

The background is a vibrant red color. It features several abstract geometric shapes: a large teal semi-circle in the top-left corner, a blue semi-circle in the top-right corner containing a white circle, a dark blue semi-circle in the bottom-right corner, and a teal semi-circle in the bottom-left corner. There are also several white circles of varying sizes, some with blue or dark blue outlines, scattered throughout the design.

# Appendix M1

## Stage 1 Quality Audit

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# 1. Introduction

This report documents a Quality Audit carried out on the proposed Swords to City Centre Core Bus Corridor (CBC) Scheme hereafter referred to as the Proposed Scheme. The audit has been prepared by Jacobs who are also acting as Designer for the Proposed Scheme.

The Quality Audit considers the following elements, and has been undertaken in general accordance with the Design Manual for Urban Roads and Streets (DMURS):

- Visual Quality Audit;
- Street Use Audit;
- Road Safety Audit;
- Access Audit;
- Walking Audit;
- Cycle Audit;
- Non-Motorised User Audit;
- Community Audit; and
- Place Check Audit.

Each individual Audit is included as an appendix to the report with the key findings summarised in Section 5.

## 2. Methodology

The process adopted involved nine separate individual audits. Whilst there was some overlap between the various audits, it was noted that there was consistency between the reports which allowed the preparation of an overall set of conclusions. Reference is made throughout the individual audits to the Engineering Design documents prepared for the Proposed Scheme, including the Preliminary Design Report (PDR), as well as the Environmental Impact Assessment Report (EIAR) prepared.

The Quality Audit report was prepared by the Design Team and approved by the Scheme Project Manager Hugh O'Sullivan.

### 3. Proposed Scheme

The Proposed Scheme has an overall length of approximately 12km from end to end online. The Proposed Scheme begins on the R132 Swords Road at the Pinnock Hill junction. The Proposed Scheme is routed via the R132 along Swords Road, Drumcondra Road Upper and Lower and Dorset Street to the junction with North Frederick Street. The Proposed Scheme is then routed via North Frederick Street and Parnell Square East, where it will join the prevailing traffic management regime in the City Centre. Priority for buses is provided along the entire route, consisting primarily of dedicated bus lanes in both directions.

The route of the Proposed Scheme is shown in Figure 1.

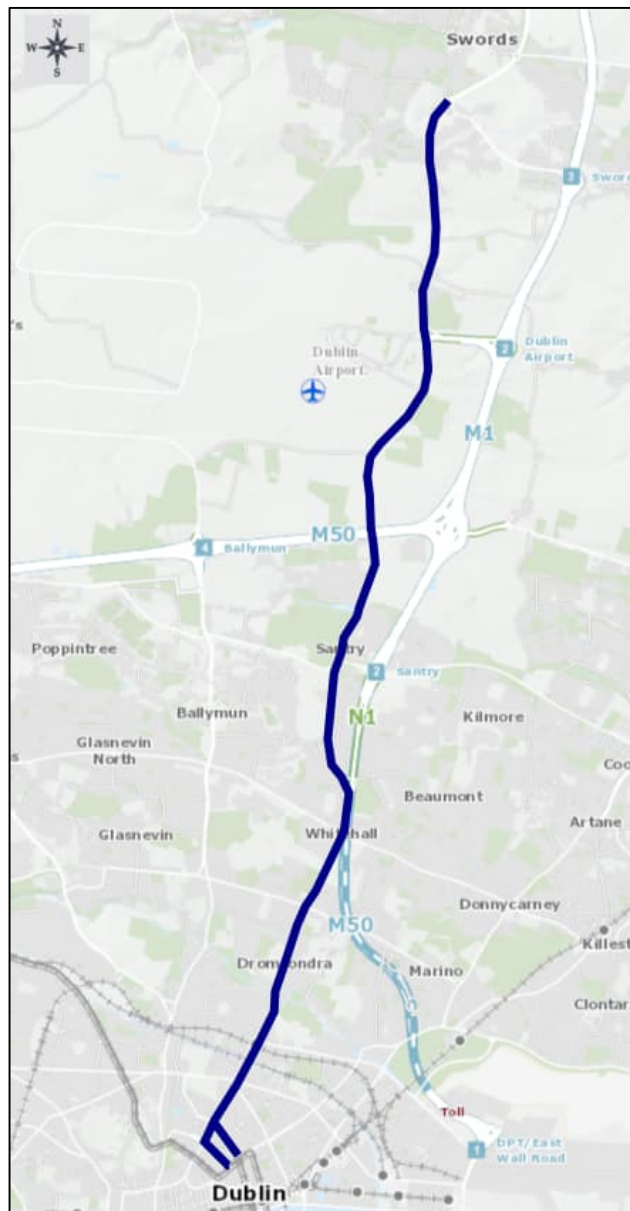


Figure1: Proposed Scheme Route

The Proposed Scheme includes an upgrade of the existing bus priority and cycle facilities. The Proposed Scheme includes a substantial increase in the level of bus priority provided along the corridor, including the provision of additional lengths of bus lane resulting in improved journey time reliability. Throughout the Proposed Scheme bus stops will be enhanced to improve the overall journey experience for bus passengers and cycle facilities will be substantially improved with segregated cycle tracks provided along the links and protected junctions with enhanced signalling for cyclists provided at junctions.

Moreover, pedestrian facilities will be upgraded, and additional signalised crossings will be provided. In addition, urban realm works will be undertaken at key locations with higher quality materials, planting and street furniture provided to enhance the pedestrian experience.

The PDR provides significant detail on the design of the Proposed Scheme including the following relevant information:

- Road Geometry;
- Junction Design;
- Pavement, Kerbs, Footways and Paved Areas;
- Structures;
- Drainage, Hydrology and Flood Risk;
- Services and Utilities;
- Traffic Signs, Lighting and Communications; and
- Landscape and Urban Realm.

## 4. Existing Environment

### 4.1 Pedestrian and Cyclist Provision

Overall existing cycling infrastructure provision within the Proposed Scheme area consists of 69% cycle priority outbound (34% cycle track, 35% advisory cycle lane), with 49% inbound (23% segregated, 26% advisory cycle lane).

Generally footpaths are provided throughout the scheme, which are of varying widths. Pedestrian crossings are provided at junctions.

Section 6.3 of the EIAR provides a detailed description of the existing pedestrian and cyclist provision within the various sections of the Proposed Scheme.

### 4.2 Public Transport Provision

Currently bus lanes are available for 72% of the route of the Proposed Scheme, furthermore there are key sections of the current bus lanes that are not operational on a 24-hour basis while some are also shared with both formal and informal parking facilities and cyclists. An examination of Automatic Vehicle Locator (AVL, collected by the NTA) data indicates that the current standard deviation for journey time of buses on the corridor varies by up to 10 minutes, with predicted future traffic increases these issues are expected to be exacerbated. While impacting upon bus passengers, longer and less reliable bus services also require operators to use additional buses to maintain headways to fill gaps created in the timetable. Aligned to this, the remaining sections of unprioritised bus network can lead to bunching of buses which, in turn, means stops can become overcrowded, creating delays in boarding and alighting and the imbalanced use of bus capacity.

Section 6.3 of the EIAR provides a detailed description of the existing public transport provision within the various sections of the Proposed Scheme.

### 4.3 Local Amenities

The Proposed Scheme will commence in the town of Swords, a large suburb north of Dublin City and one of the fastest growing urban areas in the State. The Proposed Scheme will continue south from Swords and will pass Dublin Airport before it will cross under the M50 Motorway into Dublin City. The route from Swords to the M50 Motorway is a mixture of residential and commercial areas, with some farmlands located both north and south of Dublin Airport. Once passed the M50 Motorway, the Proposed Scheme will continue through largely residential and mixed commercial / residential areas of Santry and Whitehall.

The Proposed Scheme will then pass through the community areas of Drumcondra, North William Street, Iona Road and Gardiner Street before it will cross the Royal Canal into Dublin City Centre. Here, the area that will surround the Proposed Scheme is more urban in character, with more commercial and fewer residential properties. The Proposed Scheme will terminate in the City Centre at Parnell St.

The study area for the Proposed Scheme consists of 13 community areas which have an approximate total population of 116,000 according to the 2016 Census (CSO 2016a).

Section 10.3 of the EIAR provides a more detailed description of the existing local amenities within the various sections of the Proposed Scheme.



## 5. Summary of Key Findings

This report documents a Stage 1 Quality Audit which has been carried out for the Swords to City Centre Core Bus Corridor Scheme in accordance with DMURS. In summary, the Audit has concluded that the Proposed Scheme has been designed in accordance with the principles of DMURS and the other applicable design standards as set out in Section 2.2 of the PDR. The Audit has not identified any significant issues with the preliminary design of the Proposed Scheme however a number of recommendations are outlined within each individual audit report, appended herein.

## Appendix A. Visual Quality Audit

### A1.1 Introduction

The purpose of this audit is to assess the visual quality of the Proposed Scheme including proposed materials, street furniture, impacted views and any visual impacts in areas where place value is high (i.e. city, town or village centres) or in areas of civic or cultural importance (i.e. around protected structures, within Architectural Conservation Areas and tourist precincts).

### A1.2 Existing Environment

Section 17.3 of the EIAR outlines the existing environment of the Proposed Scheme in relation to Landscape and Visual.

### A1.3 Visual Quality Audit Findings

The following Key Issues are listed within the DMURS Street Design Audit template as provided on [www.dmurs.ie](http://www.dmurs.ie). The design response of the Proposed Scheme to each issue is listed below:

Key Issue 1: The landscape plan responds to the street hierarchy and the value of the place.

Design Response: Section 14.3 of the Preliminary Design Report (PDR) outlines how the design has been developed from an analysis of the existing urban realm including the street hierarchy and the value of the place. Key design decisions have been taken on the basis of the place value of a particular place. An example of this includes public realm improvements to enhance the Drumcondra Road Upper shopping parade.

Key Issue 2: Street furniture is orderly placed.

Design Response: Section 4.15.1 of the PDR outlines the approach to hardscape including the proposed street furniture strategy for the Proposed Scheme. The following is noted:

*“Street furniture is mostly confined to replacing or relocating existing furniture, at locations where there is potential development opportunities there is the prospect to provide additional street furniture where it would most enhance the communal spaces.”*

As the scheme progresses to detailed design it is recommended that this strategy be articulated through the positioning of street furniture in an orderly manner, to avoid visual clutter and in a sympathetic manner to the existing public realm.

Key Issue 3: The use of signage and line marking has been minimised.

Design Response: Section 12.2 of the PDR sets out the traffic signage strategy, while section 12.3 sets out the traffic signage and line marking proposals. It is noted in Section 12.2 that:

*“In line with DMURS, the signage proposals have been ‘kept to the minimum requirements of the Traffic Sign Manual (TSM)’. This is to avoid sign congestion within the Proposed Scheme corridor.*

Key Issue 4: Materials and finishes used throughout the scheme have been selected from a limited palette and respond to the value of the place.

Design Response: Section 14.5.1 of the PDR outlines the approach to hardscape including the proposed material typologies for the Proposed Scheme. The following is noted:

*“Through the process of developing the Preliminary Design a typology and palette of proposed materials was developed to create a consistent design response for various sections of the route. The proposed materials were based on the existing landscape character, existing materials, historical materials while also identifying areas for betterment through the use of higher quality surface materials”.*

High quality materials have been proposed in a number of locations throughout the proposed scheme to respond to urban centres, including Northern End of Drumcondra Road Lower Drumcondra Station to Parnell Square including Dorset Street Upper and Frederick Street North (End of route).

It is further noted that Figure 17.2 of the EIAR includes a series of photomontages which have been prepared in order to assess the visual impact of the Proposed Scheme in sensitive areas and where significant interventions are proposed. These photomontages demonstrate the quality of the proposed materials and the consideration which has been given to visual quality in the design of the Proposed Scheme.

#### A1.4 Conclusions

The Proposed Scheme will generally improve existing visual quality along the proposed route through the consistent application of high quality proposed materials, consistent street furniture, and the minimisation of impacted views and any visual impacts in areas where place value is high.

It is recommended that the as the Scheme progresses to Detailed Design that the design intent to provide enhanced visual quality, in particular in areas of high visual sensitivity, is retained and further articulated.

## Appendix B. Street Use Audit

### B1.1 Introduction

The purpose of this Audit is to assess the Proposed Scheme in the context of how the street is currently being used by the community, and how it may be used following implementation of the Proposed Scheme. Key considerations would include existing & proposed connectivity for non-motorised road users and the provision of a self-regulating Road/Street environment.

### B1.2 Existing Environment

Section 6.3 of the EIAR outlines the existing environment of the Proposed Scheme in relation to the street use in terms of walking, cycling, bus services, general traffic and parking/loading facilities.

Section 17.3.4 of the EIAR outlines the existing environment of the Proposed Scheme in relation to the streetscape character.

### B1.3 Street Use Audit Findings

#### B1.3.1 Connectivity

The following Key Issues are listed within the DMURS Street Design Audit template as provided on [www.dmurs.ie](http://www.dmurs.ie). The design response of the Proposed Scheme to each issue is listed below:

Key Issue 1: Strategic routes/major desire lines been identified and are clearly incorporated into the design

Design Response: The Proposed Scheme is located within a built-up urban environment and generally follows the route of existing roads and streets. Where applicable and appropriate additional desire lines have been identified and incorporated into the scheme. In addition, new pedestrian crossings have been provided along key pedestrian desire lines both at a number of junctions and mid-block (e.g. on R132 Swords Road near Centra in Santry Village and on the R132 Swords road outside the Royal College of Surgeon Sports Ground to provide more frequent safe opportunities for pedestrians to cross roads.

Key Issue 2: Multiple points of access are provided to the site/place, in particular for sustainable modes.

Design Response: This proposed scheme supports sustainable travel through retrofitting the existing road cross section to create space for sustainable modes. More sustainable neighbourhoods are created by connecting existing estates or local roads to proposed pedestrian and cycling infrastructure. An example of this would be on Botanic Avenue where existing parallel parking is replaced with a cycle lane and Advanced Stacking Lane (ASL) to provide improved access to cycling facilities on the Drumcondra Road Lower.

Key Issue 3: Accessibility throughout the site is maximised for pedestrians and cyclists, ensuring route choice.

Design Response: As noted in the response to Key Issue 1 above, the Proposed Scheme is located in a built up urban environment and generally follows the route of existing roads and streets. Pedestrian and cyclist accessibility has been maximised through the provision of improved facilities for both groups throughout the Proposed Scheme. Additional route choice has been facilitated through the provision of alternative cycle facilities, where the optimum cycle facilities are not practicable along the Core Bus Corridor, for example the alternative cycle facilities within Lorcan Road (Quiet Street) adjacent to the R132 Swords Road.

Key Issue 4: Through movements by private vehicles on local streets are discouraged by an appropriate level of traffic calming measures.

Design Response: Traffic calming measures, including turn bans, quiet street treatments and filtered permeability measures have been proposed where there is the potential for through movements by private vehicles on local streets.

Examples of this include a quiet street cycle route proposed on Lorcan Road in Santry and retention of turning bans on Dorset St Upper.

### B1.3.2 Self-Regulating Street Environment

The following Key Issues are listed within the DMURS Street Design Audit template as provided on [www.dmurs.ie](http://www.dmurs.ie). The design response of the Proposed Scheme to each issue is listed below:

Key Issue 1: A suitable range of design speeds have been applied with regard to context and function.

Design Response: Design speeds throughout the proposed scheme have been reviewed in the context of the proposals and in cases where the existing design speed would not function safely or effectively with the Proposed Scheme, it is proposed to change design speeds. It is not proposed to change any speed limits as part of the proposed scheme.

Key Issue 2: The street environment will facilitate the creation of a traffic calmed environment via the use of 'softer' or passive measures

Design Response: General traffic lane widths are proposed to be narrowed in places throughout the extents of the Proposed Scheme. Controlled access points and side roads with low radii will ensure vehicles entering or leaving the carriageway can only do so at low speed to again generate a softer traffic calmed environment. It is proposed to provide continuous cycle tracks and footways at side roads to further slow turning vehicles. Urban tree planting will provide a height element and moderate sense of enclosure to aid visual calming measures. Extensive road markings are proposed throughout the scheme to help narrow active carriageway widths, discourage illegal parking manoeuvres and vehicle speeds.

Key Issue 3: A suitable range of design standards/measures have been applied that are consistent with the applied design speeds.

Design Response: Design standards as outlined in DMURS have been adopted to improve the existing carriageway widths, road geometry, forward and junction visibilities and horizontal and vertical deflections throughout the scheme. In addition to this the BusConnects Preliminary Design Guidance Booklet (PDGB), included in Appendix O of the PDR, has been developed to inform the preliminary design of all Core Bus Corridor Schemes and ensure consistent designs. The Preliminary Design Report outlines the standards used.

### B1.4 Conclusions

The Proposed Scheme will generally improve existing connectivity along the proposed route and includes appropriate measures to encourage slower vehicle speeds to facilitate the creation of a self-regulating traffic calmed street environment.

It is recommended that as the Scheme progresses to Detailed Design that this design intent is retained and further articulated, through detailing and material choice

## Appendix C. Road Safety Audit Report

A Stage 1 Road Safety Audit has been carried out in relation to the Proposed Scheme by Jacobs Engineering Ireland Ltd. This audit report is included in Appendix M of the PDR. A number of recommendations have been highlighted within the report which have been incorporated into the Preliminary Design of the Proposed Scheme where appropriate.

## Appendix D. Access Audit

### D1.1 Introduction

The purpose of this Audit is to review the Proposed Scheme, and the existing environment into which it would be located, to assess if it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size or disability. The Audit has considered a number of aspects of the Proposed Scheme, including lighting, the provision of kerbs and/or dropped kerbs, tactile paving and tonal contrast of proposed materials, as appropriate.

### D1.2 Existing Environment

The Accessibility Audit Report, included in Appendix I of the Preliminary Design Report outlines the existing environment of the Proposed Scheme in relation to accessibility.

### D1.3 Access Audit Findings

#### D1.3.1 Lighting

Section 12.4 of the Preliminary Design Report (PDR) sets out the proposed public lighting strategy for the Proposed Scheme. It is noted that the strategy for the Proposed Scheme is to replicate the existing public lighting provision, with existing public lighting columns moved or replaced where necessary. Any new or relocated public lighting provided will be provided with Light Emitting Diode (LED) lanterns.

As the scheme progresses to detailed design it is recommended that this lighting strategy be further articulated to ensure sufficient lighting is provided throughout the extents of the Proposed Scheme, in order to facilitate accessibility.

#### D1.3.2 Kerbs including dropped Kerbs

The preliminary design drawings do not specify the locations of dropped kerbs. As the scheme progresses to Detailed Design it is recommended that dropped kerb locations be identified in any locations where they are required, such as at pedestrian crossings and accessible parking spaces.

It is noted that in line with the Bus Connects Preliminary Design Guidance Booklet (PDGB), included in Appendix O of the PDR, the proposed side road treatment is to provide continuous footpaths and cycle tracks across side roads. As such dropped kerbs would not be required in these locations to allow pedestrians to cross the side road.

#### D1.3.3 Tactile Paving

The preliminary design drawings do not specify the locations of tactile paving. As the scheme progresses to Detailed Design it is recommended that tactile paving locations be identified in any locations where they are required in accordance with the DETR Guidance on the use of Tactile Paving Surfaces document, such as at controlled and uncontrolled pedestrian crossings, adjacent to shared spaces and at the top and bottom of flights of steps.

#### D1.3.4 Tonal Contrast of Materials

The preliminary design drawings do not specify the colours of proposed paving materials. As the scheme progresses to Detailed Design it is recommended that consideration be given to the tonal contrast of proposed materials, in order to ensure a legible public realm for visually impaired users in addition to a high quality visual

finish. All tactile paving should be of the colour specified in the DETR Guidance on the use of Tactile Paving Surfaces document, for example red blister tactile paving should only be used for controlled crossings.

#### D1.4 Conclusions

The Proposed Scheme will generally improve existing accessibility along the proposed route and includes appropriate measures to ensure that it can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size or disability.

It is recommended that the as the Scheme progresses to Detailed Design that the design intent of the Proposed Scheme in relation to accessibility is retained and further articulated, through detailing and material choice.



## Appendix E. Walking Audit

### E1.1 Introduction

The purpose of this Audit is to review the Proposed Scheme, and the existing environment into which it would be located, to assess if it can be readily & comfortably traversed by pedestrians, that the needs of pedestrians have prioritised over cyclists & vehicles, and that footpaths are continuous and widened enough to cater for the anticipated number of pedestrians.

### E1.2 Existing Environment

Section 6.3 of the EIAR outlines the existing environment of the Proposed Scheme in relation to Pedestrian Infrastructure

### E1.3 Walking Audit Findings

The following Key Issues are listed within the DMURS Street Design Audit template as provided on [www.dmurs.ie](http://www.dmurs.ie). The design response of the Proposed Scheme to each issue is listed below:

Key Issue 1: The built environment contributes to the creation of a safe and comfortable pedestrian environment.

Design Response: The Proposed Scheme has been designed to ensure that it facilitates a safe and comfortable pedestrian environment through the provision of widened footpaths and enhanced areas of public realm. Section 6.4.6.2 of the EIAR summarises an assessment which has been carried out to assess the overall impact of the Proposed Scheme compared to the existing situation in relation to Pedestrian Infrastructure. Examples of an improved pedestrian environment as part of the Proposed Scheme is on the Swords Road (R132) southbound, between the entrance to Kilronan Equestrian Centre to Kettles Lane, and on Kettles Lane where provision of a footpath provides connectivity to Metropoint Business Park.

Key Issue 2: Junctions been designed to ensure the needs of pedestrians and cyclists are prioritised

Design Response: The Proposed Scheme has been designed to ensure that it prioritises the needs of pedestrians at junctions. Section 6.4.6.2 of the EIAR summarises an assessment which has been carried out to assess the overall impact of the Proposed Scheme compared to the existing situation in relation to Pedestrian Infrastructure. The following is noted:

*“The Proposed Scheme consists of measures to enhance the existing pedestrian infrastructure along the direct study area. A Level of Service (LoS) junction assessment has been undertaken using a set of five criteria to determine the impact that the Proposed Scheme has for pedestrians. The assessments demonstrate in the Do Minimum scenario, 72% of the junctions assessed had LoS ratings of D or below, 23% had a C rating and 5% had a B rating. In the Do Something scenario, i.e. following the development of the Proposed Scheme, 90% of the assessed junctions had the highest A / B LoS ratings, 10% had C ratings. The improvements to the quality of the pedestrian infrastructure will be Positive, Moderate and Long-term in Section 2, Positive, Very Significant and Long-term in Sections 1, 4 and 5 and Positive, Significant and Long-term in Sections 3 the Proposed Scheme.”*

An example of this is the Pinnock Hill Junction which is proposed to be converted from a large roundabout to a signalised junction with improved pedestrian crossings facilities

Key Issue 3: Footpaths are continuous and wide enough to cater for the anticipated number of pedestrian movements.

Design Response: Footpath widths have been designed in accordance with DMURS width requirements and are generally 2.0m wide. Furthermore, it is noted that in line with the Bus Connects Preliminary Design Guidance Booklet (PDGB), included in Appendix O of the PDR, the proposed side road treatment is to provide continuous footpaths across side roads.

Proposed footpath widths have been assessed to ensure that pedestrian comfort requirements outlined in the Dublin City Council Public Realm Masterplan are met, based on predicted pedestrian flows. A further pedestrian comfort assessment has also been carried out in accordance with the Transport for London Pedestrian Comfort Guidance document.

Where departures or deviations from the minimum footpath widths outlined in DMURS are proposed, these are listed in Appendix C of the Preliminary Design Report (PDR). The design justification for relaxations/departures is set out in this PDR Appendix C.

Key Issue 4: The particular needs of visually and mobility impaired users been identified and incorporated in the design.

Design Response: Visually impaired pedestrians have been considered during the design development of the Proposed Scheme. Minimum kerb upstand heights of 60mm have been specified to ensure that the kerb is fully detectable by visually impaired pedestrians. Pedestrian/cyclist conflicts have also been carefully considered, in particular at signalised junctions and bus stops, where there is potential for such conflict. These conflicts have generally been controlled in order to ensure priority for visually and mobility impaired pedestrians. Tactile paving will be provided as appropriate in any locations where they are required in accordance with the DETR Guidance on the use of Tactile Paving Surfaces document

#### E1.4 Conclusion

The Proposed Scheme will generally improve existing pedestrian facilities along the proposed route and includes appropriate measures to ensure that it can be readily & comfortably traversed by pedestrians, that the needs of pedestrians have prioritised over cyclists & vehicles, and that footpaths are continuous and widened enough to cater for the anticipated number of pedestrians.

It is recommended that the as the Scheme progresses to Detailed Design that the design intent of the Proposed Scheme in relation to enhanced pedestrian provision is retained and further articulated.

## Appendix F. Cycle Audit

### F1.1 Introduction

The purpose of this Cycle Audit is to review the proposed Scheme, and the existing environment into which it would be located, to assess if it will cater comfortably for cyclists, of all ages and abilities, and that the needs of cyclists have been prioritised over vehicular traffic.

### F1.2 Existing Environment

Section 6.3 of the EIAR outlines the existing environment of the Proposed Scheme in relation to Cycling Infrastructure.

### F1.3 Cycle Audit Findings

The following Key Issues are listed within the DMURS Street Design Audit template as provided on [www.dmurs.ie](http://www.dmurs.ie). The design response of the Proposed Scheme to each issue is listed below:

Key Issue 1: Junctions have been designed to ensure the needs of cyclists are prioritised.

Design Response: The Proposed Scheme has been designed to ensure the needs of cyclists are prioritised at junctions. Section 6.4.6.3 of the EIAR summarises an assessment which has been carried out to assess the overall impact of the Proposed Scheme compared to the existing situation in relation to Pedestrian Infrastructure. The following is noted in relation to cyclist facilities at junctions:

*“The Proposed Scheme also consists of measures to enhance the existing cycling infrastructure along the direct study area. A LoS assessment was undertaken using an adapted version of the NTA’s National Cycle Manual Quality of Service (QoS) Evaluation criteria. The assessments demonstrate in the Do Minimum scenario, 64% of the route sections assessed had LoS ratings of D, 32% had a C rating, with 4% having a B rating.*

*In the Do Something scenario, 82% of the assessed route sections had A or B LoS ratings, 14% had C ratings and 4% had D ratings. The potential improvements to the quality of the cycling infrastructure will be Positive, Slight and Long-term in Section 2, Positive, Moderate and Long-term in Section 1 and Positive, Very Significant and Long-term in Sections 3, 4 and 5”.*

An example of a junction which will provide enhanced facilities for cyclists following the implementation of the Proposed Scheme is the junction of Coolock Lane and Swords Road (R132) where it is proposed to remove traffic slip lanes and provide a protected junction for cyclists

Key Issue 2: Cycling facilities will cater for cyclists of all ages and abilities.

Design Response: Significant efforts have been undertaken during the development of the Proposed Scheme to ensure that cycle facilities are inclusive and cater for cyclists of all ages and abilities. The BusConnects Preliminary Design Guidance Booklet (PDGB) is included in Appendix O of the PDR. This document states the following:

*“In the approach to cycle infrastructure design, the BusConnects project not only aims to cater for existing cyclists, but more particularly for younger and older cyclists, mobility impaired cyclists and new cyclists as well as those who currently do not cycle but would be prepared to, subject to improved safety and greater cycle infrastructure provision.”*

Segregated cycle facilities have been provided throughout the Proposed Scheme as standard, as well as protected junctions for cyclists and island bus stops which remove the conflict between cyclists and buses. In addition the desirable minimum cycle track width is 2.0m, which caters for a range of adapted cycles and for two-abreast cycling, e.g. a parent and child. The Proposed Scheme has been designed in accordance with these principles and as such provides facilities which will cater for cyclists of all ages and abilities.

#### F1.4 Conclusion

The Proposed Scheme will generally improve existing cyclist facilities along the proposed route and includes appropriate measures to ensure that it will cater comfortably for cyclists, of all ages and abilities, and that the needs of cyclists have been prioritised over vehicular traffic.

It is recommended that the as the Scheme progresses to Detailed Design that the design intent of the Proposed Scheme in relation to enhanced cyclist provision is retained and further articulated.

## Appendix G. Non Motorised User Audit

### G1.1 Introduction

The purpose of a Non-Motorised User (NMU) Audit is to review the Proposed Scheme, and the existing environment into which it would be located, to assess if it will cater comfortably for all non-motorised road users, of all ages and abilities, and that the needs of these vulnerable road users have been prioritised over vehicular traffic.

As part of the preparation of this Quality Audit separate Access, Walking & Cycling Audits have been undertaken (refer to Appendix D, Appendix E and Appendix F of this report). It is considered that the findings of these three audits appropriately address any issues which would likely be raised in the NMU Audit and as such no further findings are presented here.

## Appendix H. Community Audit

### I1.1 Introduction

The purpose of this Audit is to review the existing roads & streets in the vicinity of the Proposed Scheme, and to identify changes to the way the existing streets are used by all road users and assess if any negative consequences are expected to arise which would require changes to the proposed scheme in order to address them. This audit also considers any potential impact on community businesses.

### I1.2 Community Audit Findings

The proposals will maintain the existing street use along the proposed route and in the adjacent neighbouring road/street network. In many instances the proposals will enhance/improve existing vulnerable road user facilities, improve connectivity and reduce vehicle speeds. It is considered that the proposals will not give rise to any negative community consequences on the existing road/streets through which the Scheme runs.

Section 10.6 of the EIAR notes the following in this regard:

“As outlined within Section 10.4.4 and summarised in Table 10.12 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. 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).

## Appendix I. Place Check Audit

### I1.1 Introduction

The purpose of this audit is to assess the placemaking element of the Proposed Scheme and assess the balance of Movement and Place as outlined in DMURS including Enclosure, Active Edges and Pedestrian Activity/Facilities.

### I1.2 Existing Environment

Section 6.3 of the EIAR outlines the existing environment of the Proposed Scheme in relation to the street use in terms of walking, cycling, bus services, general traffic and parking/loading facilities.

Section 17.3.4 of the EIAR outlines the existing environment of the Proposed Scheme in relation to the streetscape character.

### I1.3 Place Check Audit Findings

In relation to Enclosure, the Proposed Scheme is situated on existing urban roads and streets with existing built form. It is not proposed to construct any new buildings as part of the Proposed Scheme and as such the Proposed Scheme does not have any direct influence on Enclosure, as could be achieved with a new development.

In relation to Active Edges, it is again noted that the Proposed Scheme is situated on existing urban roads and streets with existing built form. As such the Proposed Scheme does not have any influence on adjacent active edges. Pedestrian Activity/Facilities are comprehensively dealt with under the Walking Audit.

### I1.4 Conclusion

The Proposed Scheme will generally improve the urban spaces places through which it passes, and has appropriately addressed the balance of Movement and Place as outlined in DMURS, with placemaking elements as appropriate.