Appendix I2
Accessibility Audit -
Clondalkin to Drimnagh

Accessibility Audit Report

Tallaght / Clondalkin to City Centre CBC08
BCIDA-ACM-TRA_ZZ-0008_XX-RP-TR-0001

Client – National Transport Authority
Stage – Stage 2

Package A
BCIDA-ACM-TRA_ZZ_0008_XX-RP-TR-0001

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Executive Summary

This Disability Audit includes an assessment of the existing accessibility features and potential barriers to disabled people along the Clondalkin Route 8 as well as a review of the Stage 2 proposals. Each section includes a list of recommendations for consideration when developing the design to enable everyone to use and enjoy the environment on equal terms regardless of age or disability.

In general, the scheme is likely to improve the street environment meeting current Universal Design good practice standards, or at least make it no worse than the current situation. However, in a small number of cases where road space is limited, the improvements for cyclists have the potential to make the pedestrian environment more complex for vulnerable pedestrians, including people with vision impairments.

The scheme has the opportunity to address many of the existing barriers to accessibility. For example; although the majority of the footways appear to be in a reasonable state of repair and the majority of crossings have dropped kerbs and tactile paving there is the opportunity to address any gaps in the current provision within the scheme; in general there will be an increase in the number of controlled pedestrian crossings along the route improving the experience for pedestrians, and the Audit identifies strategic locations where blue-badge parking spaces could be of benefit to many disabled people.

However, the proposed scheme includes a small number of bus stops with shared pedestrian/cycle areas on the approach to the bus boarding areas which could be problematic for vulnerable pedestrians. These bus stops are in the minority and are only proposed where the available space is limited, the majority of the bus stops are provided on bypass islands segregated from cyclists. Therefore, although this bus stop design meets guidance detailed in the BusConnects (BC) Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors, there is a recommendation to explore every opportunity to design out shared spaces and to carry out testing with disabled people on this bus stop type before adoption across the whole network. The ramps proposed to provide access to the pedestrian/cycle bridge at the Nangor Road/Naas Road junction are unlikely to meet the needs of many disabled people. Therefore, there is a recommendation to revisit the potential crossing options at this junction at the next stage. The cycle facilities proposed at a number of junctions potentially create more complex pedestrian environment and the Audit recommends revising these designs to reduce the potential areas of conflict between pedestrians and cyclists at the next design stage.

An effective parking enforcement strategy should be implemented to help prevent parked vehicles blocking footways and cycleways.

Table of Contents

1 Introduction

1.1 Background

This Disability Audit Report was compiled by People Friendly Ltd Accessibility and Inclusion Consultants as part of the AECOM led design team for Route 8 Clondalkin. The report considers the needs of a wide range of disabled people - people with sensory and cognitive impairments as well as those with mobility impairments, including wheelchair users. The report was produced in response to the Tender and Schedule requirement to produce *"a report listing existing shortcomings and proposed recommendations for ensuring the Scheme is designed in line with the requirements of the Disability Act 2005"*

The Disability Act 2005 places a statutory obligation on public service providers to consider the needs of disabled people. On this basis the report includes an assessment of the existing environment along the scheme route with a description of the key accessibility features and potential barriers to disabled people based on the Universal Design standards of good practice listed below. The report also includes a review of the Stage 2 proposals for each section of the scheme based on these standards, with a commentary on the Universal Design features of the scheme within the context of the existing environment. Each section of the Audit ends with a list of recommendations on how the scheme should be developed to enable everyone to use and enjoy the environment on equal terms regardless of age or disability.

1.2 Universal Design Standards

The following relevant standards and guidelines have been identified within the report:

- Building for Everyone: A Universal Design Approach NDA CEUD
- How Walkable is Your Town, 2015 NDA CEUD
- Shared Space, Shared Surfaces and Home Zones from a Universal Design Approach for the Urban Environment in Ireland NDA CEUD
- Best Practice Guidelines, Designing Accessible Environments. Irish Wheelchair Association
- UK DfT Inclusive Mobility
- UK DfT Guidance on the use of tactile paving surfaces
- BS8300:2018 Volume 1 Design of an accessible and inclusive built environment. External Environment - code of practice

1.3 Universal Design

Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people, regardless of their age, size or disability. This includes public places in the built environment such as buildings, streets or spaces that the public have access to; products and services provided in those places; and systems that are available including information and communications technology (ICT).

The seven Principles of Universal Design were developed in 1997 by a working group of architects, product designers, engineers and environmental design researchers, led by the late Ronald Mace in the North Carolina State University. The Principles "may be applied to evaluate existing designs, guide the design process and educate both designers and consumers about the characteristics of more usable products and environments." These principles are as follows:

1: Equitable Use The design is useful and marketable to people with diverse abilities. Guidelines:

a. Provide the same means of use for all users: identical whenever possible; equivalent when not.

b. Avoid segregating or stigmatizing any users.

c. Provisions for privacy, security, and safety should be equally available to all users.

d. d. Make the design appealing to all users.

2: Flexibility in Use The design accommodates a wide range of individual preferences and abilities. Guidelines:

a. Provide choice in methods of use.

b. Accommodate right- or left-handed access and use.

c. Facilitate the user's accuracy and precision.

d. Provide adaptability to the user's pace.

3: Simple and Intuitive Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level. Guidelines:

a. Eliminate unnecessary complexity.

b. Be consistent with user expectations and intuition. Accommodate a wide range of literacy and language skills.

c. Arrange information consistent with its importance.

d. Provide effective prompting and feedback during and after task completion.

4: Perceptible Information The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities. Guidelines:

a. Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information.

b. Provide adequate contrast between essential information and its surroundings.

c. Maximize "legibility" of essential information.

d. Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions).

e. Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

5: Tolerance for Error The design minimizes hazards and the adverse consequences of accidental or unintended actions. Guidelines:

a. Arrange elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded.

b. Provide warnings of hazards and errors.

c. Provide fail safe features.

d. Discourage unconscious action in tasks that require vigilance.

6: Low Physical Effort The design can be used efficiently and comfortably and with a minimum of fatigue. Guidelines:

a. Allow user to maintain a neutral body position.

b. Use reasonable operating forces.

c. Minimize repetitive actions.

d. Minimize sustained physical effort.

7: Size and Space for Approach and Use Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility. Guidelines:

a. Provide a clear line of sight to important elements for any seated or standing user.

b. Make reach to all components comfortable for any seated or standing user.

c. Accommodate variations in hand and grip size.

d. Provide adequate space for the use of assistive devices or personal assistance.

2 Section 1 of Route 8

2.1 Introduction

The following overview of the existing and proposed facilities is based on google maps information and a review of the AECOM proposals for Section 1 shown on Drawing BCD-0000-PRW_PC-08_XX_0000-DR-CR-0002, Sheet 1 of 12.

2.2 Local Amenities (within 500m)

The following facilities were identified within a 500m radius of the route:

- Canal Towpath access
- Homes
- Businesses
- Park

2.3 Existing

Pedestrian Facilities

The pedestrian only footways are provided on both sides of Nangor Road and Woodford Walk. The footway next to the eastbound carriageway of Nangor Road appears to be narrower than 2m at its widest and is partially overgrown.

Pedestrian crossings are provided at the junction between Nangor Road and Woodford Walk but there is no crossing on the east side of the junction which is likely to add a detour for those wishing to cross Nangor Road from the eastern footway. The tactile paving on the controlled crossings uses the old 'T' shaped layout, rather than the current 'L' shape.

Cycle Facilities

Cyclists share the bus lanes.

Bus Facilities

A bus stop is provided on the eastbound carriageway of Nangor Road west of the junction with Woodford Walk.

Parking & Drop off

There is no on-street parking.

2.4 Proposed

Pedestrian Facilities

There are no proposed changes to the footways but bus boarding areas on both sides of the Nangor Road would be shared with cyclists which is far from ideal.

There is no additional crossing shown on the east of the Nangor Road/Woodford Walk junction which becomes more important with the location of the bus stops to the east of the junction. However, at this stage the design team believe the pedestrian traffic volumes will be catered for with a single signalised crossing route on the Nangor Road west of Woodford Walk junction as per the existing arrangement.

Cycle Facilities

Dedicated cycleways will be provided on both sides of Nangor Road.

Bus Facilities

New bus stops are shown on both sides of Nangor Road east of the junction with Woodford Walk.

Parking & Drop off

There are no changes proposed to the parking and drop-off arrangements.

2.5 Recommendations

- At the next stage the need for an additional controlled crossing on the east side of the Nangor Road/Woodford Walk junction should be considered further.
- At the next stage the design of the bus stop should minimise the potential interaction between pedestrians and cyclists. The BC Preliminary Design Guidance Booklet shows a bus stop with a shared route to the bus boarding area but the consultant recommends that this bus stop type should be tested with a wide range of disabled people before it is adopted across the network.

3 Section 2 of Route 8

3.1 Introduction

The following overview of the existing and proposed facilities is based on google maps information and a review of the AECOM proposals for Section 2 shown on Drawing BCD-0000-PRW_PC-08_XX_0000-DR-CR-0002, Sheet 2 of 12.

3.2 Local Amenities (within 500m)

The following facilities were identified within a 500m radius of the route:

- Canal and Park

3.3 Existing

Pedestrian Facilities

The footway running parallel to the main eastbound carriageway is designated as a shared footway/cycleway, although with one exception all of the homes, businesses and other facilities are accessed from the westbound carriageway on this section of the route minimising the likely pedestrian footfall on the eastbound footway.

A footway is provided on one side of the side road up to the gates of a golf club but there are no dropped kerbs at the gate in the wall leading to the shared footway running parallel to the main carriageway. All footways appear to be at least 2m wide and in good condition.

Pedestrian Facilities

Footways are provided on both sides of Nangor Road, but these appear to be narrower than 2m and are narrowed further by overgrown planting/bushes. There are no pedestrian crossings on this section of the scheme.

Cycle Facilities

Cyclists share the bus lanes on both sides of Nangor Road

Bus Facilities

Bus lanes are provided on both sides of Nangor Road along part of this section of the route.

Parking & Drop off

There is no on-street parking and no amenities accessed directly from Nangor Road.

3.4 Proposed

Pedestrian Facilities

The eastbound cycleway cuts across the footway on both sides of the underpass under the motorway bridge which is likely to create shared cycle/pedestrian areas of footway. However, the pedestrian route will be reviewed at detail design stage to avoid or minimise pedestrian / cycle conflicts.

Bus only signals are shown to the east of the motorway bridge and a controlled pedestrian crossing will be provided near the signal.

Cycle Facilities

Dedicated cycleway will be provided on both sides of Nangor Road.

Bus Facilities

There are no significant changes proposed to the bus lanes.

Parking & Drop off

There is no additional parking proposed.

3.5 Recommendations

- The points where the pedestrian and cycle routes cross on the eastbound footways should be carefully considered at the next stage to avoid/minimise the interaction and potential conflict between the two user groups.

4 Section 3 of Route 8

4.1 Introduction

The following overview of the existing and proposed facilities is based on google maps information and a review of the AECOM proposals for Section 3 shown on Drawing BCD-0000-PRW_PC-08_XX_0000-DR-CR-0002, Sheet 3 of 12.

4.2 Local Amenities (within 500m)

The following facilities were identified within a 500m radius of the route:

- Business Park

4.3 Existing

Pedestrian Facilities

Footways are provided on both sides of Nangor Road, but these appear to be narrower than 2m and are narrowed further by overgrown planting/bushes. The only pedestrian crossings over Nangor Road are location at the Park Avenue Roundabout. The only crossings on the western roundabout are over the side roads leading to the business park.

Cycle Facilities

Cyclists share the bus lanes on both sides of Nangor Road

Bus Facilities

Bus lanes are provided on both sides of Nangor Road along part of this section of the route. Bus stops are provided on the eastbound carriageway west of the first roundabout on this section of the scheme but there is no obvious pedestrian crossing over Nangor Road and only uncontrolled crossings over the side roads leading to Nangor Business Park. The bus stops have no shelters, seats or boarding kerbs.

Parking & Drop off

There is no on-street parking and no amenities accessed directly from Nangor Road.

4.4 Proposed

Pedestrian Facilities

Pedestrian crossings are provided on all 4 arms of the proposed Dutch/Cyclops junctions to replace the western and eastern roundabouts. However, pedestrian crossing facilities are likely to be complex and it is not clear whether cyclists will be required to stop for pedestrians where pedestrian and cycle routes cross.

Cycle Facilities

Dedicated cycleways will be provided on both sides of Nangor Road.

Bus Facilities

New bus stops are shown on both sides of the Road west of the Park Avenue junction. The eastbound stop is located on an island. The approach to the westbound bus stop is shared between pedestrians and cyclists which is likely to problematic for vulnerable pedestrians.

Parking & Drop off

There is no additional parking proposed and no obvious reason to provide on-street parking.

4.5 Recommendations

- The Dutch/Cyclops junctions proposed to replace the roundabouts are likely to be an improvement for cyclists and provide additional pedestrian crossings but have the potential to add complexity to the pedestrian environment with pedestrians crossing cycle routes to reach crossings over the main vehicle carriageways. The design of the pedestrian/cycle crossings at the junctions should be carefully considered to minimise the impact on vulnerable pedestrian at the next stage. The arrangement meets the BC Preliminary Design Guidance Booklet but this junction type should be tested with a range of disabled people before being adopted across the network.
- At the next stage the design of the westbound bus stop should minimise the potential interaction between pedestrians and cyclists. The BC Preliminary Design Guidance Booklet shows a bus stop with a shared route to the bus boarding area but the consultant recommends that this bus stop type should be tested with a wide range of disabled people before it is adopted across the network.

5 Section 4 of Route 8

5.1 Introduction

The following overview of the existing and proposed facilities is based on google maps information and a review of the AECOM proposals for Section 4 shown on Drawing BCD-0000-PRW_PC-08_XX_0000-DR-CR-0002, Sheet 4 of 12.

5.2 Local Amenities (within 500m)

The following facilities were identified within a 500m radius of the route:

- Business Park

5.3 Existing

Pedestrian Facilities

Footways are provided on both sides of Nangor Road, but these appear to be narrower than 2m and are reduced in width in a number of locations due to overhanging planting. The only pedestrian crossings are provided at the Park Avenue roundabout. The side road uncontrolled crossing at the entrance to the Diageo has no dropped kerbs.

Cycle Facilities

Cyclists share the bus lanes on both sides of Nangor Road

Bus Facilities

Bus lanes are provided on both sides of Nangor Road along part of this section of the route. Bus stops are provided on the eastbound carriageway west of the Park Avenue roundabout on this section of the scheme. The bus stops have no shelters, seats or boarding kerbs.

Parking & Drop off

There is no on-street parking and no amenities accessed directly from Nangor Road.

5.4 Proposed

Pedestrian Facilities

Pedestrian crossings are provided on all 4 arms of Park Avenue junction. However, the pedestrian crossing facilities are likely to be complex and it is not clear whether cyclists will be required to stop for pedestrians where pedestrian and cycle routes cross.

The uncontrolled crossing at the entrance to the Diageo site will be upgraded to a table crossing.

Cycle Facilities

Dedicated cycleway will be provided on both sides of Nangor Road.

Bus Facilities

The bus stops will be removed from this section of the scheme.

Parking & Drop off

There is no additional parking proposed and no obvious reason to provide on-street parking.

5.5 Recommendations

- The Dutch/Cyclops junctions proposed to replace the Park Avenue/Nangor Road roundabout is likely to be an improvement for cyclists and provides additional pedestrian crossings but has the potential to add complexity to the pedestrian environment with pedestrians crossing cycle routes to reach crossings over the main vehicle carriageways. The design of the pedestrian/cycle crossings at the junction should be carefully considered to minimise the impact on vulnerable pedestrian at the next stage. The arrangement meets the BC Preliminary Design Guidance Booklet but this junction type should be tested with a range of disabled people before being adopted across the network.

6 Section 5 of Route 8

6.1 Introduction

The following overview of the existing and proposed facilities is based on google maps information and a review of the AECOM proposals for Section 5 shown on Drawing BCD-0000-PRW_PC-08_XX_0000-DR-CR-0002, Sheet 5 of 12.

6.2 Local Amenities (within 500m)

The following facilities were identified within a 500m radius of the route:

- Business Park

6.3 Existing

Pedestrian Facilities

Footways are provided on both sides of Nangor Road, but these appear to be narrower than 2m. The only pedestrian crossings provided on this section are at the Willow Road junction.

Cycle Facilities

Cyclists share the bus lanes on both sides of Nangor Road

Bus Facilities

Bus lanes are provided on both sides of Nangor Road along this section of the route. The east and westbound bus stops on this section of the scheme are west of the Killeen Road junction.

Parking & Drop off

There is no on-street parking and no amenities accessed directly from Nangor Road.

6.4 Proposed

Pedestrian Facilities

Controlled pedestrian crossings will be provided on all 4 arms of the Willow Road junction. A Dutch/Cyclops junction is proposed as a replacement for the roundabout, but the facilities shown for cyclists are unlikely to significantly increase the complexity of the junction for pedestrians, assuming cyclists must stop for pedestrians at the pedestrian crossing phase.

Cycle Facilities

Dedicated cycleway will be provided on both sides of Nangor Road and improved cycle facilities are shown at the Willow Road junction.

Bus Facilities

The bus stops will be provided on both sides of Nangor Road close to their current locations west of the Killeen Road junction although the stops are still a significant distance from the crossings at this junction.

The approaches to the bus stop on this section of the scheme are shared between pedestrians and cyclists which is potentially problematic for vulnerable pedestrians.

Parking & Drop off

There is no additional parking proposed and no obvious reason to provide on-street parking.

6.5 Recommendations

- At the next stage the design of the bus stops should minimise the potential interaction between pedestrians and cyclists. The BC Preliminary Design Guidance Booklet shows a bus stop with a shared route to the bus boarding area, but the consultant recommends that this bus stop type should be tested with a wide range of disabled people before it is adopted across the network.

7 Section 6 of Route 8

7.1 Introduction

The following overview of the existing and proposed facilities is based on google maps information and a review of the AECOM proposals for Section 6 shown on Drawing BCD-0000-PRW_PC-08_XX_0000-DR-CR-0002, Sheet 6 of 12.

7.2 Local Amenities (within 500m)

The following facilities were identified within a 500m radius of the route:

- Business Park

7.3 Existing

Pedestrian Facilities

Footways are provided on both sides of Nangor Road, but these appear to be narrower than 2m and encroaching vegetation reduces their width in a number of locations. The only pedestrian crossings provided on this section are at the Killeen Road junctions. At the western junction the crossing over the bus lane is uncontrolled leading to controlled crossings over the main carriageways and this arrangement is likely to make the crossing difficult to find for people with vision impairments. At this junction the tactile paving at the controlled crossings are laid out in a 'T' shape rather than the current 'L' layout recommended. At the eastern most junction on this section it is possible to cross Killeen Road but not Nangor Road, and the tactile paving is laid out in an 'L' shape at this controlled crossing.

Cycle Facilities

Cyclists share the bus lanes on both sides of Nangor Road.

Bus Facilities

Bus lanes are provided on both sides of Nangor Road along this section of the route. The east and westbound bus stops are to the east of this section of the scheme. The bus stops have no shelters, seating or raised bus boarding kerbs.

Parking & Drop off

There is no on-street parking and no amenities accessed directly from Nangor Road.

7.4 Proposed

Pedestrian Facilities

Controlled crossings over Killeen Road and Nangor Road are provided at both of the junctions which is likely to improve pedestrian connectivity. However, at the western most junction the crossing over Killeen Road is more complex and includes areas of potential conflict between pedestrians and cyclists.

Cycle Facilities

Dedicated cycleways will be provided on both sides of Nangor Road and improved cycle facilities are shown at both Killeen Road junctions.

Bus Facilities

The bus stops will be provided on both sides of Nangor Road close to their current locations to the east of this section, and still a significant distance from the pedestrian crossings at the Killeen Road and Naas Road Junctions.

The approaches to the bus stops on this section of the scheme are shared between pedestrians and cyclists which is far from ideal.

Parking & Drop off

There is no additional parking proposed and no obvious reason to provide on-street parking.

7.5 Recommendations

- The cycle facilities proposed at the Killeen Road junction is likely to be an improvement for cyclists but has the potential to add complexity to the pedestrian environment with pedestrians crossing cycle routes to reach crossings over the main vehicle carriageways. The design of the pedestrian/cycle crossings at the junction should be carefully considered to minimise the impact on vulnerable pedestrian at the next stage.
- At the next stage the design of the bus stops should minimise the potential interaction between pedestrians and cyclists. The BC Preliminary Design Guidance Booklet shows a bus stop with a shared route to the bus boarding area but the consultant recommends that this bus stop type should be tested with a wide range of disabled people before it is adopted across the network.

8 Section 7 of Route 8

8.1 Introduction

The following overview of the existing and proposed facilities is based on google maps information and a review of the AECOM proposals for Section 7 shown on Drawing BCD-0000-PRW_PC-08_XX_0000-DR-CR-0002, Sheet 7 of 12.

8.2 Local Amenities (within 500m)

The following facilities were identified within a 500m radius of the route:

- Business Park

8.3 Existing

Pedestrian Facilities

Footways are provided on both sides of Nangor Road and Naas Road. The only pedestrian crossings provided on this section are at the junction between the two roads. The crossings are at grade and broken up into short crossing lengths with large islands, but the arrangement is complex given the complex nature of the junction. The tram rails will be difficult to cross for some disabled people, including many wheelchair users but there are no obvious solutions to improve this situation. The tactile paving at the controlled crossings are laid out in a 'T' shape rather than the current 'L' layout recommended. There are a number of uncontrolled crossings, such as those at the entrances to the petrol station, and redundant dropped kerbs with no tactile blister paving.

Cycle Facilities

There are no obvious facilities for cyclists around the Nangor Road/Naas Road junction, but a cycle route begins on the slip-road turning east from Nangor Road onto Naas Road.

Bus Facilities

There are no obvious bus lanes or bus stops around the Nangor Road/Naas Road junction.

Parking & Drop off

There is no on-street parking and no amenities accessed directly from the Nangor Road/Naas Road junction.

8.4 Proposed

Pedestrian Facilities

Pedestrian only footways will be retained on both sides of all of the road converging on the Nangor Road/Naas Road junction.

In the proposals a series of long ramps and steps would provide access to a pedestrian/cycle bridge over the Nangor Road/Naas Road junction replacing all of the at grade crossings over all of the adjoining roads. The bridge could potentially simplify the crossing arrangements and separates pedestrians and cyclists from vehicles. However, each of the ramps to the bridge deck will rise in excess of the 2m maximum permitted by good practice standards and will be inaccessible to many disabled and older people. Cyclists will share the bridge with pedestrians which will be at least off-putting to many vulnerable pedestrians, including people with vision impairments. In addition, all vulnerable pedestrians including women walking on their own, generally feel more vulnerable to mugging/attack on bridges and underpasses, where the route is not overseen by drivers and other pedestrians, although CCTV could help in this respect.

Cycle Facilities

Dedicated cycleways will be provided on both sides of all of the road converging on the Nangor Road/Naas Road junction cycle/pedestrian bridge.

Bus Facilities

A continuous bus lane will be provided on both sides of Nangor Road and Naas Road, east of the junction. There will be no additional bus stops added to this section of the scheme.

Parking & Drop off

There is no additional parking proposed and no obvious reason to provide on-street parking.

8.5 Recommendations

- The proposed junction layout should be subject to further analysis at the next design stage, including considering accessibility and pedestrian/cyclist conflicts. A shared pedestrian/cycle bridge with no lifts would be inaccessible to many disabled and older people given the change in level between footway and bridge deck. There is also potential conflict/perceived conflict between cyclists and pedestrians on a shared facility.

9 Section 8 of Route 8

9.1 Introduction

The following overview of the existing and proposed facilities is based on google maps information and a review of the AECOM proposals for Section 8 shown on Drawing BCD-0000-PRW_PC-08_XX_0000-DR-CR-0002, Sheet 8 of 12.

9.2 Local Amenities (within 500m)

The following facilities were identified within a 500m radius of the route:

- Business Park

9.3 Existing

Pedestrian Facilities

Footways are provided on both sides of Naas Road. The only crossings are at the Naas Road/Nangor Road junction and a staggered crossing to the east of the section near Robin Hood Road. Crossing the tram tracks will be problematic for many disabled people but there is no obvious improvement to suggest over and above what is currently provided. The tactile paving is laid out in a 'T' shape at all of these controlled crossings rather than the current 'L' configuration.

Cycle Facilities

A segregated cycleway is provided along most of the eastbound carriageway, east of the Naas Road/Nangor Road junction. A cycleway is painted on the westbound carriageway.

Bus Facilities

Bus lanes are provided on both sides of Naas Road along most of this section of the route. A bus stop is provided next to the east and westbound carriageways on this section of the scheme. The westbound bus stop has no shelters or seating but does have a boarding kerb. The eastbound bus stop has a shelter, seat and boarding kerb. The boarding area around the eastbound stop is effectively shared with cyclists, although the cycle route is painted on the footway behind the bus shelter.

Parking & Drop off

There is no on-street parking and no amenities accessed directly from Naas Road. However, parked cars obstruct the footway outside a car showroom near Robin Hood Road.

9.4 Proposed

Pedestrian Facilities

Pedestrian only footways will be retained on both sides of all of Naas road. A side road crossing to the west of the section will be raised to a table to help emphasise pedestrian priority.

Cycle Facilities

Dedicated cycleways will be provided on both sides of Naas Road and both facilities will be segregated from vehicles and pedestrians.

Bus Facilities

The bus stop on the eastbound carriageway will be retained but the westbound stop will be removed on this section of the scheme. The eastbound stop will be located on a bypass island segregated from the cycle lane by a kerb.

Parking & Drop off

There is no additional parking proposed and no obvious reason to provide on-street parking.

9.5 Recommendations

- There are no specific recommendations for the design of this section of the scheme.
- An effective parking enforcement regime should be established to help prevent parked cars from obstructing the footway.

10 Section 9 of Route 8

10.1 Introduction

The following overview of the existing and proposed facilities is based on google maps information and a review of the AECOM proposals for Section 9 shown on Drawing BCD-0000-PRW_PC-08_XX_0000-DR-CR-0002, Sheet 9 of 12.

10.2 Local Amenities (within 500m)

The following facilities were identified within a 500m radius of the route:

- Business Park

10.3 Existing

Pedestrian Facilities

Footways are provided on both sides of Naas Road and Walkinstown Avenue. The only controlled crossings are adjacent to Robin Hood Road and the Naas Road/Kylemore Road junction. The uncontrolled crossings, such as those on Old Naas Road and Robin Hood Road have no tactile paving and the tactile paving on the controlled crossing is laid out in a 'T' shape rather than the current 'L' configuration. The crossing over Walkinstown Avenue at the junction with Naas Road has no tactile paving and does not appear to have pedestrian crossing controls. There is also no pedestrian crossing on the east side of the Naas Road junction, limiting the options of where pedestrians can cross. There are no dropped kerbs at the side road crossing at the entrance to one of the business units on Walkinstown Avenue.

Cycle Facilities

Cyclist share the bus lanes on the eastbound carriageway of Naas Road on this section of the scheme. A cycle lane is painted on the westbound carriageway of Naas Road where there is no bus lane. There are no cycle lanes on Walkinstown Avenue.

Bus Facilities

A bus lane is provided on the eastbound carriageway of Naas Road on this section of the route. East and westbound bus stops are provided near the middle of this section of the scheme and both stops have a shelter and seat. However, only the westbound stop has a boarding kerb. The steps on a secondary route leading to the eastbound bus stop have no handrails, no contrasting step nosings, and no tactile warning surface at the top and bottom of the flight.

East and westbound bus stops are provided on this section of Walkinstown Avenue. The East and westbound bus stops have a shelter and seat. However, only the eastbound stop has a boarding kerb.

The east and westbound Luas stop on this section of Naas Road is accessed from the controlled crossing on the west side of the Kylemore Road junction, close to the east and westbound bus stops.

Parking & Drop off

There is no on-street parking and no amenities accessed directly from Naas Road.

10.4 Proposed

Pedestrian Facilities

Pedestrian only footways will be retained on both sides of Naas Road and Walkinstown Avenue. The pedestrian crossings at the Naas Road/Walkinstown Avenue junction will remain relatively unchanged. However, there are locations where pedestrians will have to cross cycle routes and cyclists appear to share areas of the footway with pedestrians which is not ideal.

At the Old Naas Road/John F Kennedy Drive junction there are also a number of areas of potential conflict between pedestrians and cyclists.

Cycle Facilities

Dedicated cycleways will be provided on both sides of Naas Road and Walkinstown Avenue and both facilities will be segregated from vehicles and pedestrians. On Naas Road the cycle route will be next to the kerb line on the westbound carriageway and behind the footway on the eastbound route. Although the eastbound arrangement of the footway and cycleway is not ideal it permits segregation of pedestrians and cyclists and accommodates bus by-pass islands for both bus stops.

Bus Facilities

The bus stops on Naas Road will be retained in their current locations but the stops on Walkinstown Avenue will be removed from this section of the scheme. The stops will be located on islands.

Parking & Drop off

There is no additional parking proposed and no obvious reason to provide on-street parking.

10.5 Recommendations

- At the next stage the segregation between pedestrians and cyclists should be improved as far as possible to minimise the potential cycle/pedestrian conflict and minimise the complexity of the arrangement at the junctions.
- All the pedestrian facilities, including dropped kerbs and tactile paving should be brought up to current standards of good practice.

11 Section 10 of Route 8

11.1 Introduction

The following overview of the existing and proposed facilities is based on google maps information and a review of the AECOM proposals for Section 10 shown on Drawing BCD-0000-PRW_PC-08_XX_0000-DR-CR-0002, Sheet 10 of 12.

11.2 Local Amenities (within 500m)

The following facilities were identified within a 500m radius of the route:

- Businesses
- Homes

11.3 Existing

Pedestrian Facilities

Footways are provided on both sides of Walkinstown Road and Long Mile Road. The only controlled pedestrian crossings provided on this section are at the junction between the two roads. There are only crossings on three of the four sides of this junction. The tactile paving at the controlled crossings is laid out in the recommended 'L' layout. There are a number of uncontrolled crossings at the entrances to business units with potentially high vehicle flows with no tactile blister paving.

Cycle Facilities

Cycle lanes are provided on both sides of Long Mile Road but there are no cycle lanes on Walkinstown Road.

Bus Facilities

Bus lanes are provided on both sides of Long Mile Road. An eastbound bus stop is provided on Long Mile Road located close to the junction with Walkinstown Road and a westbound stop is located to the east of this section of the scheme.

Parking & Drop off

There is no on-street parking and no amenities accessed directly from Walkinstown Road or Long Mile Road on this section of the scheme.

11.4 Proposed

Pedestrian Facilities

Pedestrian only footways will be retained on both sides of Walkinstown Road and Long Mile Road.

An additional controlled crossing will be provided on the western side of the Walkinstown Road/Long Mile Road junction improving pedestrian connectivity. However, the addition of cycle facilities at this junction are likely to make it more complex which could potentially be problematic for vulnerable pedestrians, including people with vision impairments, with pedestrians crossing cycle routes to find the controlled crossings.

Cycle Facilities

Dedicated cycleways will be provided on both sides of Walkinstown Road and Long Mile Road. New cycle facilities will be provided at the Walkinstown Road/Long Mile Road junction.

Bus Facilities

A continuous bus lane will be provided on both sides of Walkinstown Road and Long Mile Road. The bus stop locations on Long Mile Road will be retained and bus stops will be located on by-pass islands.

Parking & Drop off

There is no additional parking proposed and no obvious reason to provide on-street parking.

11.5 Recommendations

- The Dutch/Cyclops junction proposed to replace the Walkinstown Road/Long Mile Road junction is likely to be an improvement for cyclists and provides an additional pedestrian crossing but has the potential to add complexity to the pedestrian environment with pedestrians crossing cycle routes to reach crossings over the main vehicle carriageways. The interaction between the pedestrian/cycle routes and the crossings at the junctions should be carefully considered to minimise the impact on vulnerable pedestrian at the next stage. The arrangement meets the BC Preliminary Design Guidance Booklet but this junction type should be tested with a range of disabled people before being adopted across the network.
- All of the pedestrian facilities, including dropped kerbs and tactile paving should be brought up to current standards of good practice.

12 Section 11 of Route 8

12.1 Introduction

The following overview of the existing and proposed facilities is based on google maps information and a review of the AECOM proposals for Section 11 shown on Drawing BCD-0000-PRW_PC-08_XX_0000-DR-CR-0002, Sheet 11 of 12.

12.2 Local Amenities (within 500m)

The following facilities were identified within a 500m radius of the route:

- Businesses, including supermarkets and local shops
- Pharmacy
- Primary and Secondary Schools
- Homes

12.3 Existing

Pedestrian Facilities

Footways are provided on both sides of Long Mile Road. The only controlled pedestrian crossing provided on this section is adjacent to a primary school and a secondary school close to Walkinstown Parade. This is a staggered crossing and has the correct tactile paving layout for a controlled crossing. An uncontrolled crossing over Long Mile Road is provided to the east of the school sites close to local shops, including a pharmacy. The side roads have dropped kerbs at crossing points but no tactile paving.

Cycle Facilities

Cycle lanes are provided on both sides of Long Mile Road.

Bus Facilities

Bus lanes are provided on both sides of Long Mile Road. Two eastbound and two westbound bus stops are provided on this section of the scheme. One eastbound stop is located to the west of the controlled crossing, the other is located to the east of the crossing next to the secondary school. The two westbound stops are located between the controlled and uncontrolled crossings and are adjacent to the primary school. The bus stops have shelters, seats and boarding kerbs.

Parking & Drop off

On-street parking is provided next to the westbound carriageway outside homes to the west of this section.

12.4 Proposed

Pedestrian Facilities

Pedestrian only footways will be retained on both sides of Long Mile Road.

The uncontrolled crossing adjacent to the schools will be upgraded to a controlled crossing. And both crossings will become Toucan crossings with raised tables

Cycle Facilities

Dedicated cycleways will be provided on both sides of Long Mile Road.

Bus Facilities

A continuous bus lane will be provided on both sides of Long Mile Road. One east and one westbound bus stop will be retained on this section of Long Mile Road but two of the stops will be removed. The eastbound stop will be to the east of the new Toucan crossing the westbound stop will be located outside the Primary school. However, the number of bus stops and the size of the islands to meet the peak demand will be established at the next design stage.

Parking & Drop off

The existing on-street parking outside the homes to the west of this section will be retained. There is no additional parking proposed and no obvious reasons to provide additional on-street parking.

12.5 Recommendations

- The number of bus stops adjacent to the schools and bypass island capacity/space to coupe peak demands should be considered further at the next design stage.
- All of the pedestrian facilities, including dropped kerbs and tactile paving should be brought up to current standards of good practice.

13 Section 12 of Route 8

13.1 Introduction

The following overview of the existing and proposed facilities is based on google maps information and a review of the AECOM proposals for Section 12 shown on Drawing BCD-0000-PRW_PC-08_XX_0000-DR-CR-0002, Sheet 12 of 12.

13.2 Local Amenities (within 500m)

The following facilities were identified within a 500m radius of the route:

- Businesses, including shops and restaurants
- Pharmacy
- Bank
- Primary and Secondary Schools
- Homes

13.3 Existing

Pedestrian Facilities

Footways are provided on both sides of the R110, Slievebloom Park, Walkinstown Road, Slievebloom Road and Balfe Road. Controlled pedestrian crossings are provided at the Walkinstown Road/R110 junction and at the junctions between the R110, Slievebloom Road and Balfe Road. However, there is no pedestrian crossing to the east of the junction between Slievebloom Room and the R110 which is on a pedestrian desire line given the arrangement of the shops and bus stops around this junction. As stated above an uncontrolled crossing over Long Mile Road is provided to the east of the school sites close to local shops. The layout of the tactile paving at the controlled crossings is a mix of 'T' and 'L' shapes. The side roads have dropped kerbs at crossing points but no tactile paving.

Cycle Facilities

Cycle lanes are provided on both sides of sections of the R110.

Bus Facilities

Bus lanes are provided on sections of the R110. An eastbound bus stop is provided on the R110 between Walkinstown Road and Slievebloom Road. The nearest westbound stops are located to the east and west of this section of the scheme. The former is located on a build out adjacent to shops the latter is located next to a primary school. Both have shelters, seats and boarding kerbs.

Parking & Drop off

On-street parking is provided next to the shops fronting the eastbound carriageway to the east of this section and parking is provided adjacent to the shops facing the westbound carriageway east of the Slievebloom Road junction. One of the spaces, located outside a pharmacy to the west of this section, is designated for blue-badge holders but it does not appear to be large enough to comply with current

standards. None of the spaces to the east of the Slievebloom Road junction are designated for blue-badge holders.

Parked cars obstruct the footway on Walkinstown Road and Balfe Road. Cars also obstruct the footway and eastbound cycleway to the east of the Slievebloom Road junction.

13.4 Proposed

Pedestrian Facilities

Pedestrian only footways will be retained on both sides of all of the streets within the scheme area.

As stated above, the uncontrolled crossing adjacent to the schools will be upgraded to a controlled crossing.

The controlled crossing to the west of the junction with Walkinstown Road will be removed and replaced with a crossing to the east of this junction. The crossing at the Slievebloom Road junction will also be removed. The new crossing location is potentially close to the general desire line between the eastbound bus stop and local amenities such as the bank. However, reducing the number of crossings reduces the choice of pedestrian routes and increases the length of detour, especially given the new west-bound bus stop will be located to the west of this junction. The new crossing also includes an additional crossing over the eastbound cycle lane increasing the complexity of this area for vulnerable pedestrians, including people with vision impairments. What will effectively be a pedestrian crossing island between the cycle lane and the bus lane will double as a bus bypass island.

It is not clear whether the existing controlled crossings over the side roads - Slievebloom Road, Walkinstown Road and Balfe Road, would be retained.

Cycle Facilities

Dedicated cycleways will be provided on both sides of the R110.

Bus Facilities

A continuous bus lane will be provided on both sides of the R110. The eastbound bus stop will remain in its current location a new westbound stop will be provided to the west of Walkinstown Road. As stated above the eastbound bus stop will be located on a bypass island. However, the approach to the westbound stop will be shared with cyclists which is potentially problematic for vulnerable pedestrians.

Parking & Drop off

The existing on-street parking will be retained and there is no obvious reason to provide additional on-street parking.

13.5 Recommendations

- At the next design stage, the segregation between pedestrians and cyclists at the junction should be improved as far as possible to minimise the potential cycle/pedestrian conflict and minimise the complexity of the arrangement.
- The number of controlled crossings on this section of the scheme should be reviewed at the next design stage.
- At the next stage the design of the westbound bus stop should minimise the potential interaction between pedestrians and cyclists. The BC Preliminary Design Guidance Booklet

shows a bus stop with a shared route to the bus boarding area, but the consultant recommends that this bus stop type should be tested with a wide range of disabled people before it is adopted across the network.

- All of the pedestrian facilities, including dropped kerbs and tactile paving should be brought up to current standards of good practice.
- A proportion of the on-street parking bays should be designated for blue-badge holders.

Scheme: Clondalkin Route 8 to City Centre Sccessibility Audit Stage - Preferred Route Option				
Section	Assessment Comments	To Be Completed By Designer		
		Problem/Observation Accepted (yes/no/n/a)	Recommended measure accepted (yes/no/n/a)	Designers Comments
1	An additional controlled crossing should be provided on the east side of the Nangor Road/Woodford Walk junction. The bus stop boarding areas should be redesigned to avoid the shared pedestrian/cycle areas in the current design.	y	n	The shared pedestrian / cycle areas at the bus stops will be reviewed at detail design stage.
2	The points where the pedestrian and cycle routes cross on the east bound footways should carefully considered. Will the bus only signals include pedestrian crossing facilities?	y	y	Pedestrian route will be reviewed at detail design stage to avoid or minimise pedestrian / cycle conflicts. Pedestrian crossing near bus only signal will be signalised.
3	The addition of controlled pedestrian crossings will improve pedestrian connections and improve access to bus services. However, there are a number of locations where pedestrians and cyclist mix and ideally these should be removed/mitigated. The west bound bus stop should be redesigned to avoid conflict between pedestrians and cyclists.	y	n/a	Cyclist / Pedestrian interface at junctions will be re-assessed at detail design stage. The shared pedestrian / cycle areas at the bus stops will be reviewed at detail design stage.
4	The controlled pedestrian crossings at the Park Avenue junction include a number of locations where pedestrians and cyclist must mix and ideally these should be removed/mitigated.	y	n/a	Cyclist / Pedestrian interface at junctions will be re-assessed at detail design stage.
5	The bus stops should be redesigned to avoid conflict between pedestrians and cyclists.	y	n/a	The shared pedestrian / cycle areas at the bus stops will be reviewed at detail design stage.
6	Ideally the crossings at the western most Killeen Road junction and the bus stops should be redesigned to avoid conflict between pedestrians and cyclists.	y	n/a	Cyclist / Pedestrian interface at junctions will be re-assessed at detail design stage. The shared pedestrian / cycle areas at the bus stops will be reviewed at detail design stage.
7	A shared pedestrian/cycle bridge with no lifts will be inaccessible to many disabled and older people given the change in level between footway and bridge deck. There is also potential conflict/perceived conflict between cyclists and pedestrians on a shared facility.	y	n/a	Proposed junction layout is subject to further analysis, accessibility and pedestrian / cyclist conflicts will be assessed at detail design stage.
8	The segregation between pedestrians and cyclists should be improved at the east bound bus stop as part of the scheme	y	n/a	Island bus stops will be designed as per Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors with measures to mitigate pedestrian / cyclist conflicts.
9	At the Naas Road/Walkinstown Avenue junction the segregation between pedestrians and cyclists should be improved as far as possible to minimise the potential conflict between cyclists and pedestrians. All of the pedestrian facilities, including dropped kerbs and tactile paving should be brought up to current standards of good practice.	y	n/a	Proposed junction layout is subject to further analysis, accessibility and pedestrian / cyclist conflicts will be assessed at detail design stage. Pedestrian facilities will be upgraded in accordance with the Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors, and pedestrian crossing points will be provided with tactile paving in each direction of approach.
10	The Walkinstown Road/Long Mile Road junction is potentially more complex with potential conflict between pedestrians and cyclists. Can this be improved? All of the pedestrian facilities, including dropped kerbs and tactile paving should be brought up to current standards of good practice.	y	n/a	Cyclist / Pedestrian interface at junctions will be re-assessed at detail design stage. Pedestrian facilities will be upgraded in accordance with the Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors, and pedestrian crossing points will be provided with tactile paving in each direction of approach.
11	The number of bus stops adjacent to the schools is being reduced by half and the bus by-pass islands shown appear to be relatively small. Will there be enough capacity/space to coupe with large groups of school children at peak periods? All of the pedestrian facilities, including dropped kerbs and tactile paving should be brought up to current standards of good practice.	y	n/a	Bus stop requirement will be re-assessed at detail design stage. Pedestrian facilities will be upgraded in accordance with the Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors, and pedestrian crossing points will be provided with tactile paving in each direction of approach.

12	The number of controlled crossing on this section of the scheme is reduced by half which is likely to reduces the choice of routes and increases the detour off the desire line for many pedestrians. The additional crossing over the east bound cycle lane is likely to add complexity for many vulnerable pedestrians. Can this be improved? Will the side road crossings at Slievebloom Road, Walkinstown Road and Balfe Road, continue to be controlled crossings? The design of the new west bound bus stop should be reviewed. The shared cycle/pedestrian approach to the bus stop is not ideal. A proportion of the on-street parking bays should designated for blue-badge holders. All of the pedestrian facilities, including dropped kerbs and tactile paving should be brought up to current standards of good practice.	y	n/a	Noted. Controlled crossing requirement and cycle lane crossings will be re-assessed at detail design stage. All junctions will be re-assessed at detail design stage, existing junction at Long Mile Road/Drimnagh Road and Walkinstown Road will be upgraded to be fully signalised with pedestrian and cycle facilities. Westbound bus stop will be re-assessed at detail design stage and Island bus stops will be designed as per the Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors, with measures to mitigate pedestrian / cyclist conflicts. Blue badge parking provision will be assessed at detail design stage. Pedestrian facilities will be upgraded in accordance with the Preliminary Design Guidance Booklet for BusConnects Core Bus Corridors, and pedestrian crossing points will be provided with tactile paving in each direction of approach.