 Multi Criteria Analysis (MCA) summary of the assessment and relative ranking of these route options against the four main assessment criteria is shown below in Figure 2.8.12.19, Table 6.10 extract from the Feasibility and Options Assessment Report

Assessment Criteria	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Economy						
Integration						
Safety						
Environment						

Figure 2.8.12.19: Walkinstown Roundabout Options Assessment Summary (Main Criteria) (Table 6.10)

Section 6.3.6 of the Feasibility and Options Assessment Report summarises the MCA assessment as follows:

"As can be seen in Table 6.9 and Table 6.10, there is relatively little to distinguish between the junction arrangement options explored. While the signalised junction arrangement options appear to have a greater impact, particularly on traffic movements, further assessment is required at the next design stage to fully understand the impact of traffic diversions and signalisation, as these changes would likely offer better reliability for buses passing through the junction.

However, on the basis of this assessment, Option 1 (Dual Lane Roundabout) is considered to be the preferred roundabout option for Walkinstown Roundabout for the following reasons:

- *It allows good bus lane provision on both the northern and southern approaches to the junction, stopping only 35m in advance of the yield line to accommodate left turners;*
- *It negates the need for buses to switch lanes to pass through the roundabout (currently identified as a major issue for buses progressing through the 3 lane roundabout);*
- *It is considerably cheaper than options to signalise the junction;*
- *It provides improved facilities for cyclists and pedestrians;*
- *It requires no land take and would actually create some additional public space; and*
- *Although it reduces capacity for general traffic, all existing traffic movements are catered for."*

Section 3.4.1.1.1 of EIAR Chapter 3 Consideration of Reasonable Alternatives notes that the draft Preferred Route Option proposed for Section 2: Ballymount to Crumlin, proposed that Walkinstown Roundabout, where Walkinstown Roundabout maintained roundabout control at the junction with a reduction of the internal circulating carriageway from three lanes to two lanes, be altered to include a segregated two-way cycle track around the junction. This will reduce conflicts with pedestrians and allow the cyclists to take the shortest route around. Parallel signal-controlled pedestrian / cycle crossings on all arms of the roundabout are also provided.

Section 3.3.3.1 of the Preferred Route Option (PRO) Report, provided as part of the Supplementary Information, provides details of the consideration of the option for the proposed Walkinstown Roundabout junction options. Section 3.3.3.1 states: "*At Walkinstown Roundabout, an in-depth assessment of various junction options, taking into consideration multiple factors such as traffic movement counts, traffic management and junction operations and subsequent MCA, determined that the modified dual lane roundabout was the optimum solution for this location."*

Section 3.5.4 of the PRO Report states: *"The EPR design for Walkinstown Roundabout has been revised to improve cycle and pedestrian connectivity around this busy junction. A two-way segregated cycle track has been proposed around the junction to adopt the most direct route around the roundabout (i.e both directions) and to reduce interactions with motor vehicles. Parallel pedestrian/cyclist raised table crossings have been implemented on all arms to improve pedestrian*

and cyclist safety. City bound cyclists will be directed to the offline cycle route along Bunting Road and St. Mary's Road providing a more direct route linking Walkinstown Roundabout with Kildare Road."

Section 4.5.2.1 of Chapter 4 of Volume 2 of the EIAR states:

"The layout of Walkinstown Roundabout has been designed to provide enhanced cycle and pedestrian connectivity around this busy junction as well as improving safety for pedestrians, cyclists, bus and general traffic. A two-way segregated cycle track has been proposed around the junction to allow cyclists to adopt the most direct route around the roundabout (i.e., both directions) and to reduce interactions with motor vehicles. Parallel pedestrian / cyclist raised table crossings have been implemented on all arms to improve pedestrian and cyclist safety. Set back crossings have been used on all arms to promote pedestrian / cyclist desire lines with consideration for vehicle exit lane storage off the roundabout. Cycle detection loops have also been implemented on the two-way segments on approach to the crossings to help promote cycling journey time efficiencies and minimise delays for cyclists crossing multiple arms of the junction. The number of general traffic entry lanes / flares, circulation lanes and angle of entry have been reconfigured to promote safer vehicle movements. Landscaping proposals and revised parking arrangements are also proposed to enhance the area. City bound cyclists will be directed to the offline cycle route along Bunting Road and St. Mary's Road, providing a more direct route linking Walkinstown Roundabout with Kildare Road."

Figure 2.8.12.20 below extract from the General Arrangement Drawings from Volume 3 Part 1 of 3 of the EIAR shows the Proposed Scheme Layout at Walkinstown Roundabout.

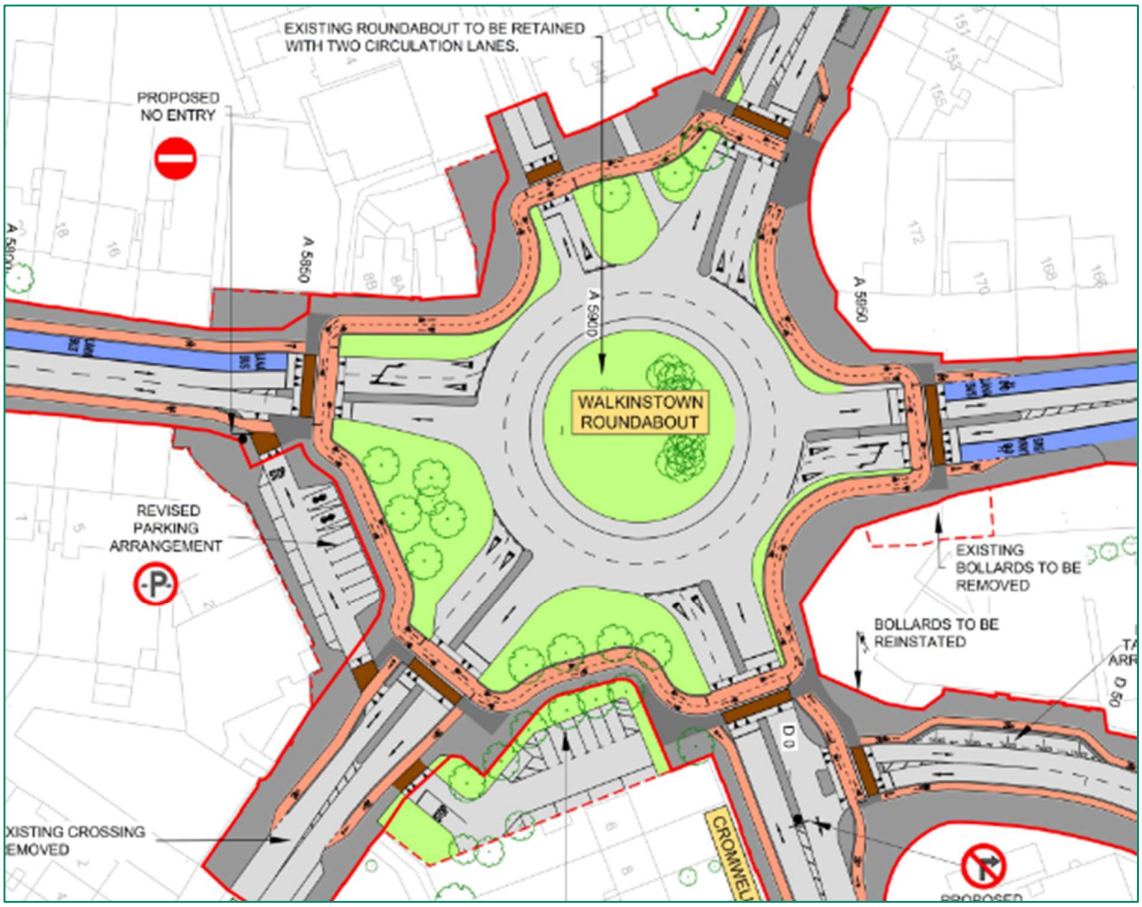


Figure 2.8.12.20: Extract from General Arrangement Drawings (Sheet 19)

ix. Francis St/ Dean St/ Patrick St Junction

On pages 44-45 of the submission, DCC notes *"the recently completed high quality Francis Street Public Realm Scheme"* and states the following:

"The proposed scheme layout would interfere with the as built layout of Francis Street. Consideration should be given to limiting the works within the scheme to run along the outer edge of the footpath rather than extend up Francis Street as shown. A right turn ban could be implemented through traffic signage. The junction layout does not require redesign to implement this. Furthermore, the rationale for running the cycle route through pedestrian space on the north western corner of the junction is not clear. This is a very busy area for pedestrians and the cycle route traverses several pedestrian desire lines and waiting areas at pedestrian crossings. Consideration should be given to keeping the cycle lane along the outer edge of the footpath and allowing cyclist movements to be regulated by the traffic lights (as proposed for the other three corners) rather than cyclists having to negotiate an area where large pedestrian volumes will congregate waiting on the signals."

Response

Bus priority from St. Luke's Avenue will be maintained with through Signal Controlled Priority as there is insufficient road corridor width on Dean Street to provide continuous bus lanes.

The Dean Street/Patrick Street junction will be upgraded to provide enhanced cycling and pedestrian facilities with the conversion of the existing left turn slip lane on the north western corner of the junction to a cycle bypass facility to provide efficiencies for left turning cyclists on the corridor. A controlled crossing will be implemented to manage the pedestrian and cyclist interaction at the cycle bypass.

At the north-western corner of the Dean Street / Patrick Street junction the proposed cycle track runs along the existing outer edge of the paved footway within the existing left-turn traffic slip lane, the remainder of this road slip lane will be converted to a built-out for a pedestrian crossing so reducing the pedestrian crossing distance on Dean Street and converting the two-stage pedestrian crossing to a single stage pedestrian crossing. This left-turn cycle lane effectively converts the existing left-turn general traffic lane to a cycle track.

Notwithstanding the above, the NTA will continue the close liaison with DCC that has been in place during the planning and design stage of the Proposed Scheme, during and throughout the subsequent construction stage

x. Scheme wide - Numerous permitted developments should be considered.

DCC notes on pages 45 of its submission that there are numerous permitted developments along the scheme, some of significant scale where access and boundary arrangements should be considered.

Refer to response to Relevant Planning History [Submission point 3.1] in Section 2.8.12.4.1 above.

DCC Section 4.11.4 Environmental Protection Division

Observations raised / clarifications sought

i. Drainage requirements overview
ii. Drainage details
iii. Sustainable Urban Drainage Systems
iv. Surveys of the surface water sewers.
v. Flood Risk
vi. Drainage design comments

Response

i. Drainage requirements overview

This section summarises the observations set out in Section 4.11.4 of DCC's submission (including reference to the Appendix) and NTA responses.

Through the very positive and constructive liaison relationship with the DCC BusConnects Liaison Office throughout the design and planning process there has been consultation with the DCC Environmental Protection Division in regard to the need for Sustainable Environmental Infrastructure as part of the development of the Proposed Scheme.

The NTA has, in consultation with DCC, followed the principles of integrating Sustainable Urban Drainage Systems with all other environmental aspects of the Proposed Scheme using best practice solutions appropriate to the Proposed Scheme. This has included consideration of a softer engineered approach as applicable to manage surface water at source as a greener, more environmentally

effective approach for managing storm water. Section 13.4.1.1 of Chapter 13 Water outlines the key design principles for the proposed surface water management design for the scheme.

Section 9.1 of the Preliminary Design Report in the Supplementary Information included in the application for the scheme notes the following:

"The drainage preliminary design was developed following consultation with the relevant Local Authority and Irish Water where applicable. The strategy and design parameters to be adopted throughout BusConnects is summarised in the Drainage Design Basis included in Appendix K.

The design basis statement was developed whilst taking the Greater Dublin Greater Dublin Regional Code of Practice (GDRCoP), Greater Dublin Strategic Drainage Study (GDSDS), Planning requirements of Local Authorities within the Dublin region, Transport Infrastructure Ireland (TII) requirements and international best practices such as CIRIA The SuDS Manual (C753).

The principal objectives of drainage design are as follows:

- *To drain surface water from existing and proposed pavement areas throughout the BusConnects development and maintain the existing standard of service;*
- *To maintain existing runoff rates from existing and newly paved surfaces using Sustainable Urban Drainage Systems (SuDS); and*
- *To minimise the impact of the runoff from the roadways on the surrounding environment using SuDS, silt traps and/or oil/petrol interceptors. The drainage system should ensure that surface water drains from existing and new pavement areas be limited by the capacity of the existing highway drainage network.*

No drainage features like gullies or manholes are to be located at, or any ponding will be allowed to occur at, pedestrian cross-walk locations or at bus stop locations. Where any such drainage features currently exist at such locations they will be relocated.

Drainage of newly paved areas will include SuDS measures to treat and attenuate any additional runoff. These measures will ensure that there is:

- *No increase in existing runoff rates from newly paved areas, and*
- *Appropriate treatment to ensure runoff quality.*

A hierarchical approach to the selection of SuDS measures has been adopted with 'Source' type measures e.g. tree pits implemented in preference to catchment type measures e.g. attenuation tanks. Further details of the SuDS hierarchy are provided in Drainage Design Basis."

The design of the Proposed Scheme has taken account of the requirement under the EU Water Framework Directive to protect and improve water quality in all waters, including surface waters. This includes recognition that the surface water drainage network impacted by the Proposed Scheme outfalls to a number of protected waterbodies that are identified as Priority Areas for Action under the Water Framework Directive's 2nd and 3rd River Basin Management Plans, and that these contiguous waterbodies are protected waterbodies under Article 4 of the Water Framework Directive. To support the achievement of the legislative obligations the Proposed Scheme is designed to ensure no deterioration of the status of any waterbody to which it is contiguous with downstream and will not jeopardise the attainment of good ecological and good surface water chemical status.

In regard to the Recommendations/Conditions of the Environmental Protection Division set out in the Appendix, NTA is satisfied as set out above that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Environmental Protection Division inputs regarding criteria and processes as these matters were the subject of extensive liaison throughout the design development process.

These points can be grouped under a number of general headings, which are responded to below:

ii. Drainage Details

A number of comments refer to the proposed drainage details included in the 'BusConnects Core Bus Corridor Drainage Design Basis' which is noted in section 4.6.14.1 of Chapter 4 of Volume 2 of the EIAR as one of the relevant guidance documents for drainage design. This document is included as Appendix K of the Preliminary Design Report provided in the Supplementary Information. In this regard it is noted that the Proposed Scheme, and indeed the BusConnects Dublin Infrastructure Works as a whole, interacts with numerous local authorities, who have differing requirements in relation to drainage details.

The BusConnects Core Bus Corridor Drainage Design Basis' document includes options for consideration that have been developed with regard to the necessary standards and good industry practice. The NTA will continue to liaise closely with Dublin City Council Environmental Protection Department and this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme taking their requirements into consideration, where aligned with and consistent with the EIAR.

iii. Sustainable Drainage and Permeability

The drainage design is based on a number of best practice general principles, which are set out in the document 'BusConnects Core Bus Corridor Drainage Design Basis' which is included as Appendix K of the Preliminary Design Report in the Supplementary Information. A SuDS drainage design has been developed as a first preference and in accordance with the SuDS Management Train described in the CIRIA SuDS manual (CIRIA 2015). The CIRIA SuDS Manual recommends that when considering SuDS solutions, the preferred approach is a hierarchy whereby runoff using source control solutions (e.g. pervious surfacing) are considered first. Where source control is not possible or cannot fully address an increase in runoff from a development, residual flows are then managed using site controls (e.g. bioretention / infiltration basins). If this is not practical or residual flows remain above existing runoff rates, regional controls (e.g., oversized pipes) are used. SuDS provide the dual benefits of controlling flow and treating water quality.

In areas where the catchment is proposed to remain unchanged as no additional impermeable areas are proposed, the design consists of relocating existing gullies (where possible) to new locations.

The details of drainage measures proposed for each catchment and subsequently each water body are provided in Figure 2.8.12.21 below which is a reproduction of Table 13.15 in Chapter 13 of Volume 2 of the EIAR. It is noted that no new outfalls are proposed as part of the Proposed Scheme.

Existing Catchment Reference	Chainage	Water body	Road Corridor Area (m^2)	Change of use to impermeable areas (m^2)	Change of use to permeable areas (m^2)	Net Change (m^2)	Percentage Change (%)	SuDS Measures Proposed
9.12	A0 – A800	Dodder_040	8855	1668	570	1353	16.7%	Oversized pipes, bioretention areas and green roofs
9.11	A800 – A2000	Dodder_040	24981	0	0	0	0%	N/A
9.10	A2000 – A2210	Poddle_010	1736	0	0	0	0%	N/A
9.9	A2210 – A2550	Poddle_010	5583	1654	154	1454	26%	Oversized pipes
9.8	A2550 – A2770	Poddle_010	3672	1927	0	1427	38.9%	Oversized pipes
9.7	A2770 – A3630	Poddle_010	9380	12296	2746	19847	211%	Oversized pipes
	B0 – B520							Oversized pipes
9.6	A3670 – A5535	Camac_040	47317	22020	2827	13555	28.6%	Oversized pipes, bioretention areas
	C75 – C914							Oversized pipes, bioretention areas
9.5	A5325 – A7400 &	Poddle_010	81327	1469	2292	-576	-0.7%	Oversized pipes
	D0 – D1060	Poddle_010						N/A
9.4	A7400 – A7800	Poddle_010	16628	48	115	-47	-0.3%	N/A
	D1060 - D1346	Poddle_010						N/A
9.3	A8975 - A9275	Ringsend WwTP	63798	0	615	-431	-0.7%	N/A
	E0 - E2447	Ringsend WwTP						N/A
9.2	A7800 – A9275	Ringsend WwTP	27632	435	403	22	0.1%	Oversized pipes
9.1	A9275 – A11438	Ringsend WwTP	55364	55	277	155	0.28%	Oversized pipes
8.2	F0 – F615	Camac_040	13168	1344	390	668	5.1%	Oversized pipes, tree pits, soakaways and filter drains
8.3	F615 – F1500	Camac_040	20979	4928	246	3277	15.6%	Oversized pipes, tree pits, bioretention areas, soakaways and filter drains
8.4	F1500 – F1980	Camac_040	11738	2189	107	1457	12.4%	Oversized pipes, tree pits, bioretention areas and filter drains
8.5	F1980 – F2750	Camac_040	39188	5583	1864	3434	8.8%	Oversized pipes, bioretention areas and filter drains
8.6	F2750 – F3330	Camac_040	16743	2438	242	1537	9.2%	Oversized pipes and soakaways

Figure 2.8.12.21 Extract from EIAR Chapter 13 detailing change in impermeable surface area and proposed SuDS features

The NTA notes the request that the final detailed design of SuDS should refer to the Dublin City Council Sustainable Drainage Design and Evaluation Guide.

The NTA will continue to liaise closely with DCC Drainage Planning, Policy and Development Section and this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme taking their requirements into consideration, where aligned with and consistent with the EIAR.

iv. Surveys of the surface water sewers.

In respect of the query raised by DCC concerning surveys on the location and condition of surface water infrastructure, it is intended that any surveys of the existing surface water infrastructure sewers considered necessary will be undertaken by the NTA in the preparation of the construction-stage documents.

v. Flood Risk

The submission seeks confirmation that the development has been designed such that the risk of flooding to the development has been reduced as far as is reasonably practicable.

Flood risk associated with the Proposed Scheme is dealt with within the Flood Risk Assessment included in Appendix A13.2 in EIAR Volume 4 Appendices Part 3 of 4. The FRA has been prepared in accordance with the Department of the Environment, Heritage and Local Government (DEHLG) and the Office of Public Works (OPW) Planning System and Flood Risk Management - Guidelines for Planning Authorities (hereafter referred to as the FRM Guidelines) (DEHLG and OPW 2009). The Flood Risk Assessment covers three stages of a Site Specific Flood Risk Assessment (Identification of flood risk, initial flood risk assessment and detailed assessment supported by CFRAM hydraulic modelling). The Flood Risk Assessment also includes the 'Development Management Justification Test' (box 5.1 of the 2009 Planning System Flood Risk Management Guidelines),and concludes that the development satisfies the requirements of the Development Management JT (Justification Test). Refer to section 5.5 of the Flood Risk Assessment report.

In relation to pluvial flood risk, it should be noted that all of the proposed networks have been modelled independently of their length. The proposed networks are attenuated to existing runoff rates before discharging to the existing network. Where possible, SuDS and Green Infrastructure measures have been incorporated, preference has been given to nature based SuDS solutions (tree pits/rain gardens interlinked by filter drains) however the following two constraints were experienced in the design.

- Where the SuDS solution will not provide sufficient storage to attenuate the discharge down to the allowable discharge rates oversized pipes will be used to facilitate the provision of sufficient storage capacity of the SuDS solutions.
- Where there is no space available in the public realm to accommodate the SuDS solution due to the presence of existing underground utilities in the proposed/existing footpath the only practicable solution will be to utilise oversized pipes to facilitate the provision of sufficient storage capacity of the SuDS solutions.

Section 6 of the Site Specific Flood Risk Assessment Chapter 13 Appendix A13.2 of Volume 4 Part 3 of 4 of the EIAR notes the following for the Tallaght to City Centre Section and the Clondalkin to Drimnagh Section of the Proposed Scheme:

"This site-specific flood risk assessment for the Proposed Scheme has been undertaken in accordance with the requirements of "The Planning System and Flood Risk Management Guidelines for Planning Authorities".

Several historic flood events are noted to be in the vicinity of the Proposed Schemes. The schemes are largely on existing roads and will result in minimal increase in paved surfaces, therefore will not increase the existing floods levels and risks.

There is no tidal flood risk to either of the Proposed Schemes. Therefore, there is no risk of coastal flooding to the site in the present, or future climate change scenario.

The risk of pluvial flooding along most of the Proposed Scheme is low. However, this risk exists in the current scenario and will be reduced as a result of the Proposed Scheme development.

All proposed surface water sewers provided as part of the CBC shall be designed to provide attenuation for a return period of up to 30 years where possible. This would be an improvement on the existing historical drainage network infrastructure and will reduce the overall risk of pluvial flooding. Proposed drainage infrastructure will be provided which will include new Sustainable (Urban) Drainage Systems (SuDS) such as rain gardens, swales and tree pits. These SuDS features will provide source control measures and reduce the risk of pluvial flooding."

Summary

The NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Drainage comments provided in the Appendix as these matters were the subject of extensive liaison throughout the design development process. The NTA will however continue the very positive and constructive liaison with DCC during the preparation of the construction-stage documents and during the construction works.

vi. Drainage Design Comments

DCC's submissions includes 34 detailed queries, primarily in relation to the development of final construction stage drainage proposals, as set out below.

1. DCC stated that while an increase in permeable areas in some sections is welcome, consideration should still be given to SuDS treatment of runoff whenever possible. Nature based solutions should be used throughout rather than oversized pipes.
Response:

Preference has been given to nature based SuDS solutions (tree pits/rain gardens interlinked by filter drains) where practicable. The drainage design is based on a number of general principles, which are set out in the document 'BusConnects Core Bus Corridor Drainage Design Basis' which is included as Appendix K of the Preliminary Design Report in the Supplementary Information. A SuDS drainage design has been developed as a first preference and in accordance with the SuDS Management Train described in the CIRIA SuDS manual (CIRIA 2015). The CIRIA SuDS Manual recommends that when considering SuDS solutions, the preferred approach is a hierarchy whereby runoff using source control solutions (e.g. pervious surfacing) are considered first. Where source control is not possible or cannot fully address an increase in runoff from a development, residual flows are then managed using site controls (e.g. bioretention / infiltration basins). If this is not practical or residual flows remain above existing runoff rates, regional controls (e.g., oversized pipes) are used. SuDS provide the dual benefits of controlling flow and treating water quality.

2. DCC stated that while compensation of hardstand with soft stand areas is welcomed, more detail is to be provided in the specific areas to clarify the workings throughout, this should be as noted in the legend with areas, flow control and allowable discharge rates etc. provided.
Response:

This will be clarified in the preparation of the construction-stage documents in the context of it being in alignment with and consistent with the EIAR.

3. Preferable for nature based nature based solutions in a SuDS train throughout rather than one off features.
Response:

See response to Drainage Design Comments immediately above.

4. DCC stated a detailed gully and swale design to be approved where additional required.
Response:

Consultations have been held with DCC regarding the drainage design for the Proposed Scheme, in regard to proposed road gullies, Section 3 Conclusion & Recommendations of the Drainage Design Basis in Appendix K of the Preliminary Design Report in the Supplementary Information included in the application for the scheme notes the following:

"A review of the allowable spacing of the various gully collection systems shows that in an urban situation a side inlet kerb is the least efficient. If this option (side inlet kerb) was utilised, the number of gullies required would increase by a factor of approx. 75%, when compared with the proposed options. This can be seen in Table 1 which outlines the maximum gully/ kerb inlet spacing for the corresponding road gradients and crossfalls.

Typical gully units, the split grating and kerb units and narrow profile gullies have similar discharge capacities across the various gradients and crossfalls, with the narrow profile gullies proving to be slightly more efficient.

The split grating and kerb unit does not meet Dublin City Council drainage maintenance requirements and is therefore not recommended.

The narrow profile gullies reduce risks associated with gully gratings being laid within the carriageway outside the wheel running track of buses and will improve ride quality.

Correct construction of the gully pot blockwork and foundation to the appropriate standard, should mitigate against the risk of settlement of gully pots.

Based on review of the existing drainage system, discussion with local authorities about the following surface water collection strategy is being proposed to complement the narrow profile gully.

- *In the interest of Water Quality all proposed gullies shall contain a sump that will trap debris & prevent siltation, to enter the drainage networks.*
- *Where existing gullies are present a narrow profile gully as shown in Appendix A should be retrofitted wherever practicable.*
- *Where existing combined gullies are in the carriageway, single units shall be connected using separation chambers and rodding facility as detailed in Appendix B."*

The NTA will continue the very positive and constructive liaison with DCC throughout the preparation of the construction-stage documents and during the construction works.

5. DCC stated that design check to be carried out throughout the design prior to connection to sewer network in line with GDRCOP.

Response:

Manholes will be proposed at regular distances and at pipe ends and connections. Appendix K of the Preliminary Design Report (Drainage Design Basis Document) states:

"In accordance with Greater Dublin Regional Code of Practice Section 11.6, the length of pipework from manhole to manhole should not exceed 90metres."

6. DCC stated that at ChA0 and globally the location of flow control device should be included.

Response:

The comment is noted. This will be considered as part of the development of the detailed design for construction.

7. DCC stated ChA25-A175 (and globally) - storage volumes are 23-65m^2 and queries if the attenuation sufficient for the catchment or is just the available storage, noting a big variation in figures.

Response:

Storage volumes stated are a storage calculation from source control drainage software. This storage volume is based on allowable discharge rate, climate change and rainfall parameters. Storage requirements have been achieved in these areas through a combination of Nature Based

Solutions (NBS) and oversized pipes. All pipes/NBSs have been sized to provide adequate storage and attenuation requirements in line with Greater Dublin Regional Code of practice.

8. DCC requested that the network between ChA1620-A2000 should be surveyed prior to construction and design updated accordingly & agreed with DCC.
Response:

The comment is noted. This will be considered as part of the development of the detailed design for construction.

Section 1.2 of the Drainage Design Basis in Appendix K of the Preliminary Design Report in the Supplementary Information included in the application for the scheme notes the following:

"Physical drainage investigations might be required at detailed design stage to precise details of existing drainage along the route, the size, number, depth, and location etc. of each drainage infrastructure present along the route."

9. DCC stated that at ChA2170 and globally proposed additional trees should be clash checked against existing network.
Response:

NTA notes that clash checks are carried out as part of the design development and will continue to be as part of the development of the detailed design.

10. DCC stated a design check is required ChA2789-A3100 as the no. of manholes seems excessive, querying if the design can be simplified.
Response:

Section 9.1 Overview of Drainage Strategy of the Preliminary Design Report in the Supplementary Information included in the application for the scheme notes the following:

"The drainage preliminary design was developed following consultation with the relevant Local Authority and Irish Water where applicable. The strategy and design parameters to be adopted throughout BusConnects is summarised in the Drainage Design Basis included in Appendix K.

The design basis statement was developed whilst taking the Greater Dublin Greater Dublin Regional Code of Practice (GDRCoP), Greater Dublin Strategic Drainage Study (GDSDS), Planning requirements of Local Authorities within the Dublin region, Transport Infrastructure Ireland (TII) requirements and international best practices such as CIRIA The SuDS Manual (C753).

The principal objectives of drainage design are as follows:

- *To drain surface water from existing and proposed pavement areas throughout the BusConnects development and maintain the existing standard of service;*
- *To maintain existing runoff rates from existing and newly paved surfaces using Sustainable Urban Drainage Systems (SuDS); and*
- *To minimise the impact of the runoff from the roadways on the surrounding environment using SuDS, silt traps and/or oil/petrol interceptors. The drainage system should ensure that surface water drains from existing and new pavement areas be limited by the capacity of the existing highway drainage network.*

No drainage features like gullies or manholes are to be located at, or any ponding will be allowed to occur at, pedestrian cross-walk locations or at bus stop locations. Where any such drainage features currently exist at such locations they will be relocated.

Drainage of newly paved areas will include SuDS measures to treat and attenuate any additional runoff. These measures will ensure that there is:

- *No increase in existing runoff rates from newly paved areas, and*
- *Appropriate treatment to ensure runoff quality.*

A hierarchical approach to the selection of SuDS measures has been adopted with 'Source' type measures e.g. tree pits implemented in preference to catchment type measures e.g. attenuation tanks. Further details of the SuDS hierarchy are provided in Drainage Design Basis."

11. DCC queried if the green area at ChA3360-A3750 could be utilised as Bio-retention rather than oversized pipes?

Response:

Bio-retention areas and SuDS solutions were considered in this area during the development of the design. They have been included in this section where feasible. One of the constraints in this area is existing utilities and available space required for construction.

12. DCC queried how is it proposed to attenuate the additional impermeable area at ChB435-B550 and in many other areas.

Response:

Attenuation has been addressed in any section where additional impermeable area has been added, and the existing network does not have the capacity to accept the additional areas. The only areas where attenuation is not indicated is where there is an increase in permeable area (decrease in impermeable areas compared to existing) and areas where the increase is so minimal that calculations show a volume of attenuation equal to zero. Specific to B435-B550, this would be a situation where the increase in area was considered small, volume of attenuation was negligible.

13. DCC queried where the attenuation for the 458m^2 of additional impermeable area at ChA3750-A3925 is.

Response:

Storage has been provided within the new pipe network with attenuation being provided through use of a flow control device. Larger, oversized pipes are not required for this network and this has been confirmed through hydraulic modelling.

14. DCC queried if the design at ChA3750-A4050 (south side), could be amended to include tree pits where trees are proposed/ nature based solution.

Response:

Due to the size of the increased impermeable areas at this location, in order to provide the necessary attenuation, oversized pipes were the only solution available to provide adequate storage capacity. A SUDs pond/detention basin was considered (in Tymon Park), however this solution was rejected by SDCC. As such oversized pipes with a flow control device was considered to be a buildable and suitable solution to be provided here. DCC's query regarding the addition of tree pits/NBS/bio-retention area is valid at this location and could be incorporated into the drainage design to provide some attenuation storage, in conjunction with the oversized pipes.

15. DCC queried if Bio-retention rather than pipe be used at ChA4060A4375 (north side).

Response:

Various bio-retention solutions were considered for this location. Originally a SUDs pond and bio-retention area was considered, however due to the various utilities and steep gradient of the location, tree pits and associated pipework were considered the only feasible solutions at this location.

16. DCC requested that the design at C50 should include NBS where possible in preference to hard engineering.

Response:

Due to the size of the increased impermeable areas at this location, in order to provide the necessary attenuation, oversized pipes were the only solution available to provide adequate storage capacity. A SUDs pond/detention basin was considered at this junction, however this solution was rejected due to HV underground utilities and lack of space available to construct a suitably sized pond. As such oversized pipes with a flow control device was considered to be a buildable and suitable solution to be provided here. DCC's query regarding the addition of tree pits/NBS/bio-retention area is valid at this location and could be incorporated into the drainage design to provide some attenuation storage, in conjunction with the oversized pipes.

17. DCC queried if the design at ChA4950-A5510 (north side), could be amended to include tree pits rather than oversized pipes

Response:

At this location, tree pits will not provide sufficient additional storage to compensate for the inclusion of oversized pipes.

18. DCC queried if the design at Ch A5160-A5470 (south side), could be amended to include tree pits rather than oversized pipes?

Response:

At this location, tree pits will not provide sufficient additional storage to compensate for the inclusion of oversized pipes.

19. DCC queried where is the attenuation for the additional net impermeable area at ChC625-C893.

Response:

This section has a net permeable area of 318m^2. Therefore no attenuation is required as there is actually a reduction in impermeable area at this location.

20. DCC queried where is the attenuation for the additional net impermeable area at ChA5340-A5350.

Response:

The area is attenuated within the 375mm dia. pipe with a flow control shown on the drawing.

21. DCC requested a design check proposed pipe on top of trees ChA5500-A5660 (both sides), and questioned if tree pits could be used?

Response:

At this location, tree pits will not provide sufficient additional storage to compensate for the inclusion of oversized pipes.

22. DCC stated ChA5450-A5510 Note states sheet 16 has drainage details, but this area is not addressed sheet 16, 17, 18?

Response:

Sheet 16 provides a note detailing the area between ChA4950-A5510, which covers the pipe network located across 16, 17 & 18. The outfall is located on sheet 16 and therefore the drainage details note is included only on sheet 16.

23. DCC stated ChA5835-A6050 Additional area of 2431m^2 with no NBS proposed, and questioned if there is an opportunity to create a NBS on main junction.

Response:

While there is an increase in permeable areas, other impermeable areas are being removed and overall flows into the existing drainage network will be reduced. Therefore there is no need for further drainage features.

24. DCC queried the annotation at ChA5835-A6050 which shows "*existing paved area to be grassed"*, noting that most of the roundabout is grassed).

Response:

Noted. This is an error in the design drawings, however this does not affect the drainage regime in this area as there is a net loss in impermeable area therefore does not alter the drainage design.

25. DCC states that drainage details are not described for ChA7800-A7865.

Response:

Drainage details are included on sheet 24 as this network spans across both drawings. This is a continuous run of pipe with the outfall of the pipe located on Sheet 25. Reference back to Sheet 24 is also noted on Sheet 25.

26. DCC requested that a design check required to check space for new trees at ChA10450-A10510.

Response:

The NTA notes that clash checks will be included as part of the development of the detailed design and will be reviewed in the preparation of the construction stage documents.

27. DCC queried if clash check undertaken for proposed/ existing network ChA11300 and globally.

Response:

The NTA notes that clash checks will be included as part of the development of the detailed design and will be reviewed in the preparation of the construction stage documents.

28. DCC states that at ChA11325-A11413 and ChA11413-A11438, the attenuation of one area has been ignored and other notes that no attenuation required, and queried if they should be combined with attenuation

Response:

No additional storage volume is required due to the minor increase in impermeable area, so the new small diameter pipework with flow control is sufficient to provide attenuation.

29. DCC stated design check required at ChE0-E250 & ChE250-E625 as proposed trees are on top of existing foul network. Proposed new tree locations to be checked throughout.

Response:

The NTA do not believe that such clashes occur. However, the NTA notes that clash checks will be included as part of the development of the detailed design and will be reviewed in the preparation of the construction stage documents.

30. DCC disagree 30m^2 additional impermeable area at Woodford Walk is considered minimal - and note attenuation should be provided.

Response:

Attenuation has been addressed in any section where additional impermeable area has been added, and the existing network does not have the capacity to accept the additional areas. The only areas where attenuation is not indicated is where there is an increase in permeable area (decrease in impermeable areas compared to existing) and areas where the increase is so minimal that calculations show a volume of attenuation equal to zero. Specific to Woodford Walk, this would be a situation where the increase in area was considered small, volume of attenuation storage required for the additional area was negligible (zero) and therefore the existing network would have capacity without attenuation.

31. DCC stated area at ChF40-F230 should be attenuated and NBS provided.

Response:

Attenuation has been addressed in any section where additional impermeable area has been added, and the existing network does not have the capacity to accept the additional areas. The only areas where attenuation is not indicated is where there is an increase in permeable area (decrease in impermeable areas compared to existing) and areas where the increase is so minimal that calculations show a volume of attenuation equal to zero. Specific to ChF40-F230, this would be a situation where the increase in area was considered small, volume of attenuation storage required for the additional area was negligible (zero) and therefore the existing network would have capacity without attenuation. This area was discussed with highways team and it was requested

that over the edge drainage (and no attenuation) be utilised due to the small increase in impermeable area.

32. DCC noted an Infiltration suitability check required at ChF40-F230, adding NBS should be employed instead of pipes before discharging to Camac River. Comment applies throughout.
Response:

The main proposal of utilising infiltration for these locations is considered to be an NBS. Oversized pipes were suggested here as a last resort at these locations depending on the outcome of soil infiltration testing and consideration of other NBSs which could be utilised here. Oversized pipes ultimately were a solution which would be buildable if all other NBS options weren't feasible

33. DCC disagree 42m^2 of required attenuation at F2260 is negligible.

Response:

Attenuation has been addressed in any section where additional impermeable area has been added, and the existing network does not have the capacity to accept the additional areas. The only areas where attenuation is not indicated is where there is an increase in permeable area (decrease in impermeable areas compared to existing) and areas where the increase is so minimal that calculations show a volume of attenuation equal to zero. Specific to F2260, this would be a situation where the increase in area was considered small, volume of attenuation storage required for the additional area was negligible (zero) and therefore the existing network would have capacity without attenuation.

34. DCC queries if NBS instead of hard engineering (pipes) could be employed at F2700-F2850?
Response:

Bio-retention areas and SuDS solutions were considered in this area during the development of the design. They have been included in this section where feasible. One of the constraints in this area is existing utilities and in the DCC area, existing trees prevent the installation of NBS solutions.

DCC Section 4.11.5 Water Framework Directive

Observations raised / clarifications sought

The submission disagrees with the evaluation of the sensitivity of identified Water Framework Directive (WFD) receptors in Section 13.2.4.2 of EIAR Chapter 13 Water for the Camac and Poddle Rivers. The submission expresses the view that the WFD should take precedence over National Roads Authority and UK Environmental Agency criteria. It requests that an evidence-based assessment of the impact of the Proposed Scheme on the water quality status of both rivers within the curtilage of the proposed project, including both ecological and chemical status.

Response

Section 13.1 of EIAR Chapter 13 Water states the following: *"An assessment of Proposed Scheme's compliance with the Water Framework Directive (WFD) (Directive 2000/60/EC) requirements is provided in Appendix A13.1 WFD Assessment in Volume 4 of this EIAR; the status of WFD water bodies and protected areas within the Study Area are provided in Section 13.3.3 and a summary of the conclusions of the WFD assessment is provided in Section 13.6.3."*

Section 13.2.2 of Chapter 13 details the relevant guidelines, policy and legislation and the WFD is listed as the first item in Section 13.2.2.1. In the final paragraph of Section 13.2.2.1, it is stated that: "*In the absence of WFD assessment guidance specific to Ireland, the assessment has been carried out using the UK Environment Agency's 'Water Framework Directive assessment: Estuarine and Coastal waters' 2016 (updated 2017) (Environment Agency 2016). No specific guidance exists for freshwater waterbodies. However, this guidance was used as the basis of the UK's Planning Inspectorate (PINS) Advisory Note 18 'Water Framework Directive' June 2017 (PINS 2017) in which it sets out the stages of an assessment. On this basis it is considered appropriate to use for the assessment of the Proposed Scheme."*

Appendix A13.1 (Water Framework Directive Compliance Assessment) of the EIAR Volume 4 Part 3 of 4 documents that the design of the Proposed Scheme has taken account of the primary requirements of the EU Water Framework Directive to protect and improve water quality in all waters, including surface waters. These contiguous waterbodies are protected waterbodies under Article 4 of the Water Framework Directive. To support the achievement of the legislative obligations the Proposed Scheme is designed to ensure no deterioration of the status of any waterbody to which it is contiguous with downstream and will not jeopardise the attainment of good ecological and good surface water chemical status. The assessment has been produced in support of the application using publicly available data. It is an assessment in its own right, independent of the EIAR but using the same scheme detail and data, in addition to that which is WFD specific.

In Section 13.3.9.1 of Chapter 13 (Water) of the EIAR, the Poddle was assigned high sensitivity given its short, direct hydrological connection to the Liffey Estuary Upper. In Section 13.3.9.3 the Camac was assigned high sensitivity given its direct hydrological connection to the Liffey Valley Nutrient Sensitive Area. To ensure compliance with WFD obligations, Sustainable Urban Drainage Systems have been incorporated into these catchment areas to protect and improve the water quality of the surface water bodies.

An interpretation of the likely effects of the Proposed Scheme with regard to these data is included in the impact assessment section of the WFD compliance (Section 13.6 and Table 13.21) which detail the compliance of the proposed scheme with the environmental objectives of the WFD.

For chemical status, the evidence-based Compliance Assessment concludes that during construction there is potential for accidental release of chemicals which are on the Environmental Quality Standards Directive (EQSD) list (for example, hydrocarbons); however, with the implementation of control and mitigation measures outlined in the SWMP there will be no significant impacts. No substances on the EQSD list will be released during operation (Table A13.6). Further, it has been concluded that the study area is known to contain sources of known pressures including UWWTP SWOs and a number of Industrial Licensed Emissions. The Proposed Scheme does not include any new discharge points and will not impact the flow or volume of current surface water drainage. A CEMP and a SWMP (Appendix A5.1 in Volume 4 of the EIAR) will also be implemented to mitigate potential impacts in relation to surface water contamination.

The evidence-based Compliance Assessment records that for ecology, habitats and fish were assessed in line with all relevant guidance, as outlined in Tables A13.4 and A13.5 of the Assessment. Risks to ecology under WFD include loss of habitat, loss of protected species and prey species. The assessment concludes that the potential for these impacts will not be significant. WFD Assessment primarily considers the operation of a scheme, however, for biological elements, potential construction impacts are often considered as they have the potential for long-term change if a potential impact is considered to be significant. Therefore, the Compliance Assessment notes that a CEMP (Appendix A5.1) which includes a SWMP in Volume 4 of the EIAR will be implemented for construction management and sediment control measures, respectively.

The evidence-based Compliance Assessment records that for fish, the risks to the receptor are due to noise from construction and operation; potential release of suspended sediment concentrations, and the creation of plumes as a result; and contaminated surface water runoff. Chapter 9 (Noise & Vibration) in Volume 2 of the EIAR has determined that, with the incorporation of the various mitigation measures outlined in that Chapter, there are no significant residual noise or vibration impacts during construction or operation. As above, a CEMP and SWMP (Appendix A5.1 in Volume 4 of the EIAR) will be adhered to, to reduce any risk of suspended solid release. In the unlikely event of an accidental spillage, the emergency response plan will be activated, and onsite spill kits utilised. In-stream works will not take place during the closed season (for fish). The bunding of the water body will be carefully monitored and any fish caught within it will be rescued and released downstream. The Proposed Scheme does not propose to increase the current flow or volume of surface water runoff. Overall, the WFD assessment concludes there is no risk of deterioration to fish (ecology) as a result.

The evidence-based assessment completed comprises an appropriately-scoped and comprehensive evaluation of the Proposed Scheme with regard to the WFD, and it concludes that the Proposed Scheme is consistent with the objectives of the WFD.

Flood Prevention

On page 49 of their submission DCC request that:

"At detailed design stage more detail will need to be provided and agreed on:

- *Cross sections for crossings of the Camac and Poddle Rivers.*

- *Plan for dealing with local pluvial flooded areas anywhere where flood depths on the carriageway are predicted to be above 300mm.*
- *DCC 2022-2028 Development Plan contains updates on Poddle glood zones. These should be referenced.*
- *NTA shall check design against new flood extent maps for the Camac catchment which are due later this year may alter flood risk areas.*
- *Climate Change Flood Adaption Plan for river crossings and other flooded areas.*
- *FRA should give more detail on the river crossings."*

Response

The NTA notes that the Proposed Scheme will have no direct impact on the Rivers Poddle and Camac as has been demonstrated in the EIAR Chapter 13 Water. The NTA will however continue the very positive and constructive liaison with DCC on flood prevention matters during the preparation of the construction-stage documents and during the construction works. This will include taking into consideration any changes to plans, policies, and legislation, where aligned with and consistent with the EIAR.

DCC Section 4.11.6 Environment and Transportation Department Comments

For this department DCC's submissions refers to the Appendix 1 of their submission. The NTA's response to the recommendations included in Appendix 1 is set out in section 2.3.4.16 of this report below.

2.8.12.19 DCC Section 4.12 Parks Department Comment regarding Bunting park

Observations raised / clarifications sought

The submission is concerned that the proposed site compound at Bunting Park will impact safety of run-off zone around GAA pitch, requesting that if there is any impact the site compound footprint should be reduced/altered. The submission also recommends that given the disruption a sum of €50,000 should be provided.

Response

On page 120 of the GAA Club Manual Chapter 8 Providing Facilities, it states that at least 5 meters run off space around the playing area should be provided for safety reasons.

Figure 2.8.12.22 shows the extent of the proposed temporary construction compound at Bunting Park superimposed on the aerial background mapping. The extents of the compound are approximately 10.0m from the edge of the playing area. As such there is no impact on safety in respect of the run-off zone at this location.



Figure 2.8.12.22: Extent of Temporary Compound TC8 on aerial imagery (Image Source: Google)

Section 10.4.3.1 of EIAR Chapter 10 Population assesses the impact on community amenity during the construction phase. Table 10.9 lists the land take impacts on these community facilities and shows that no community facilities are expected to experience significant land take impacts during the Construction Phase of the Proposed Scheme. Overall, the impact of land take across the impacted community areas as a whole (Clogher Road, Crumlin, Dolphins Barn, Greenhills, Kilnamanagh, Mourne Road, Springfield, Tallaght Tymon, Tallaght Village, Walkinstown) is considered Negative, Not Significant and Short-Term during the Construction Phase.

In regard to recommendation that given the disruption a sum of €50,000 should be provided, the necessary lands for the construction compound are included in the schedule of temporary compulsory purchase order plots for the Proposed Scheme, and upon completion of the works the lands will be reinstated and returned to the owner.

Following completion of the construction works, the Construction Compound areas will be cleared and reinstated to match pre-existing conditions. In the case of Construction Compound TC8 on Bunting Road additional tree planting will be provided also, Figure 2.8.12.23 below extract from the Landscaping General Arrangement Drawings from Volume 3 Part 1 of 3 of the EIAR shows the

Proposed Scheme layout on completion.

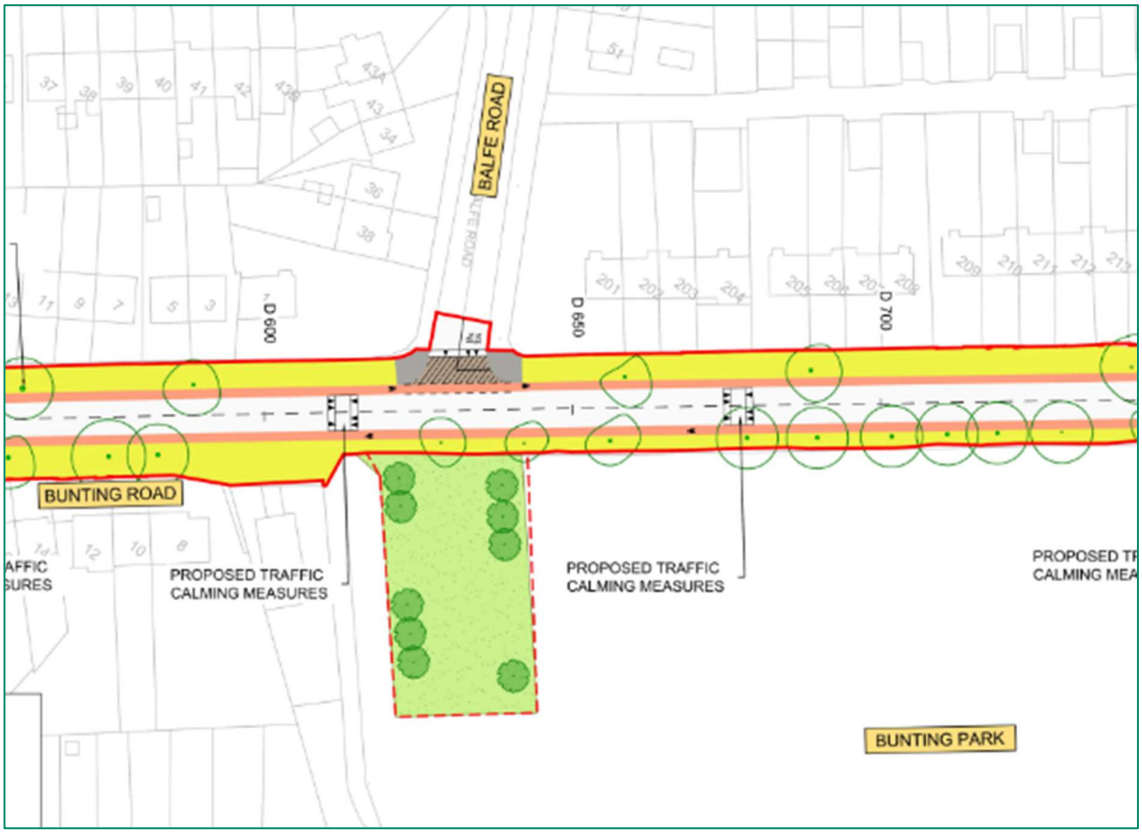


Figure 2.8.12.23: Extent from Landscaping General Arrangement Drawings from EIAR (Sheet 36)

2.8.12.20 DCC Section 5.0 Conclusion

DCC reiterates their support of the Proposed Scheme as stated in their conclusion on pages 49-50 of the submission: *"The proposed* Tallaght/Clondalkin *to City Centre Core Bus Corridor Scheme is supported and welcomed by Dublin City Council as it will ensure the delivery of a number of key policies and objectives of the Dublin City Development Plan 2022-2028."*

DCC further confirmed that the development of the Proposed Scheme will provide an upgraded and expanded bus network and quality of service together with better quality cycling and pedestrian facilities and DCC acknowledged that these improvements will make it easier for people to access and use public transport. It also acknowledged that the Proposed Scheme will, in turn, promote modal shift from the private car to more sustainable forms of transport including walking, cycling and public transport, ultimately contributing to the creation of a greener and more sustainable city.

2.8.12.21 DCC Appendix 1 [Proposed Conditions and Departmental Recommendations]

DCC have set out at the start of their appendix three suggested conditions, followed by a series of recommendations from the various departments.

Proposed Condition 1:

The first suggested condition requested by DCC states:

"That a comprehensive agreement is put in place between DCC and the NTA regarding how the corridor is to be handed over to the NTA and its contractors, what pre-inspection and recording of the corridor is necessary and how the corridor is to be maintained during construction activities and by whom. The agreement shall also address the hand back process, the treatment of all relevant records treated and how the corridor is to be accepted back by DCC following construction."

Response

Under the provisions of the relevant legislation, the NTA has exercised certain powers under Section 44(2)(b) of the 2008 Act to the effect that the functions in relation to securing the provision of public transport infrastructure falling within Section 44(2)(a) of the 2008 Act (as amended) in relation to the CBC Infrastructure Works, should be performed by the NTA. Those functions include the design and construction of the Proposed Scheme and, effectively, the NTA becomes the road authority in respect of the exercise of those functions.

Under the relevant legislation, upon the completion of the construction of the Proposed Scheme the NTA automatically ceases to be the road authority and the status of DCC as the relevant road authority is automatically restored – it does not require the operation of the conventional "*taking-in-charge*" arrangements provided for elsewhere in legislation. Accordingly, the legislative provisions appropriately govern the arrangements for the NTA to commence the construction of the Proposed Scheme, subject to the necessary planning and environmental consents, and govern the restoration of the road authority function to the relevant local authority, in this case being Dublin City Council.

Notwithstanding the above, the NTA will continue the close liaison with DCC that has been in place during the planning and design stage of the Proposed Scheme, during and throughout the subsequent construction stage. This will include engaging and collaborating on the construction arrangements, the road maintenance arrangements during construction and the standard to which the Proposed Scheme will be completed prior to transfer back to DCC, together with record retention, all in full accordance with the EIAR. Given the legislative framework that is in place, these are matters that can, and will, be successfully addressed between DCC and the NTA, in the absence of any approval condition.

Proposed Condition 2:

The second suggested condition requested by DCC states:

"Following hand back, a separate agreement shall be put in place between DCC and the NTA regarding the costs of maintenance of the corridor as a high-quality public transport corridor with agreed levels of performance and how the performance of the public transport corridor is not eroded in the future."

Response:

This proposed condition seeks the enactment of an agreement between DCC and the NTA, subsequent to the completion of the construction of the Proposed Scheme, addressing issues related to maintenance costs.

The Proposed Scheme upon its completion reverts to the status of a public road under the management of the relevant local authority, in this case Dublin City Council. The funding of costs associated with the maintenance of public roads can involve a number of parties depending on the status of the road – for instance, in the case of a national road Transport Infrastructure Ireland would have an involvement. As the Proposed Scheme does not encompass any section of national road, its components constitute regional and/or local roads only. Funding of regional and local roads fall under the ambit of the relevant local authority and the Department of Transport.

The Exchequer does not currently provide the NTA with funds for dispersal to local authorities for maintenance activities and the NTA does not have a role in overseeing or organising general public road maintenance activities. However, the NTA does retain responsibility for bus fleet, bus stops and bus shelters, and maintenance of these elements falls within its remit.

The NTA agrees with the objective stated in the draft condition, namely, to ensure "maintenance of the corridor as a high-quality public transport corridor with agreed levels of performance". To achieve that objective, the NTA anticipates continuing its collaboration with DCC to ensure the delivery of an appropriate maintenance regime. As part of this collaboration, the NTA will support the provision of the necessary funding by the relevant parties to ensure that the benefits of the Proposed Scheme are not inappropriately eroded. These are matters that can be successfully addressed between DCC and the NTA, in the absence of any approval condition.

Proposed Condition 3:

The third suggested condition requested by DCC states:

"All relevant DCC departments involved with the development of the Scheme shall be consulted during the detailed design development process for the Scheme and the NTA shall incorporate the requirements of the DCC departments into the final detailed design of the Scheme."

Response:

The NTA acknowledges the close liaison with DCC that has been in place during the planning and design stage of the Proposed Scheme, which included extensive dialogue with the relevant sections within the Council. The Proposed Scheme as submitted to An Bord Pleanála has properly considered, and taken into account, the inputs from those sections during the design development process.

It is the intention of the NTA that this collaboration will continue both in advance of, and during, the subsequent construction stage of the Proposed Scheme. This will include continued liaison with the relevant sections of the Council and taking their requirements into consideration, where aligned with and consistent with the EIAR. These are matters that can be successfully addressed between DCC and the NTA, in the absence of any approval condition.

Departmental Recommendations

Archaeology Department

The NTA notes the recommendation set out in the DCC Report Appendix 1, from the DCC Archaeology Section that the NTA appoint a Project Archaeologist to oversee the delivery of the archaeological strategy (and it goes on to set out the archaeological aspects that the Project Archaeologist would manage). In Section 15.5.1.1 in Chapter 15 (Archaeological and Cultural Heritage) it states that: *"The NTA will procure the services of a suitably-qualified archaeologist as part of its Employer's Representative team administering and monitoring the works. The appointed contractor will make provision for archaeological monitoring to be carried out under licence to the DHLGH and the NMI, and will ensure the full recognition of, and the proper excavation and recording of, all archaeological soils, features, finds and deposits which may be disturbed below the ground surface."*

Section 15.5.1.1.1 addresses archaeological management.

"An experienced and competent licence-eligible archaeologist will be employed by the appointed contractor to advise on archaeological and cultural heritage matters during construction, to communicate all findings in a timely manner to the NTA and statutory authorities, to acquire any licenses/ consents required to conduct the work, and to supervise and direct the archaeological measures associated with the Proposed Scheme.

Licence applications are made by the licence-eligible archaeologist on behalf of the client to the National Monuments Service at the DHLGH. In addition to a detailed method statement, the applications must include a letter from the client on client letterhead that confirms the availability of adequate funding. There is a prescribed format for the letter that must be followed. Other consents may include a Detection Device licence to use a metal detector or to carry out a non-invasive geophysical survey.

A construction schedule will be made available to the archaeologist, with information on where and when the various elements and ground disturbance will take place.

As part of the licensing requirements, it is essential for the client to provide sufficient notice to the archaeologist/s in advance of the construction works commencing. This will allow for prompt arrival on site to undertake additional surveys and to monitor ground disturbances. As often happens, there may be down time where no excavation work is taking place during the Construction Phase. In this case, it will be necessary to inform the archaeologist/s as to when ground breaking works will recommence.

In the event of archaeological features or material being uncovered during the Construction Phase, all machine work will cease in the immediate area to allow the archaeologist/s time to inspect and record any such material.

Once the presence of archaeologically significant material is established, full archaeological recording of such material is recommended. If it is not possible for the construction works to avoid the material, full excavation will be recommended. The extent and duration of excavation will be advised by the client's archaeologist and will be a matter for discussion between the client and the licensing authorities.

Secure storage for artefacts recovered during the course of the monitoring and related work will be provided.

As part of the licensing requirement and in accordance with the funding letter, adequate funds to cover excavation, post-excavation analysis, and any testing or conservation work required will be made available…"

The Archaeology Section requests that there is publication and/or dissemination as appropriate of the archaeological results of the project and that the Archaeology Section is copied with all Section 26 method statements and any reports arising and provide regular updates on finds and mitigation.

The Archaeology Section also recommends that the primary archaeological paper archive for all archaeological site investigations be prepared and deposited with the Dublin City Archaeological Archives within a timeframe to be agreed with the planning authority. The NTA will liaise with DCC in regard to archival processes.

City Architects Department

The NTA notes the general comments on the Proposed Scheme in the recommendations in the Appendix. NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC City Architects Department comments as these matters were the subject of extensive liaison throughout the design development process.

Conservation Section

In regard to the recommended measures relating to Conservation Issues in the Appendix, the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Conservation Department comments and recommendations as these matters were the subject of extensive liaison throughout the design development process. These issues are addressed within the planning application documents as follows:

The proposed approach to safeguarding architectural interest of affected Architectural Heritage across the Proposed Scheme is covered in section 16.5 in Chapter 16 in Volume 2 of the EIAR.

Best conservation practice, specifications, and method statements for the careful and sensitive relocation and reinstatement of historic fabric is addressed in section 16.5 in Chapter 16 in Volume 2 of the EIAR.

The proposed engagement of an architectural heritage specialist and the duties is addressed in section 16.5 in Chapter 16 in Volume 2 of the EIAR.

The NTA will continue to engage with the relevant local authority departments in accordance with the relevant guidelines, policy and legislation outlined in section 16.2.4 of Chapter 16 in Volume 2 of the EIAR.

Best conservation practice and the Architectural Heritage Protection Guidelines for Planning Authorities (2011) and the Advice Series issued by the Department of Housing, Local Government and Heritage are referenced in 16.2.4 Chapter 16 in Volume 2 of the EIAR.

The proposed protection measures for all existing original architectural heritage features in the vicinity of the works are outlined in section 16.5 of Chapter 16 in Volume 2 of the EIAR.

The requirement of the appointed contractor relating to the Architectural Heritage is outlined in section 16.5 of Chapter 16 in Volume 2 of the EIAR.

In relation to conservation, the submission has recommended specific measures at four locations, listed a) to d) on page 54 of the submission.

Alternate location of bus shelter at St. Patrick's Park should be considered as there is a concern about the impact on the character of St Patrick's Cathedral

The NTA can confirm that there it is not proposed to be a bus shelter at this location. The proposal is to install a finger post bus stop.

The precise location is requested for the milestone/cast iron post box/heritage lamp posts that are being relocated

Section 16.5.1.7.2 in Chapter 16, Volume 2 of the EIAR states:

"…. The proposed mitigation is the recording of the lamp posts in position prior to the works, the labelling of the affected fabric prior to its careful removal to safe storage, and their reinstatement in new positions in close proximity (within 2m) of their existing positions. Recording, overseeing of protective measures and monitoring is to be undertaken by a suitably qualified architectural heritage specialist engaged by the appointed contractor. The works to the historic fabric will be carried out in accordance with the methodology provided in Appendix A16.3 Methodology for Works Affecting Sensitive and Historic Fabric in Volume 4 of this EIAR……

Section 16.4.3.7.1 in Chapter 16, Volume 2 of the EIAR states the following with respect to a number of cast iron post boxes (including the one referenced by the Conservation Section):

"…They will be retained in position and will not be directly impacted by the Proposed Scheme during the Construction Phase. Indirect impacts are anticipated during the Construction Phase due to the potential for disruption of the use of the post boxes, the potential for damage of the fabric of the post boxes, and the adverse visual impact of the construction works on their settings…."

Section 16.5.1.7.3 in Chapter 16, Volume 2 of the EIAR states the following with respect to the milestone:

"…It will be temporarily removed to ensure its protection, before being reinstated within the vicinity of the existing. There is potential for damage of the sensitive fabric during its removal, transport, storage, and reassembly. The predicted pre-mitigation Construction Phase Impact is Direct Negative, Significant and Temporary. The proposed mitigation is the recording of the milestone in position prior to the works, labelling the affected fabric prior to its careful dismantling and removal to safe storage, and the reinstatement of the milestone. Recording, overseeing of protective measures and monitoring is to be undertaken by a suitably qualified architectural heritage specialist engaged by the appointed contractor…."

Consideration should be considered to the rationalisation of signage across the route to reduce visual clutter.

The NTA notes this comment. Significant efforts have been made during the design process to minimise above-ground utility infrastructure where practicable. Where such infrastructure is necessary, it has been sited in appropriate locations, and rationalised where practicable.

Consideration should be given to providing alternative high quality cycle lane surfaces in lieu of red tarmacadam, where cycle ways are located in proximity to protected structures and within ACAs.

The NTA notes this comment. Section 5.5 of the BusConnects Preliminary Design Guidance Booklet, included EIAR Appendix A4.1 in Volume 4 Part 1 of 2 states the following in relation to the proposed cycle track material:

"As illustrated in Figure 8, the use of machine laid asphalt for the cycle track has proven to be an effective way of providing a high level of service with a safe, smooth and continuous surface.

This, however, offers very little contrast to the adjacent carriageway, and depends on the type of edge kerb and the presence of road markings to offer a visual differentiation between the carriageway and the cycle track. Consideration should be given to including an additional colour contrast to the cycle track in the form of an alternative-coloured asphalt (e.g. red, buff, etc) or adding coloured chips to the asphalt surface during installation (e.g. red chip). Designers should refer to section 5.6 of the NCM for further guidance on appropriate cycle track materials.

At junctions, the chosen cycle track material should be continued (as a surface course layer) through the junction for consistency. Alternatively, coloured epoxy resin (cold-applied anti-skid layer) is a robust alternative measure in terms of longevity and maintenance for making cycle lanes more conspicuous at junctions."

In summary, the use of red coloured asphalt, or red coloured epoxy resin has been specified for all cycle tracks across the BusConnects Infrastructure Works to ensure legibility and conspicuity of the proposed cycle tracks and to ensure safety for vulnerable road users.

Traffic Division

The Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Traffic Division comments provided in the Appendix regarding consideration of the traffic management equipment that is necessary for the safe and efficient operation of this Public Transport corridor, and including all traffic signal equipment, and the relevant DCC specification. NTA is aware of, and acknowledges, the important role of the relevant DCC maintenance contractor, and their continued role on both the existing and new traffic signals. These matters were the subject of extensive liaison throughout the design development process.

Public Lighting Department

The Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Public Lighting Department inputs regarding the required light level design and the relevant EN certification as these matters were the subject of extensive liaison throughout the design development process.

Environmental Protection Division

In regard to the Recommendations/Conditions of the Environmental Protection Division set out in the Appendix NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Environmental Protection Division inputs regarding criteria and processes as these matters were the subject of extensive liaison throughout the design development process.

Air and Noise Pollution Control Unit

Chapter 7 (Air Quality) and Chapter 9 (Noise and Vibration) in Volume 2 of the EIAR, both contain an assessment of the potential air and noise impacts which could arise from the construction of the Proposed Scheme (the construction strategy is set out in Chapter 5 in Volume 2 of the EIAR). Chapters 7 and 9 also contain comprehensive suite of measures to mitigate the potential air and noise impacts which could arise from the construction of the Proposed Scheme. These mitigation measures broadly align with the ‘good practice’ measures set out in the DCC Air Quality Monitoring and Noise Control Unit’s Good Practice Guide for Construction and Demolition. These mitigation measures are also contained within the Construction Environmental Management Plan in Appendix A5.1 in Volume 4 of the EIAR.

Parks Department

In regard to the Recommendations/Conditions of the Parks Department set out in the Appendix NTA is satisfied that the Proposed Scheme as submitted to An Bord Pleanála has been planned and assessed taking on board the DCC Parks Department inputs regarding criteria and processes as these matters were the subject of extensive liaison throughout the design development process.

In regard to recommendation that given the disruption a sum of €50,000 should be provided, the necessary lands for the construction compound are included in the schedule of temporary compulsory purchase order plots for the Proposed Scheme, and upon completion of the works the lands will be reinstated and returned to the owner.

3. Responses to Individual Submissions on the Proposed Scheme

3.1 01 – Fairfield Inns Limited

3.1.1 Submission

Description of issues raised in this submission is included in section 2.7.2. of this report

3.1.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.7.2. of this report.

3.2 02 – Theresa McCann

3.2.1 Submission – Bancroft Park

The submission raised the following issues:

Other Issues Raised

3. Support for the scheme

3.2.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.3 03 – Niamh Walker

3.3.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    a. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values

10. Alternative locations
11. Lack of consultation
12. Drainage

3.3.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.4 04 – Jacinta Kenny

3.4.1 Submission

Description of issues raised in this submission is included in section 2.7.3 of this report

3.4.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.7.3 of this report.

3.5 05 – Lynn Broderick

3.5.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

3.5.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.5.3 Submission – Tallaght Village

1. Archaeological and cultural heritage
    a. Priory Walls ACA not included in analysis
2. Loss of community plaza
    a. Community event venue
    b. Loss of trees.
    c. No assessment of bat habitat
3. Alternative route available
    a. Deficiencies in MCA scoring of alternatives

3.5.4 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.6 06 – Nicola Kennedy & Others

3.6.1 Submission - Kildare Road / Old County Road / Clonard Road / Bangor Drive / Saul Road

The submission raised the following issues:

1. Increased traffic congestion and additional traffic on surrounding roads leading to noise & air pollution
2. Safety concerns for traffic diversions onto residential roads leading to danger to children playing, and walking / cycling
3. Loss of street parking.
4. Tree replacement unacceptable
5. Bus time improvement not justified
6. Quiet Road signage and enforcement of bus gate unclear
7. Removal of existing bus stops on Clogher Road
8. Construction traffic
9. Lack of community engagement
10. Disagree with EIAR statement of minimal impact on community
11. Combined effect of schemes
12. Request for mitigation

3.6.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.7 07 – Cathy Mooney & Others [Stannaway Road Residents]

3.7.1 Submission - Kildare Road / Old County Road / Clonard Road / Bangor Drive / Saul Road

The submission raised the following issues:

1. Increased traffic congestion and additional traffic on surrounding roads leading to noise & air pollution

2. Safety concerns for traffic diversions onto residential roads leading to danger to children playing, and walking / cycling
3. Loss of street parking.
4. Tree replacement unacceptable
5. Bus time improvement not justified
6. Quiet Road signage and enforcement of bus gate unclear
7. Removal of existing bus stops on Clogher Road
8. Construction traffic
9. Lack of community engagement
10. Disagree with EIAR statement of minimal impact on community
11. Combined effect of schemes
12. Request for mitigation

3.7.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.8 08 – David and Pamela Smullen

3.8.1 Submission - Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Environmental impacts
    a. Bees
    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact
6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
9. Property values
10. Bus stops
    a. Relocation
    b. Anti-social behaviour
11. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

3.8.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.9 09 – Marian and William Healy & Others

3.9.1 Submission - Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Safety of children / students / residents
3. Loss of privacy
4. Impact on foundations of properties
5. Negative visual impact
6. Access to amenities
7. Lack of consultation

Other Issues Raised

The following issues relating to Parkview were raised in individual submissions:

1. Damage to house foundations

3.9.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.10 10 – Lidl Ireland

3.10.1 Submission – Greenhills Road

The submission raised the following issues:

1. Negative effect on businesses
    a) Passing trade
    b) Additional travel distance and access issues
    c) Removal of public transport link
2. Traffic
3. Security concerns with proposed cul-de-sac of existing Greenhills Road
4. Lack of consultation
5. Property values and future development
6. Alternative proposal to leave access open at Greenhills Road / Calmount Road extension

Other Issues Raised

3. Mitigation measures

3.10.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.11 11 – Killeen Motor Group

3.11.1 Submission

Description of issues raised in this submission is included in section 2.7.4 of this report

3.11.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.7.4 of this report.

3.12 12 – Councillor Liam Sinclair

3.12.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

3.12.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.13 13 – Saint Mary's National School Board of Management

3.13.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity

   a. Flora and Fauna
   b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
   a. Access/egress to site compound
   b. Risk of accidents
   c. Risk to emergency vehicle response times
   d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

Other Issues Raised

1. Loss of educational resource
2. Noise impact on students

3.13.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.14 14 – Councillor Mick Duff and Councillor Charlie O'Connor

3.14.1 Submission

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
   c. Social impact
   d. Amenity value
3. Character of the area
4. Biodiversity
   a. Flora and Fauna
   b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
   a. Access/egress to site compound
   b. Risk of accidents
   c. Risk to emergency vehicle response times
   d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations

11. Lack of consultation
12. Drainage

3.14.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.15 15 – Debbie Gray

3.15.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

3.15.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.15.3 Submission – Tallaght Village

1. Archaeological and cultural heritage
    a. Priory Walls ACA not included in analysis
2. Loss of community plaza
    a. Community event venue
    b. Loss of trees.
    c. No assessment of bat habitat
3. Alternative route available
    a. Deficiencies in MCA scoring of alternatives

3.15.4 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.16 16 – Councillor Mick Duff

3.16.1 Submission - Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Environmental impacts
    a. Bees
    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact
6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
9. Property values
10. Bus stops
    a. Relocation
    b. Anti-social behaviour
11. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

3.16.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.17 17 – Colette Hardiman

3.17.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians

6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

3.17.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.17.3 Submission – Tallaght Village

1. Archaeological and cultural heritage
    a. Priory Walls ACA not included in analysis
2. Loss of community plaza
    a. Community event venue
    a. Loss of trees.
    b. No assessment of bat habitat
3. Alternative route available
    a. Deficiencies in MCA scoring of alternatives

3.17.4 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.18 18 – John and Miriam McDonagh

3.18.1 Submission – Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Environmental impacts
    a. Bees
    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact

6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
9. Property values
10. Bus stops
    a. Relocation
    b. Anti-social behaviour
11. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

3.18.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.19 19 – Shay L'Estrange

3.19.1 Submission - Kildare Road / Old County Road / Clonard Road / Bangor Drive / Saul Road

The submission raised the following issues:

1. Increased traffic congestion and additional traffic on surrounding roads leading to noise & air pollution
2. Safety concerns for traffic diversions onto residential roads leading to danger to children playing, and walking / cycling
3. Loss of street parking
4. Tree replacement unacceptable
5. Bus time improvement not justified
6. Quiet Road signage and enforcement of bus gate unclear
7. Removal of existing bus stops on Clogher Road
8. Construction traffic
9. Lack of community engagement
10. Disagree with EIAR statement of minimal impact on community
11. Combined effect of schemes
12. Request for mitigation

3.19.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.20 20 – Siobhan McBride

3.20.1 Submission - Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic

    c. Air, noise and vibration
2. Environmental impacts
    a. Bees
    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact
6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
9. Property values
10. Bus stops
    a. Relocation
    b. Anti-social behaviour
11. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

Other Issues Raised

The following issues relating to Parkview were raised in individual submissions:

2. Taxis / private coaches / private cars using bus route

3.20.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.2 of this report.

3.21 21 – Darren Mohan and Wendy Lyons

3.21.1 Submission - Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Environmental impacts
    a. Bees
    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact
6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
9. Property values
10. Bus stops

a. Relocation
b. Anti-social behaviour

11. Alternative options –

a. Wider road and realignment for buses
b. Option PV1

3.21.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.22 22 – AA Tyremaster Limited & Others

3.22.1 Submission – Greenhills Road

The submission raised the following issues:

1. Negative effect on businesses
    a) Passing trade
    b) Additional travel distance and access issues
    c) Removal of public transport link
2. Traffic
3. Security concerns with proposed cul-de-sac of existing Greenhills Road
4. Lack of consultation
5. Property values and future development
6. Alternative proposal to leave access open at Greenhills Road / Calmount Road extension

Other Issues Raised

2. CPO of land
4. Zoning

3.22.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.23 23 – Councillor Pat Dunne and Joan Collins TD and 396 Signatories

3.23.1 Submission - Kildare Road / Old County Road / Clonard Road / Bangor Drive / Saul Road

The submission raised the following issues:

1. Increased traffic congestion and additional traffic on surrounding roads leading to noise & air pollution
2. Safety concerns for traffic diversions onto residential roads leading to danger to children playing, and walking / cycling
3. Loss of street parking
4. Tree replacement unacceptable
5. Bus time improvement not justified
6. Quiet Road signage and enforcement of bus gate unclear
7. Removal of existing bus stops on Clogher Road

8. Construction traffic
9. Lack of community engagement
10. Disagree with EIAR statement of minimal impact on community
11. Combined effect of schemes
12. Request for mitigation

Other Issues Raised

1. Advocacy for the proposed scheme

3.23.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.24 24 – Linda Patton

3.24.1 Submission

Description of issues raised in this submission is included in section 2.8.2 of this report

3.24.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.8.2 of this report.

3.25 25 – Bernard Sweeney and Susan Byrne

3.25.1 Submission - Kildare Road / Old County Road / Clonard Road / Bangor Drive / Saul Road

The submission raised the following issues:

1. Increased traffic congestion and additional traffic on surrounding roads leading to noise & air pollution
2. Safety concerns for traffic diversions onto residential roads leading to danger to children playing, and walking / cycling
3. Loss of street parking.
4. Tree replacement unacceptable
5. Bus time improvement not justified
6. Quiet Road signage and enforcement of bus gate unclear
7. Removal of existing bus stops on Clogher Road
8. Construction traffic
9. Lack of community engagement
10. Disagree with EIAR statement of minimal impact on community
11. Combined effect of schemes
12. Request for mitigation

3.25.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.26 26 – Councillor Theresa Costello

3.26.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

3.26.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3of this report.

3.26.3 Submission – Tallaght Village

1. Archaeological and cultural heritage
    a. Priory Walls ACA not included in analysis
2. Loss of community plaza
    a. Community event venue
    b. Loss of trees.
    c. No assessment of bat habitat
3. Alternative route available
    a. Deficiencies in MCA scoring of alternatives

3.26.4 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.27 27 – Tesco Ireland Limited

3.27.1 Submission

Description of issues raised in this submission is included in section 2.7.5 of this report

3.27.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.7.5 of this report.

3.28 28 – Councillor Kieran Mahon

3.28.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

3.28.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.28.3 Submission – Tallaght Village

1. Archaeological and cultural heritage
    a. Priory Walls ACA not included in analysis

2. Loss of community plaza
    a. Community event venue
    b. Loss of trees.
    c. No assessment of bat habitat
3. Alternative route available
    a. Deficiencies in MCA scoring of alternatives

3.28.4 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.28.5 Submission – Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Environmental impacts
    a. Bees
    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact
6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
9. Property values
10. Bus stops
    a. Relocation
    b. Anti-social behaviour
11. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

Other Issues Raised

4. Light pollution
5. Removes social and ecological potential due to car usage decrease

3.28.6 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.28.7 Submission – Greenhills Road

The submission raised the following issues:

1. Negative effect on businesses
    a) Passing trade
    b) Additional travel distance and access issues
    c) Removal of public transport link
2. Traffic
3. Security concerns with proposed cul-de-sac of existing Greenhills Road
4. Lack of consultation
5. Property values and future development
6. Alternative proposal to leave access open at Greenhills Road / Calmount Road extension

Other Issues Raised

1. Bus stops and future bus routes

3.28.8 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.29 29 – Aiden and Claire Griffin & Others

3.29.1 Submission - Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Environmental impacts
    a. Bees
    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact
6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
9. Property values
10. Bus stops
    a. Relocation
    b. Anti-social behaviour
11. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

3.29.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.30 30 – Glenda and Stephen Smullen

3.30.1 Submission - Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Environmental impacts
    a. Bees
    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact
6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
9. Property values
10. Bus stops
    a. Relocation
    b. Anti-social behaviour
11. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

3.30.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.31 31 – Ciaran Cuffe MEP

3.31.1 Submission

Description of issues raised in this submission is included in section 2.8.3 of this report

3.31.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.8.3 of this report.

3.32 32 – Walkinstown Residents Association

3.32.1 Submission - Walkinstown

The submission raised the following issues:

1. Location of construction compound in Bunting Park
2. Bunting Road cycle route

3. Balfe Road right turn ban leading to traffic diversion
4. Walkinstown Road; Land acquisition and relocation of mile marker
5. Walkinstown roundabout
6. Junction of St Mary's Road / Kildare Road and Drimnagh Road
7. SuDS

3.32.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.7.9 of this report.

3.33 33 – Tallaght Community Council

3.33.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

3.33.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.33.3 Submission – Tallaght Village

1. Archaeological and cultural heritage
    a. Priory Walls ACA not included in analysis
2. Loss of community plaza
    a. Community event venue
    b. Loss of trees.
    c. No assessment of bat habitat

3. Alternative route available
    a. Deficiencies in MCA scoring of alternatives

Other Issues Raised

1. Loss of on-street parking
2. Loss of cul-de-sac and traffic congestion

3.33.4 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.34 34 – Dublin Commuter Coalition

3.34.1 Submission

Description of issues raised in this submission is included in section 2.8.4 of this report

3.34.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.8.4 of this report.

3.35 35 – Leila and Stephen Early

3.35.1 Submission

Description of issues raised in this submission is included in section 2.7.6 of this report

3.35.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.7.6 of this report.

3.36 36 – Aoife Hanley & Others

3.36.1 Submission - Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Environmental impacts
    a. Bees
    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact
6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane

9. Property values
10. Bus stops
    a. Relocation
    b. Anti-social behaviour
11. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

3.36.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.37 37 – Blackwin Limited

3.37.1 Submission

Description of issues raised in this submission is included in section 2.7.7 of this report

3.37.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.7.7 of this report.

3.38 38 – Recorder's Residents Association

3.38.1 Submission

Description of issues raised in this submission is included in section 2.8.5 of this report

3.38.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.8.5 of this report.

3.39 39 – Sean Crowe TD

3.39.1 Submission – Tallaght Village

1. Archaeological and cultural heritage
    a. Priory Walls ACA not included in analysis
2. Loss of community plaza
    a. Community event venue
    b. Loss of trees.
    c. No assessment of bat habitat
3. Alternative route available
    a. Deficiencies in MCA scoring of alternatives

3.39.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.2.3 of this report.

3.39.3 Submission - Parkview

The submission raised the following issues:

8. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
9. Environmental impacts
    a. Bees
    b. Natural light
10. Safety of children / students / residents
11. Loss of privacy
12. Negative visual impact
13. Access to amenities
14. Lack of consultation
15. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
16. Property values
17. Bus stops
    a. Relocation
    b. Anti-social behaviour
18. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

Other Issues Raised

The following issues relating to Parkview were raised in individual submissions:

4. Light pollution
7. Residents exiting estate will face challenges

3.39.4 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.40 40 – Dublin Cycling Campaign

3.40.1 Submission – Whole Scheme

3.40.2 Submission

Description of issues raised in this submission is included in section 2.8.6 of this report

3.40.3 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.8.6 of this report.

3.41 41 – Senator Mary Seery Kearney

3.41.1 Submission – Whole Scheme

Description of issues raised in this submission is included in section 2.8.7.2 of this report

3.41.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.8.7.3 of this report.

3.42 42 – St James' Gaels/ An Chaisleán

3.42.1 Submission – Bunting Park

Description of issues raised in this submission is included in section 2.5.2 of this report.

The submission raised the following issues:

1. Location of construction compound in Bunting Park

3.42.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.5.3 of this report.

3.43 43 – South Dublin County Council

3.43.1 Submission – Whole Scheme

Description of issues raised in this submission is included in section 2.8.11 of this report

3.43.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.8.11 of this report.

3.44 44 – Transport Infrastructure Ireland

3.44.1 Submission – Whole Scheme

Description of issues raised in this submission is included in section 2.8.8 of this report

3.44.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.8.8 of this report.

3.45 45 – Developments Application Unit [DAU – DHLGH]

3.45.1 Submission – Whole Scheme

Description of issues raised in this submission is included in section 2.8.9 of this report

3.45.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.8.9 of this report.

3.46 46 – Maxol Limited

3.46.1 Submission

Description of issues raised in this submission is included in section 2.6.3 of this report

3.46.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.6.3 of this report.

3.47 47 – Woodies DIY

3.47.1 Submission

Description of issues raised in this submission is included in section 2.6.4 of this report

3.47.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.6.4 of this report.

3.48 48 – Calmount Holdings Limited

3.48.1 Submission

Description of issues raised in this submission is included in section 2.7.8 of this report

3.48.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.7.8 of this report.

3.49 49 – Hannah Fitzpatrick

3.49.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation

12. Drainage

3.49.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.50 50 – Dublin City Council

3.50.1 Submission – Whole Scheme

Description of issues raised in this submission is included in section 2.8.12 of this report

3.50.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.8.12 of this report.

3.51 51 – Michelle and John-Paul Lyons

3.51.1 Submission - Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Environmental impacts
    a. Bees
    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact
6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
9. Property values
10. Bus stops
    a. Relocation
    b. Anti-social behaviour
11. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

Other Issues Raised

3. Single bus route

3.51.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.52 52 – Bancroft Resident's Association

3.52.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

3.52.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.53 53 – Kylie Burke

3.53.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion

7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

3.53.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.2 of this report.

3.54 54 – James and Charlotte Acton

3.54.1 Submission – Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

3.54.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3 of this report.

3.54.3 Submission - Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Environmental impacts

    a. Bees
    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact
6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
9. Property values
10. Bus stops
    a. Relocation
    b. Anti-social behaviour
11. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

3.54.4 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.55 55 – Brendan Heneghan

3.55.1 Submission – Whole Scheme

Description of issues raised in this submission is included in section 2.8.10 of this report

3.55.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.8.10 of this report.

3.56 56 – Concrete Pumping Limited

3.56.1 Submission – Greenhills Road

The submission raised the following issues:

1. Negative effect on businesses
    a) Passing trade
    b) Additional travel distance and access issues
    c) Removal of public transport link
2. Traffic
3. Security concerns with proposed cul-de-sac of existing Greenhills Road
4. Lack of consultation
5. Property values and future development
6. Alternative proposal to leave access open at Greenhills Road / Calmount Road extension

3.56.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.57 57 – Revensburg Unlimited Company

3.57.1 Submission – Greenhills Road

The submission raised the following issues:

1. Negative effect on businesses
    a) Passing trade
    b) Additional travel distance and access issues
    c) Removal of public transport link
2. Traffic
3. Security concerns with proposed cul-de-sac of existing Greenhills Road
4. Lack of consultation
5. Property values and future development
6. Alternative proposal to leave access open at Greenhills Road / Calmount Road extension

3.57.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.4.3 of this report.

3.58 58 – Councillor Charlie O'Connor

3.58.1 Submission - Parkview

The submission raised the following issues:

1. Loss of green space
    a. Amenity
    b. Traffic
    c. Air, noise and vibration
2. Environmental impacts
    a. Bees
    b. Natural light
3. Safety of children / students / residents
4. Loss of privacy
5. Negative visual impact
6. Access to amenities
7. Lack of consultation
8. Unnecessary change providing no real gains to bus travel times
    a. No benefit to bus route as bus will return to single-file traffic lane
9. Property values
10. Bus stops
    a. Relocation
    b. Anti-social behaviour
11. Alternative options –
    a. Wider road and realignment for buses
    b. Option PV1

3.58.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.3.3 of this report.

3.59 59 – Paul Browne

3.59.1 Submission - Bancroft Park

The submission raised the following issues:

1. Visual Impact
2. Loss of only public green space and Tallaght LAP
    a. Social impact
    b. Amenity value
3. Character of the area
4. Biodiversity
    a. Flora and Fauna
    b. Destruction of trees
5. Safety of vulnerable pedestrians
6. Construction Traffic
    a. Access/egress to site compound
    b. Risk of accidents
    c. Risk to emergency vehicle response times
    d. Delays/congestion
7. Air, noise, vibration and light pollution
8. Community care and recreational premises
9. Property values
10. Alternative locations
11. Lack of consultation
12. Drainage

3.59.2 Response to submission

Detailed responses to the issues raised by this submission have been provided in Section 2.1.3of this report.