The background is a vibrant red field with several abstract geometric shapes. In the top left, there's a green quarter-circle and a blue semi-circle. In the top right, there's a white circle with a blue border and a dark blue rectangle. In the bottom left, there's a blue semi-circle with a white circle inside, and a dark blue semi-circle below it. In the bottom right, there's a large green semi-circle and a red semi-circle with a white border.

Appendix M1
Design Quality Audit

Roughan & O'Donovan

BusConnects Core Bus Corridors

Kimmage to City Centre Core
Bus Corridor

Quality Audit

Roughan & O'Donovan

BusConnects Core Bus Corridors

Kimmage to City Centre Core Bus Corridor

Quality Audit

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1 Quality Audit Report

1.1 Introduction

This report results from a Quality Audit on the proposed Kimmage to City Centre Core Bus Corridor Scheme, carried out at the request of Mr Eoin O’Catháin of Roughtan & O’Donovan.

The Quality Audit was undertaken by Mr Antonis Papadakis (MSc, MIEI), of PMCE Ltd., in March 2023 in general accordance with the Design Manual for Urban Roads and Streets, and considers the following elements:

- Access Audit (Appendix A)
- Walkability Audit (Appendix B)
- Non-Motorised User Audit (Appendix C)
- Cycle Audit (Appendix D)
- Stage 1 Road Safety Audit (Appendix E)

In addition to examining the documents supplied, the Quality Auditor visited the site of the proposed measures on the 7th March 2023. Weather conditions during the site visit were dry and the road surface was dry. Traffic volumes during the site visit were high, pedestrian and cyclist volumes were moderate and traffic speeds were considered to be generally within the posted speed limit.

1.2 Proposed Scheme

BusConnects is the National Transport Authority’s (NTA) programme to improve bus and sustainable transport services. It is a key part of the Government’s policies to improve public transport and address climate change in Dublin and other cities. The aim of BusConnects is to deliver an enhanced bus system that is better for the city, its people and the environment. BusConnects is included in the Programme for Government “Our Shared Future” 2020, as well as within the following Government strategies:

- The National Development Plan 2018 - 2027
- Transport Strategy for the Greater Dublin Area 2016 – 2035
- The Climate Action Plan 2019

Part of the overall BusConnects Programme is to create 16 radial core bus corridors (CBC). A CBC is an existing road with bus priority so that buses can operate efficiently, reliably and punctually. This generally means full length dedicated bus lanes on both sides of the road from start to finish of each corridor or other measures to ensure that buses are not delayed in general traffic congestion. The bus lanes are typically alongside segregated cycle lanes/tracks where feasible and general traffic.

The Kimmage to City Centre corridor extends in a southerly direction from the city centre. The route can be summarised as follows, and is illustrated in Figure 1-1: -

Kimmage to City Centre (Route 11): The Kimmage to City Centre Core Bus Corridor (CBC) commences on Kimmage Road Lower at the junction with Terenure Road West and Fortfield Road. It is routed via Kimmage Road Lower to Harold’s Cross Road, and then along Harold’s Cross Road, Clanbrassil Street Upper & Lower and New Street South, where it will join the Greenhills CBC at the Kevin Street Upper junction. Priority for buses is provided along the entire route, consisting primarily of dedicated bus lanes in both directions, with alternative measures proposed at particularly constrained locations along Kimmage Road Lower.

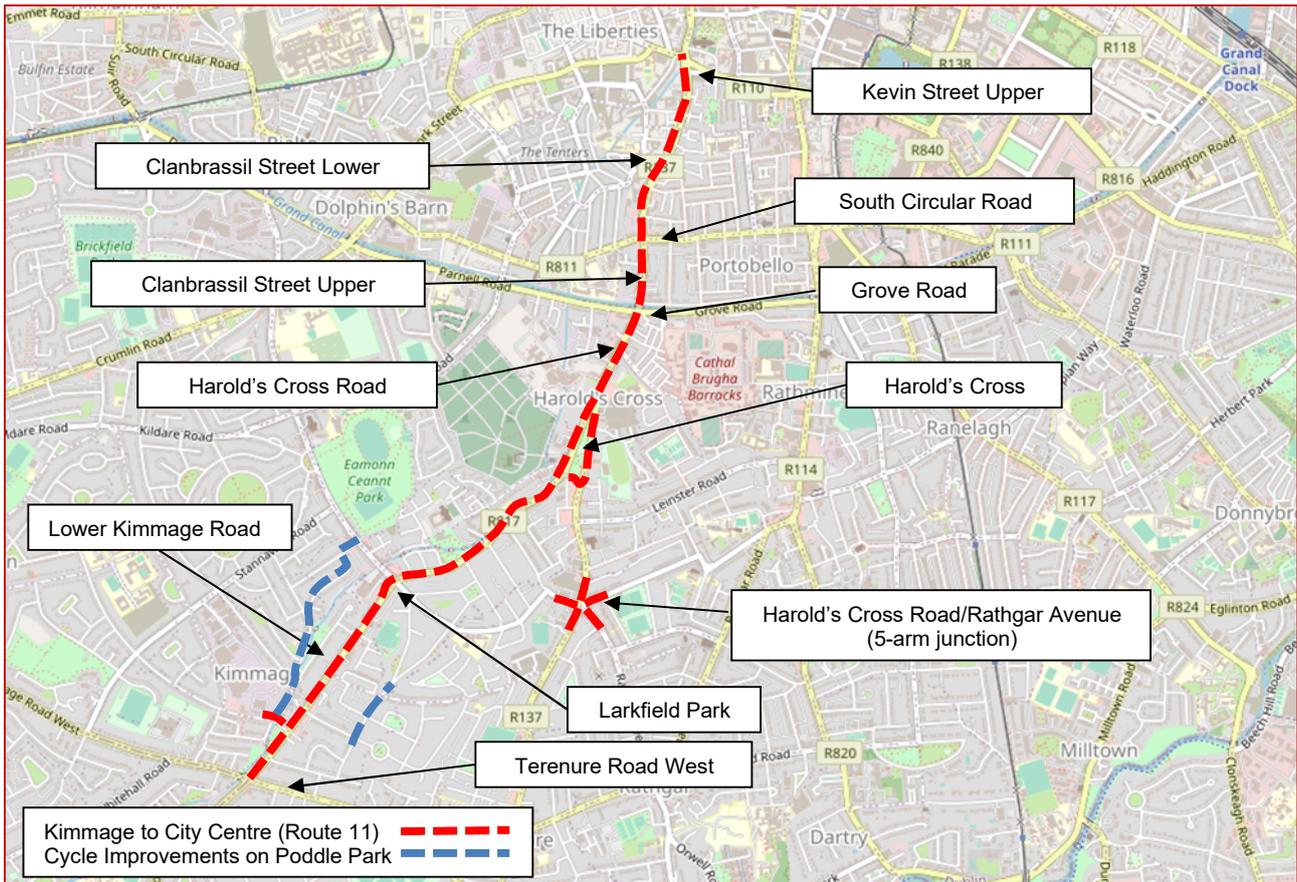


FIGURE 1-1: LOCATION PLAN

The key roads on the route are highlighted in Figure 1-1, and comprise urban streets with 50kph speed limits, high pedestrian and cyclist volumes, existing bus stops and bus lanes, signalised junctions, pedestrian crossings, public lighting and a variety of public amenities (shops, parks, carparks etc.).

As well as improvements to Route 11, additional bus priority and cycle improvements are proposed at the Harold's Cross Road/Rathgar Junction, with further cycle improvements on Poddle Park and Derravaragh Road (Figure 1-1).

1.3 Existing Environment

1.3.1 Pedestrian & Cyclist Provisions

Kimmage Road Lower is a mostly two-way single carriageway with one general traffic lane in each direction and a posted speed limit of 50kph.

There are existing advisory cycle lanes on both sides of the road to the north-east of the Kimmage Crossroads junction, which continue up to the point where it meets Harold's Cross Road. Harold's Cross Road provides a shared cycle and bus lane on both sides of the road from its junction with St Clare's Convent National School to its junction with Grove Road. Harold's Cross Road continues onto Clanbrassil Street Upper to the north of the Emmet Bridge where protected cycle lanes are provided on both sides of the road up to its junction with Lombard Street West. Continuing northbound, an advisory cycle lane is provided on the eastern side of the road as far as its junction with Kevin Street Upper where the scheme terminates.

Footpaths are currently provided on both sides of the carriageway throughout the extents of the Scheme.

1.3.2 Public Transport

There are existing bus stops on Kimmage Road Lower at its junction with Terenure Road and Fortfield Road and intermittently along the proposed route of the Kimmage to City Centre CBC as far as the Kevin Street Upper junction.

The nearest bus stops to the Kimmage to City Centre CBC route are listed in Table 1-1.

TABLE 1-1 BUS ROUTES OPERATING WITHIN THE PROPOSED SCHEME

Bus Stop (Name)	Bus Stop (Number)	Direction	Bus Stop Location	Bus Route	Travelling between
Kimmage Road Lower	2438	Northbound	50m north of the Kimmage Road Lower/Terenure Road junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way
Poddle Park	2394	Southbound	185m north of the Kimmage Road Lower/Terenure Road junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way
Ravensdale Park	2439	Northbound	200m north of the Kimmage Road Lower/Terenure Road junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way
Corrib Road	2393	Southbound	450m north of the Kimmage Road Lower/Terenure Road junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way
Aideen Avenue	2440	Northbound	40m north of the Kimmage Road Lower/Aideen Avenue junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way
Kimmage Grove	2392	Southbound	170m north of the Kimmage Road Lower/Kimmage Grove junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way

Bus Stop (Name)	Bus Stop (Number)	Direction	Bus Stop Location	Bus Route	Travelling between
Kimmage Grove	2441	Northbound	200m north of the Kimmage Road Lower/Kimmage Grove junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way
Mount Argus Church	2391	Southbound	100m north of the Kimmage Road Lower/Mount Argus View junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way
Mount Argus Church	2442	Northbound	130m north of the Kimmage Road Lower/Mount Argus View junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way
Mount Argus Park	2390	Southbound	300m north of the Kimmage Road Lower/Mount Argus View junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way
Brookfield	2443	Northbound	350m north of the Kimmage Road Lower/Mount Argus View junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way
Mount Argus Road	2444	Northbound	40m north of the Kimmage Road Lower/Mount Argus Road junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way
St Clare's Avenue	2389	Southbound	130m south of the Kimmage Road Lower/St Clare's Avenue junction	9	Charlestown to Limekiln Avenue
				54A	Pearse Street to Ellensborough/Kiltipper Way
Harold's Cross Park	1292	Southbound	50m south of the Kimmage Road Lower/St Clare's Avenue junction	16	Dublin Airport to Ballinteer (Kingston)
				16D	Dublin Airport to Kingston Estate
				49	Pearse Street to Tallaght (Square)

Bus Stop (Name)	Bus Stop (Number)	Direction	Bus Stop Location	Bus Route	Travelling between
St Claire's NS	1344	Northbound	150m north of the Kimmage Road Lower/St Clare's Avenue junction	9	Charlestown to Limekiln Avenue
				16	Dublin Airport to Ballinteer (Kingston)
				49	Pearse Street to Tallaght (Square)
				54A	Pearse Street to Ellensborough/Kiltipper Way
Harold's Cross Road	1291	Southbound	25m south of the Harold's Cross Road/La Vere Terrace junction	9	Charlestown to Limekiln Avenue
				16	Dublin Airport to Ballinteer (Kingston)
				16D	Dublin Airport to Kingston Estate
				49	Pearse Street to Tallaght (Square)
				54A	Pearse Street to Ellensborough/Kiltipper Way
La Vere Terrace	1345	Northbound	40m north of the Harold's Cross Road/La Vere Terrace junction	9	Charlestown to Limekiln Avenue
				16	Dublin Airport to Ballinteer (Kingston)
				49	Pearse Street to Tallaght (Square)
				54A	Pearse Street to Ellensborough/Kiltipper Way
Clanbrassil St Upper	1290	Southbound	120m north of Emmet Bridge	9	Charlestown to Limekiln Avenue
				16	Dublin Airport to Ballinteer (Kingston)
				16D	Dublin Airport to Kingston Estate
				49	Pearse Street to Tallaght (Square)

Bus Stop (Name)	Bus Stop (Number)	Direction	Bus Stop Location	Bus Route	Travelling between
				54A	Pearse Street to Ellensborough/Kiltipper Way
Clanbrassil St Upper	1347	Northbound	150m north of Emmet Bridge	9	Charlestown to Limekiln Avenue
				16	Dublin Airport to Ballinteer (Kingston)
				49	Pearse Street to Tallaght (Square)
				54A	Pearse Street to Ellensborough/Kiltipper Way
Clanbrassil Street	2634	Northbound	350m north of Emmet Bridge	49	Pearse Street to Tallaght (Square)
				54A	Pearse Street to Ellensborough/Kiltipper Way
Lombard Street West	2635	Northbound	20m north of the Clanbrassil Street Lower/Lombard Street West junction	49	Pearse Street to Tallaght (Square)
				54A	Pearse Street to Ellensborough/Kiltipper Way
St Kevin's Parade	2388	Southbound	10m north of the Clanbrassil Street Lower/St Kevin's Parade junction	49	Pearse Street to Tallaght (Square)
				54A	Pearse Street to Ellensborough/Kiltipper Way
New Street South	2636	Northbound	30m north of the New Street/Malpas Street junction	49	Pearse Street to Tallaght (Square)
				54A	Pearse Street to Ellensborough/Kiltipper Way
Long Lane	2387	Southbound	35m north of the New Street/Malpas Street junction	49	Pearse Street to Tallaght (Square)
				54A	Pearse Street to Ellensborough/Kiltipper Way
New Street South	2386	Southbound	120m south of the New Street/Kevin Street junction	49	Pearse Street to Tallaght (Square)
				54A	Pearse Street to Ellensborough/Kiltipper Way

Bus Stop (Name)	Bus Stop (Number)	Direction	Bus Stop Location	Bus Route	Travelling between
Kevin Street	5097	Northbound	85m south of the New Street/Kevin Street junction	49	Pearse Street to Tallaght (Square)
				54A	Pearse Street to Ellensborough/Kiltipper Way

1.3.3 Local Amenities

The scheme is located in close proximity to a number of amenities along its route. The location of the proposed scheme provides the passengers using the CBC with access to a wide range of amenities within a short walking distance of the bus stops along the route. These include various parks, cafes, restaurants, supermarkets, departments stores, dental clinics, schools, pharmacies, as well as many other amenities.

Table 1-2 below provides a list of amenities located close to the proposed scheme.

TABLE 1-2: LOCAL AMENITIES CLOSE TO THE PROPOSED SCHEME

Amenity	Closest Bus Stop (name/number)	Distance (approx.)	Journey Time on Foot (approx.)
Poddle Park	Kimmage Road Lower (2438)	80m	1min
KCR House Pub	Poddle Park (2394)	140m	2min
Tesco Express	Corrib Road (2393)	45m	1min
Ganter Crowe Dental	Corrib Road (2393)	40m	1min
Honkaky Sushi & Thai – Bell Pepper Kimmage Thai – Rosso Woodfired Pizza	Kimmage Grove (2441)	10m	1min
The Regal Barber Shop	Kimmage Grove (2441)	10m	1min
Sydney Nails Spa & Beauty	Kimmage Grove (2441)	10m	1min
Mount Argus Park	Mount Argus (2442)	130m	2min
McGowan’s of Harold’s Cross Pub	Mount Argus Road (2444)	100m	2min
Harold’s Cross Park	Mount Argus Road (2444)	10m	1min
Noshington Harold’s Cross Park Cafe	Mount Argus Road (2444)	12m	1min

Amenity	Closest Bus Stop (name/number)	Distance (approx.)	Journey Time on Foot (approx.)
Smart Fit Gym	Mount Argus Road (2444)	195m	5min
Leinster Park Montessori	Harold's Cross Park (1292)	130m	3min
Our Lady's Hospice & Care Services	St Claire's NS (1344)	200m	4min
Southbank Cafe	Harold's Cross Road (1291)	130m	3min
Grand Canal	La Vere Terrace (1345)	100m	3min
South Circular Road GP Clinic	Clanbrassil St Upper (1290)	180m	5min
Leonard's Corner Pub	Clanbrassil St Upper (1347)	110m	3min
Phelan's Pharmacy	St Kevin's Parade (2388)	45m	1min
Peadar Browns Pub	New Street South (2636)	40m	1min
Maldron Hotel	Kevin Street (5097)	10m	1min

1.4 Summary of Individual Audit Findings

The following table summarises the issues identified by the component audits of this Quality Audit, including the recommended changes or actions to address these issues.

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
1	<p>Bus Gate Awareness</p> <p>Northbound drivers may be insufficiently aware of the upcoming bus gate when entering Kimmage Road Lower, resulting in driver confusion, hesitation, and possibly unsafe U-Turn manoeuvres at the junction between Kimmage Road Lower and Ravensdale Park.</p>				E.3.1	<p>Road signs will form part of the next design stage, so the type, number and location of signs is to be developed at a later stage.</p> <p>However, it is anticipated that existing Advance Directional Signs (ADS), developed as part of the detailed design process, would be modified to identify Kimmage Road Lower as “Local Access Only”.</p> <p>No other additional/dedicated Bus Gate signage is anticipated at this stage.</p>
2	<p>Offset Cycle Lane</p> <p>Left turning drivers may turn across straight-ahead cyclists, leading to side-swipe and side-on collisions.</p>			D.2.1	E.3.2	<p>During the design development the alignment of the northbound cycle lane will be reviewed and, if possible, amended to reduce the lateral displacement from the northbound traffic lane, in order to reduce the impression that this is a separate crossing.</p> <p>In addition, left turning drivers will be presented with a flashing left-arrow</p>

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
						amber signal to ensure they enter Kimmage Road West with caution.
3	<p>Traffic Lane Merging</p> <p>The merging of two straight-ahead traffic lanes within the junction may lead to side-swipe collisions if both movements proceed on the same phase.</p>				E.3.3	The bus lane and the general traffic lane will operate on a separate phase, with each lane receiving a green signal at different times.
4	<p>Signal Phasing Information – Kimmage Road Lower/Ravensdale Park Junction</p> <p>Risk of general traffic turning left across straight-ahead bus movements, resulting in side-on collisions.</p>			D.2.3	E.3.5	The general traffic lane will operate on a separate signal phase to the bus and cycle lane(s).
5	<p>Overhanging tree canopies along the carriageway</p> <p>Tree planting, and associated canopies, may increase the risk of bus strikes and reduced visibility, leading to material damage and side-on collisions.</p>				E.3.6	During the subsequent Design Development phases, care will be taken to ensure that the tree species chosen have canopies, when mature, that will not present a hazard to vehicles travelling in the adjacent traffic lane and that adequate clearance is available so that forward visibility for all road users is not impeded.
6	<p>Swept Paths</p> <p>Large vehicles may be unable to safely turn at the Kimmage Road Lower U-Turn facility,</p>				E.3.7	No Action is proposed. The gap in the median is wide enough for normal delivery vehicles to U-turn. Any larger

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
	increasing the risk of vehicle/pedestrian and vehicle/cyclist collisions.					<p>vehicles can do a 3-point turn at the nearby junction at Corrib Road.</p> <p>Also, the number of loading vehicles in this area will be limited, as loading for businesses to the north of Corrib Road use a service lane behind the businesses, so park off Kimmage Road Lower; and loading to the south of Kimmage Road Lower is limited to two businesses. Additionally, the volume of traffic using this road will be reduced following the works. Therefore, the risk of unsafe turning manoeuvres will be low.</p>
7	<p>Network Traffic Implications</p> <p>Bus gate restrictions may displace existing traffic onto the adjacent road network, giving rise to potential safety issues outside of the scheme extents.</p>				E.3.8	An assessment of the effect of displaced traffic on the adjacent road network will be undertaken, and measures implemented to address any safety issues that may arise.
8	<p>Visibility</p> <p>Southbound drivers may have restricted visibility to the primary and secondary signals at the Toucan Crossing on Kimmage Road Lower, leading to an increased risk of overshoot and vehicle/pedestrian collisions.</p>				E.3.9	The northbound bus stop will be relocated further north on Kimmage Road Lower, and appropriate signal supports chosen (e.g. high-mast or cantilever-type signals) to ensure that approaching drivers have adequate visibility to the upcoming signals.

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
9	<p>Intersection Signalisation - Intersection between Sundrive Road and the Poddle cycleway</p> <p>Risk of vehicle/cyclist collisions where right turning cyclists' cross traffic on Sundrive Road to access/exit the Poddle cycleway.</p>			D.2.4	E.3.11	The Poddle access at Mount Argus Way will be incorporated within the signal arrangement on Sundrive Road.
10	<p>Junction Layout</p> <p>Modifications to junction radii may increase the risk of large vehicles mounting the kerb, leading to vehicle/pedestrian, vehicle/cyclist and material damage collisions.</p>				E.3.12	A swept-path analysis will be undertaken at each junction to confirm that large vehicle movements can be accommodated safely.
11	<p>Ghost Island Arrangement</p> <p>Ghost island may fail to direct drivers around the kerb island at the junction, leading to vehicles mounting the kerb, vehicle/pedestrian, vehicle/cyclist and material damage collisions.</p>				E.3.13	A physical island cannot be placed along the full extent highlighted since access is required to the petrol station forecourt across this hatch. It may be possible to provide pencil bollards on approach to the pedestrian crossing where such bollards will not impede the exit turning manoeuvres of vehicles.
12	<p>Small Islands Arrangement</p> <p>Small islands proposed at signalised junctions may be impractical to sign, and lead to these islands being struck.</p>				E.3.14	All physical islands will accommodate traffic signs and provide at least 450mm between the kerb and sign edge.

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
13	<p>Lack of Turning Head</p> <p>Large vehicles (such as Refuse Vehicles) may reverse over a lengthy distance on Poddle Park, increasing the risk of material damage collisions.</p>				E.3.15	No Action proposed. Refuse trucks regularly reverse along residential roads where provisions for turning are constrained. There is a wide commercial access approximately 70m north of the proposed traffic plug which can act as a turning point for vehicles and requires a short reversing distance.
14	<p>Removal of Advisory Cycle Lane</p> <p>The removal of approximately 100m of advisory cycle lanes on Kimmage Road Lower may increase the risk of a vehicle/cyclist collision.</p>			D.2.5	E.3.16	No Action proposed. The proposed bus gate just north of Ravensdale Park will act as traffic management along KRL, reducing the traffic volumes to appropriate levels in line with NCM guidelines for allowing cyclists to share with general traffic. The vehicular parking is required to formalise the residential parking activities in the area which currently occur within the existing cycle lanes. Removing the parking will encourage such parking activities to continue, forcing cyclists to weave in and out of the cycle lane creating a more hazardous situation than is proposed. Raised tables are not desirable from a bus operation point of view and there are no statutory signs for shared areas.
15	<p>Visibility to Signal Head</p> <p>Stationary buses at the bus stop on Sundrive Road may block visibility to the</p>				E.3.17	The pedestrian crossing will be relocated across the northern arm and

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
	primary signal head, leading to unsafe overtaking and vehicle/pedestrian collisions.					the southern stop line extended further from the bus stop.
16	Cyclist Priority Confusion Unclear priority between straight-ahead cyclists and vehicles turning into/out of side roads could lead to side-on collisions.			D.2.6	E.3.18	No Action proposed. Drivers will need to mount over a 60mm high splayed kerb at junctions indicating the priority for cyclists across these junctions.
17	Cyclist Visibility obscured by Stationary Bus Left-turning drivers into Argus House may have view of cyclists obscured by a stationary bus, leading to side-on collisions.			D.2.7	E.3.19	There is insufficient road cross-section available to provide a floating island north of the access. The bus cage will be moved further south of the access to improve the visibility for exiting drivers and for bus drivers of right turning vehicles into the access.
18	Perpendicular Parking Obscuring Traffic Vehicles using the perpendicular parking spaces on Mount Drummond Avenue may exit in front of a vehicle or cyclist using the junction, leading to side-on collisions.				E.3.20	No Action proposed. The parking spaces are located at the required set back from a junction location. The parking provision is as per DMURS recommendation to narrow the excessively wide existing street.
19	Acute Junction Angle Acute angle of side road at CH2750 may lead to complex entry/exit manoeuvres, and poor visibility.				E.3.21	A swept path analysis will be undertaken to confirm that vehicles can safely enter/exit the side road, and sufficient inter-visibility will be provided between all road users at this junction.

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
20	<p>Cycle Track may be blocked by loading/unloading operations</p> <p>The cycle track may be used for loading/unloading, forcing cyclists into the path of pedestrians, leading to personal injury collisions</p>			D.2.8	E.3.22	The designer shall investigate opportunities to create a wider buffer zone between the parking bay and the cycle track to accommodate loading activity, which should reduce the risk of loading crates and/or trollies obstructing the path of cyclists. The exact width will be developed further at the detail design stage, ahead of a Stage 2 RSA.
21	<p>Lack of Stop Line – Kimmage Road West/Kimmage Road Lower and Terenure Road West Junction</p> <p>Northbound cyclists on Fortfield Road may enter the cycle track at the junction of Kimmage Road West, Kimmage Road Lower and Terenure Road West, and fail to stop ahead of the signalised crossing during a pedestrian phase, as no stop line has been provided on the cycle track.</p>			D.2.9	E.4.5	A stop line will be provided on the cycle track upstream of the pedestrian crossing.
22	<p>Insufficient Floating Island Width</p> <p>Insufficient island width may increase the risk of pedestrians, waiting for a bus, blocking the cycle track and pedestrian/cyclist collisions.</p>	A.2.1		D.2.2	E.3.4	The floating islands at bus stops along the route will be wide enough to accommodate the expected volume of pedestrians.
23	<p>Crossing Facilities</p>	A.2.2			E.3.10	All existing pedestrian crossings will be maintained as part of the scheme. Minimal additional works are proposed

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
	The absence of pedestrian crossing facilities on Kimmage Road Lower may lead to unsafe crossing manoeuvres and present difficulties for mobility impaired non-motorised road users.					along KRL on the basis that there will be a significant reduction in traffic along the road following the implementation of the bus gates. It will be brought to the NTA and DCC's attention that a demand for additional pedestrian crossing points should be monitored and provided in future if required.
24	Tactile Paving Provision Tactile paving not indicated at controlled & uncontrolled pedestrian crossings, and also at the interface between segregated pedestrian/cyclist facilities and shared surfaces.	A.2.3			E.4.1	Appropriate tactile paving will be provided at all controlled & uncontrolled pedestrian crossings, and also at the interface between segregated pedestrian/cyclist facilities and shared surfaces. Measures will also be required at the proposed "floating island" bus stops to ensure that visually impaired public transport users are guided safely to/from the bus stop and the adjacent footpath.
25	Lack of Connectivity between Poddle cycleway and Poddle Park Unclear if sufficient connectivity will be provided between Poddle Park and the Poddle cycleway which could lead to long waiting times for pedestrians when crossing, informal crossings or to the	A.2.4	B.2.1	D.2.14		The likely pedestrian desire lines to/from Poddle Park and the Poddle cycleway will be reviewed and, if necessary, measures provided to cater for these desire lines.

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
	mobility and visually impaired being unable to travel between these locations .					
26	<p>Lack of Guidance Paving at bus stops</p> <p>Absence of Guidance Tactile Paving through the shared area at floating island bus stop locations.</p>	A.2.5				Guidance Tactile Paving will be provided to guide visually impaired pedestrians to/from the footpath & the bus stop.
27	<p>Signal time during pedestrian phases</p> <p>Unclear if sufficient time will be allocated to the pedestrian phases at all crossings within the scheme for a mobility impaired/elderly pedestrian to complete the crossing during the time provided.</p>	A.2.6	B.2.2			Sufficient time will be provided during the pedestrian phase at signalised crossings within the scheme for all pedestrians to cross the carriageway within a single phase.
28	<p>Overhanging trees/vegetation along the footpath</p> <p>Trees/vegetation may encroach onto, or overhang, the footpath presenting obstacles to pedestrians.</p>	A.2.7	B.2.3			Trees and other items of roadside furniture within the scheme will be specified, and located, so as not to present obstacles/hazards to pedestrians or cyclists.
29	<p>No access provided to/from car parking spaces and footpath</p> <p>No visual distinction between the area denoted as “Shared Space” and areas which are not (e.g. a change in surface material, colour or texture).</p>	A.2.8				The Mount Argus Way carpark carriageway area will be separated into areas for vehicle use and routes for non-motorised users.

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
30	<p>Pedestrian/Shared paths – Mount Argus Park</p> <p>The extensive use of shared spaces within the park may lead to difficulties for visually-impaired users who may rely on kerb lines to navigate streets, and it is anticipated that the likely cyclist desire lines to/from the residential areas adjacent to the park will remain creating potential conflict points between cyclists and pedestrians, particularly visually impaired pedestrians, unfamiliar with the shared path arrangement.</p>	A.2.9	B.2.6			Tactile paving will be provided, as necessary, where the shared paths transition to/from segregated surfaces (e.g. at the entrances to the park).
31	<p>Shared Surface – Poddle Cycleway</p> <p>Pedestrians and cyclists will be required to share the carriageway with motorised vehicles and, therefore, the section would be inaccessible to visually impaired pedestrians.</p>	A.2.10	B.2.7			A safe route/zone for visually impaired pedestrians will be provided within the shared surface on Mount Argus View.
32	<p>Footpath effective width</p> <p>The footpath along the western boundary of Harold's Cross Park appears to be narrow at multiple locations.</p>	A.2.11				These are existing footpaths at this location and there is insufficient cross-section within the existing carriageway to increase these any further.
33	<p>Connectivity to Parking Spaces</p> <p>No link indicated connecting the footpath with the parking spaces which may result in</p>	A.2.12				A link will be provided between the footpath and parking spaces.

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
	vehicle occupants having to enter the carriageway or cycle track when accessing these parking spaces.					
34	<p>Accessibility to Mobility Impaired Parking Spaces</p> <p>Dropped kerbs, and tactile paving, have not been indicated at the mobility impaired parking spaces.</p>	A.2.13				A dropped kerb, and the associated tactile paving will be provided adjacent to the parking space.
35	<p>Edge Protection</p> <p>No edge protection, or buoyancy aids, has been indicated where the footpath crosses the Poddle River.</p>		B.2.4			Edge protection, and buoyancy aids, will be provided where footpaths cross the Poddle River.
36	<p>Skid Resistance</p> <p>Details regarding the skid resistance properties of the surface material at the Poddle boardwalk structure has not been provided and it is, therefore, unclear if it will provide the required skid resistance during wet and icy weather.</p>		B.2.5			All pavement types along VRU routes, including the proposed boardwalk structure, will be sufficiently slip-resistant.
37	<p>Cycle Friendly Gullies</p> <p>Unclear if, and what type of, gullies are to be proposed within the Scheme. If gullies located within cycle tracks are not cycle-</p>			D.2.10		Gullies within cycle tracks will be cycle-friendly.

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
	friendly there is a risk that cyclists may swerve into the traffic lane to avoid these.					
38	<p>Lack of Signalised Push Button Units</p> <p>Unclear if signalised push button units will be provided to allow cyclists to call a crossing phase from within the cycle track.</p>			D.2.11		At future design stages, the signal layout will be reviewed and measures provide for cyclists where possible.
39	<p>Overhanging trees/vegetation along the cycle route</p> <p>Trees/vegetation, and their associated canopies, may overhang the cycle track.</p>			D.2.12		Trees within the scheme will be specified, and located, so as not to present obstacles/hazards to cyclists.
40	<p>Bicycle Parking</p> <p>It is unclear if cycle parking will be provided along the scheme, and if provided, if it will be sheltered.</p>			D.2.13		A review of the need for bicycle parking along the route will be undertaken and a variety of bicycle parking provided, as necessary, at suitable locations within the scheme.
41	<p>Full Height Kerb</p> <p>Absence of a dropped kerb at the location where cyclists may enter/exit the cycle track when traveling to/from Poddle Park may lead to cyclists having to mount/dismount a full height kerb.</p>			D.2.15		A dropped kerb with an upstand that can be detected by a visually impaired pedestrians, but also safely traversed by cyclists, will be provided.
42	<p>Cycle Route Connectivity</p>			D.2.16		All existing pedestrian crossings will be maintained as part of the scheme. This

Item No.	Summary of Issue	Access Audit	Walking Audit	Cycle Audit	Road Safety Audit	Action
	The proposal to retain the existing signalised pedestrian crossing across the R137 may reduce connectivity at this location for cyclists.					issue will be brought to the NTA and DCC's attention that the need for an upgraded crossing for cyclists at this location should be monitored and provided in future if required.

Appendix A: Access Audit

A.1 Introduction

The purpose of this Access Audit is to review the proposed Scheme, and the existing surrounding environment, 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 considers a number of aspects of the proposed Scheme, including wayfinding, lighting, tonal contrast of proposed materials, gradients, the provision of kerbs and/or dropped kerbs as appropriate, etc.

A.2 Access Audit Findings

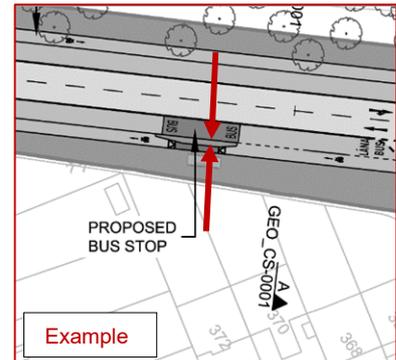
A.2.1 Insufficient Floating Island Width

The width of the floating islands at bus stops within the scheme is not indicated on the drawings provided, however, they appear to be narrow.

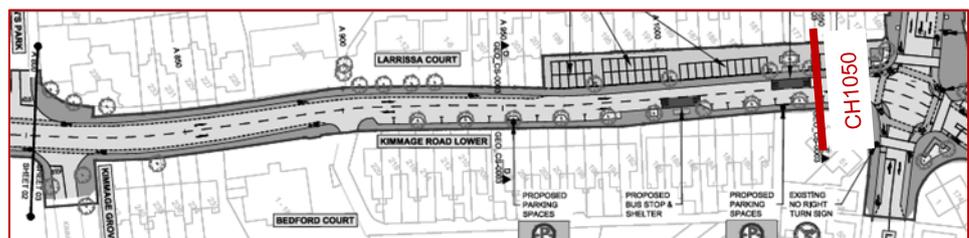
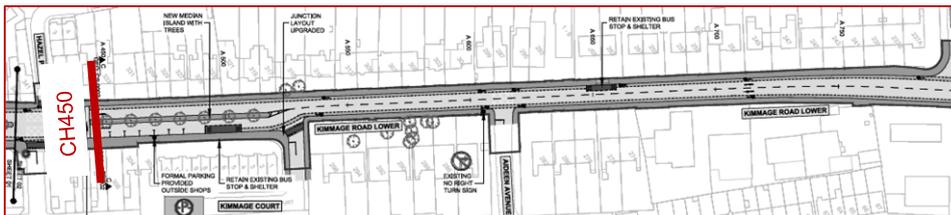
Should pedestrians waiting for a bus, particularly wheelchair users, choose to wait within the islands, there is a possibility that these would not be able to accommodate the passenger volumes.

Recommendation

Ensure the floating islands at bus stops along the route can accommodate pedestrians.



A.2.2 Crossing Facilities



No crossing has been indicated along Kimmage Road Lower between the crossing at Chainage 450 and the junction with Sundrive Road at Chainage 1050. This is a particular concern for mobility and visually impaired pedestrians who would be required to travel a long distance to access bus stops, or amenities, on the opposite side of the road.

In addition, bus passengers accessing opposing bus stops on their return journey would be unlikely to travel to either of these crossings as their desire line would be the shortest route across Kimmage Road Lower.

Recommendation

Identify desire lines across Kimmage Road Lower and provide crossing facilities to support access between the origins and destinations

A.2.3 Tactile Paving Provision

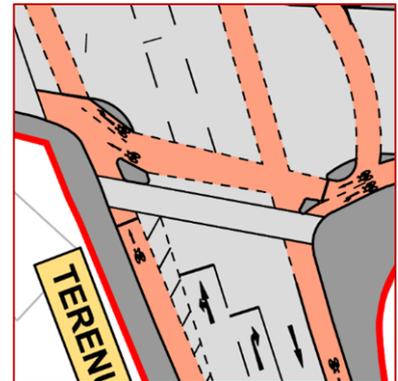
While tactile paving has not been indicated at this early stage in the design process, it will be required at all controlled & uncontrolled pedestrian crossings, and also at the interface between segregated pedestrian/cyclist facilities and shared surfaces, for example the shared surface which extends out to the “floating island” bus stop arrangements.

A lack of tactile paving within the scheme would lead to difficulties for the visually impaired in locating pedestrian crossings and being advised of transitions between shared, and segregated, facilities.

Recommendation

Appropriate tactile paving should be provided at all controlled & uncontrolled pedestrian crossings, and also at the interface between segregated pedestrian/cyclist facilities and shared surfaces.

In addition, measures will be required at the proposed “floating island” bus stop arrangements to ensure that visually impaired public transport users are guided safely to/from the bus stop and the adjacent footpath.



A.2.4 Lack of Connectivity between Poddle cycleway and Poddle Park

It is unclear from the drawings provided whether it is intended to provide a pedestrian crossing connecting Poddle Park with the Poddle cycleway. It is likely that pedestrian trips generated by the path will originate in the areas along Poddle Park to the west of the road, and that there will be a pedestrian desire line along and across the road.

Should no connectivity be provided, including the required road crossings, this could result in long waiting times for pedestrians when crossing, or lead to informal crossings. A lack of a formal crossing would also lead to the mobility and visually impaired being unable to travel between these locations.

Recommendation

The likely pedestrian desire lines to/from Poddle Park and the Poddle cycleway should be identified, and measures provided to cater for these desire lines safely.



A.2.5 Lack of Guidance Paving at bus stops

The general arrangement at bus stops includes extending a shared surface from the footpath to the edge of the traffic lane (e.g. a ‘Pedestrian Priority’ area catering for pedestrians, passengers and cyclists) with the cycle track joining the shared area through the bus stop location.

At this early stage in the design process no tactile paving (either warning or guidance) has yet been indicated. An absence of Guidance Tactile Paving could result in increased difficulties for the visually impaired who may be unaware of how to access or leave the floating island when boarding/alighting a bus.

Recommendation

Guidance Tactile Paving should be provided to guide visually impaired pedestrians to/from the footpath & the bus stop.



A.2.6 Signal time during pedestrian phases

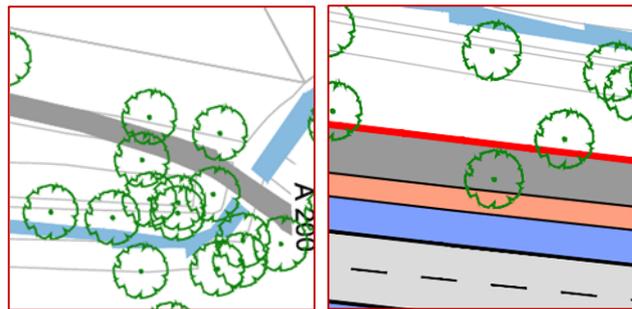
Information regarding the signal timings have not been provided to the Audit Team and it is therefore unclear if sufficient time will be allocated to the pedestrian phases at all crossings within the scheme for a mobility impaired/elderly pedestrian to complete the crossing during the allocated time.

Recommendation

Ensure sufficient time is provided during the pedestrian phase such that mobility impaired/elderly pedestrians can complete the crossing at all locations within the time provided.

A.2.7 Overhanging trees/vegetation along the footpath

It is unclear from the drawings provided which trees are to be retained, and which are to be removed. A number of trees have been indicated positioned adjacent to the proposed footpath which may obstruct pedestrian/cyclist movement.



Recommendation

Ensure retained/new trees or other items of roadside furniture do not present obstacles/hazards to pedestrians or cyclists.

A.2.8 No access provided to/from carpark and the footpath

The carriageway at Mount Argus Way, on the Poddle cycleway where on-street parking has been indicated, is intended to operate as a “Shared Space.” However, no distinction has been provided between the area denoted as “Shared Space” and areas which are not (e.g. a change in surface material, colour or texture).



Pedestrians, particularly the visually impaired, may, therefore, be insufficiently aware of the different surfaces and inadvertently enter the shared surface from the footpath where they would be unaware that they are occupying a space shared with cyclists and motorised vehicles.

Recommendation

The carriageway on Mount Argus Way at the on-street parking should be separated into areas for vehicle use and routes for non-motorised users (e.g. by marking appropriate routes along the edges of the carriageway with symbols clearly indicating to all road users that these are intended for use by pedestrians/cyclists and removing the ‘shared space’ signage).

The footpath and shared surface should also be clearly marked as different surfaces either by road markings, a level difference or contrasting materials (colour or texture).

A.2.9 Pedestrian/Shared paths – Mount Argus Park

It is proposed to use shared surface areas within poddle cycleway and where it intersects with Mount Argus Park. However, existing footpaths, within the park in many instances will run adjacent to, and cross, the shared path.

The extensive use of shared spaces may lead to difficulties for visually-impaired users who may rely on kerb lines to navigate streets, and it is anticipated that the likely cyclist desire lines to/from the residential areas adjacent to the park will remain creating potential conflict points between cyclists and pedestrians, particularly visually impaired pedestrians, unfamiliar with the shared path arrangement.

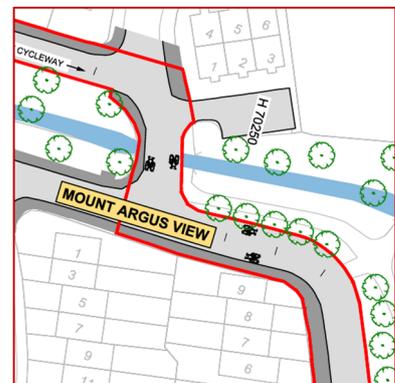


Recommendation

Tactile paving treatments should be provided where the shared paths transition to/from segregated surfaces (e.g. at the entrances to the park).

A.2.10 Shared Surface – Poddle Cycleway

A section of the Poddle cycleway where it intersects with Mount Argus View is to be utilised as a shared surface. Consequently, pedestrians and cyclists will be required to share the carriageway with motorised vehicles and, therefore, the section would be inaccessible to visually impaired pedestrians.



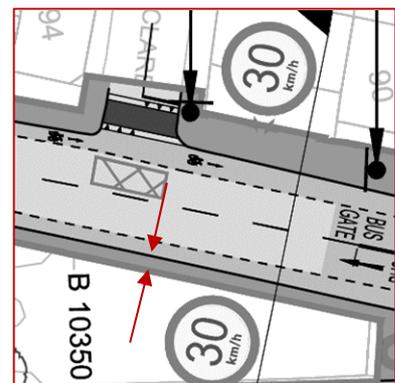
Recommendation

The proposed route should be made accessible to visually impaired pedestrians so that pedestrians are not required to share a carriageway with motorised vehicles.

Where this is not possible, a 'safe zone' for the visually impaired within the shared surface, free of vehicular traffic, should be provided with clear access between the footpath and this area provided.

A.2.11 Footpath effective width

The footpath along the western boundary of Harold's Cross Park appears to be narrow at multiple locations. It is unclear if the footpath width will be sufficient to accommodate mobility impaired pedestrians, particularly wheelchair users or those pushing strollers/prams, travelling within the footpath.

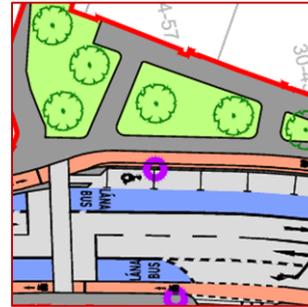


Recommendation

Ensure the effective width of the footpath is sufficient to accommodate all road users.

A.2.12 Connectivity to Parking Spaces

It is proposed to provide on-street parking spaces along the R137 Regional Road.



However, the proposed cycle track runs between the parking spaces and the footpath and there is no link indicated connecting the footpath with the parking spaces. This would result in vehicle occupants having to enter the carriageway or cycle track when accessing these parking spaces.

Recommendation

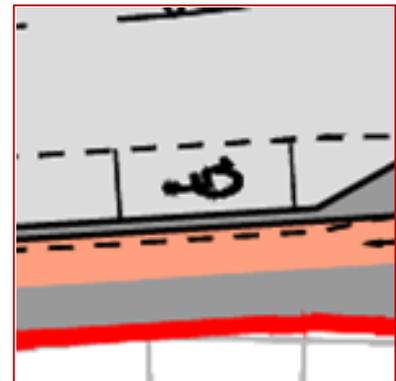
The proposed parking spaces should connect with the existing footpaths on the adjacent road network to ensure accessibility for vehicle occupants.

A.2.13 Access to Mobility Impaired Parking Space

Mobility parking spaces have been indicated adjacent to the on-street carparking spaces on the R137 Regional Road. Dropped kerbs, and tactile paving, have not been indicated at these parking spaces, so it is unclear how mobility impaired vehicle occupants will travel between the parking spaces and the adjacent footpath.

Recommendation

Ensure mobility impaired users can safely travel between the parking spaces and the adjacent footpath.



Appendix B: Walking Audit

B.1 Introduction

The purpose of this Walking Audit is to review the proposed Scheme, and the existing surrounding environment, to assess if it can be readily and comfortably traversed by pedestrians, that the needs of pedestrians have been prioritised over cyclists & vehicles, and that footpaths are continuous and wide enough to cater for the anticipated number of pedestrians.

B.2 Main Report

B.2.1 Lack of Connectivity between Poddle cycleway and Poddle Park

It is unclear from the drawings provided whether it is intended to provide a pedestrian crossing connecting Poddle Park with the Poddle cycleway. It is likely that pedestrian trips generated by the path will originate in the areas along Poddle Park to the west of the road, and that there will be a pedestrian desire line along and across the road.

Should no connectivity be provided, including the required road crossings, this could result in long waiting times for pedestrians when crossing, or lead to informal crossings. A lack of a formal crossing would also lead to the mobility and visually impaired being unable to travel between these locations.



Recommendation

The likely pedestrian desire lines to/from Poddle Park and the Poddle cycleway should be identified, and measures provided to cater for these desire lines safely.

B.2.2 Signal time during pedestrian phases

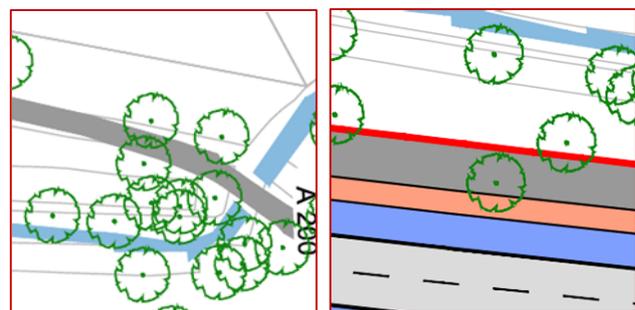
Information regarding the signal timings have not been provided to the Audit Team and it is therefore unclear if sufficient time will be allocated to the pedestrian phases at all crossings within the scheme for a mobility impaired/elderly pedestrian to complete the crossing during the allocated time.

Recommendation

Ensure sufficient time is provided during the pedestrian phase such that mobility impaired/elderly pedestrians can complete the crossing at all locations within the time provided.

B.2.3 Overhanging trees/vegetation along the footpath

It is unclear from the drawings provided which trees are to be retained, and which are to be removed. A number of trees have been indicated positioned adjacent to the proposed footpath at multiple locations within the scheme which may obstruct pedestrian movements.



Recommendation

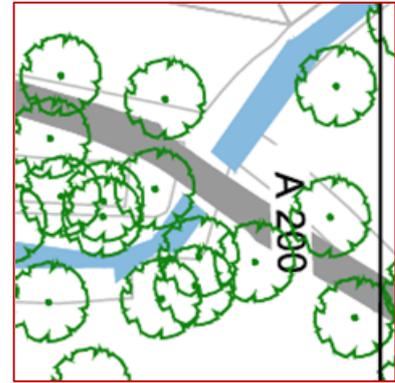
Ensure retained/new trees or other items of roadside furniture do not present obstacles/hazards to pedestrians or cyclists.

B.2.4 Edge Protection

No edge protection, or buoyancy aids, has been indicated on either side of the Poddle River at the footpath crossing in Poddle Park. This could lead to inattentive pedestrians descending into the watercourse below.

Recommendation

Ensure sufficient edge protection, and buoyancy aids are provided at crossings of the Poddle River, ensuring it is clearly visible during the hours of darkness.



B.2.5 Skid Resistance

A boardwalk structure has been indicated in the drawings provided adjacent to the Poddle River at Mount Argus Way. Details regarding the skid resistance properties of the surface material proposed on the boardwalk has not been provided at this early design stage and the Auditor is, therefore, concerned that some surfaces may lack the required skid resistance and become slippery during wet and icy weather.

Recommendation

Ensure sufficient skid resistance is provided on all pavement types indicated along VRU routes, including the proposed boardwalk structure.



B.2.6 Pedestrian/Shared paths – Mount Argus Park

It is proposed to use shared surface areas within poddle cycleway and where it intersects with Mount Argus Park. However, existing footpaths, within the park in many instances will run adjacent to, and cross, the shared path.

The use of shared spaces within the park can lead to difficulties for visually-impaired users who may rely on kerb lines to navigate streets, and it is anticipated that the likely cyclist desire lines to/from the residential areas adjacent the park will remain creating potential conflict points between cyclists and other pedestrians, and visually impaired pedestrians, unfamiliar with the shared path arrangement.

Recommendation

Tactile paving treatments should be provided where the shared paths transition to/from segregated surfaces (e.g. at the entrances to the park).



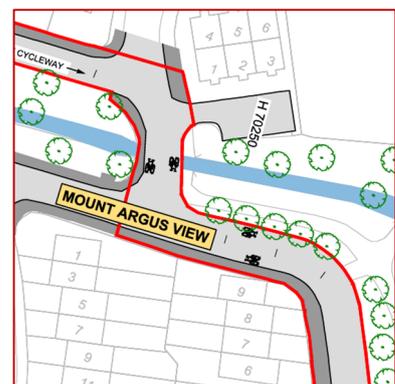
B.2.7 Shared Surface – Poddle Cycleway

A section of the Poddle cycleway where it intersects with Mount Argus View is to be utilised as a shared surface.

Consequently, pedestrians and cyclists will be required to share the carriageway with motorised vehicles and, therefore, the section would be inaccessible to visually impaired pedestrians.

Recommendation

The proposed route should be made accessible to visually impaired pedestrians so that pedestrians are not required to share a carriageway with vehicles.



Where this is not possible, a 'safe zone' for the visually impaired within the shared surface, free of vehicular traffic, should be provided with clear access between the footpath and this area provided.

Appendix C: Non-Motorised User Audit

C.1 Introduction

The purpose of a Non-Motorised User (NMU) Audit is to review the proposed Scheme, and the existing surrounding environment, 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.

For the proposed Scheme separate Access, Walking & Cycling Audits have been undertaken (ref Appendix A, Appendix B & Appendix D), and these should be referred to for findings in relation to NMUs.

Appendix D: Cycle Audit

D.1 Introduction

The purpose of this Cycle Audit is to review the proposed Scheme, and the existing surrounding environment, 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.

D.1.1 Existing Cyclist Facilities

There are existing advisory cycle lanes on both sides of the road to the north-east of the Kimmage Crossroads junction, extending to the point where it intersects Harold's Cross Road. Harold's Cross Road provides a shared cycle and bus lane on both sides of the road from its junction with St Clare's Convent National School to its junction with Grove Road. Harold's Cross Road continues onto Clanbrassil Street Upper to the north of the Emmet Bridge where protected cycle lanes are provided on both sides of the road up to its junction with Lombard Street West. Continuing northbound, an advisory cycle lane is provided on the eastern side of the road as far as its junction with Kevin Street Upper where the scheme terminates.

D.1.2 Proposed Cyclist Facilities

It is proposed to amend the road layout on the R817 (Kimmage Road Lower) from its junction with Kimmage Road West to just south of its junction with Ravensdale Park to provide a cycle track and dedicated bus lane on both sides of the carriageway. From its junction with Ravensdale Park the cycle track will commence on both sides of the carriageway and proceed north-eastwards, within the existing carriageway extents, and will terminate just west of the Kimmage Road Lower/Larkfield Avenue junction. The cycle track will recommence to the east of the Kimmage Road Lower/Larkfield Avenue Junction and continue north to the New Street/Kevin Street Upper junction where the scheme terminates.

The cycle track will transition to a shared surface on either side of bus stops along the proposed route, with the shared surface extending between the island bus stops, across the cycle track, and to the rear of the existing footpath. Cyclists on the cycle track would be required to give way to pedestrians crossing between the footpath and floating island at these locations.

Sections of the scheme where vehicle and cyclist shared surfaces are proposed include Mount Argus Way, Mount Argus View, and Poddle Park connecting Poddle Park with Mount Argus Park.

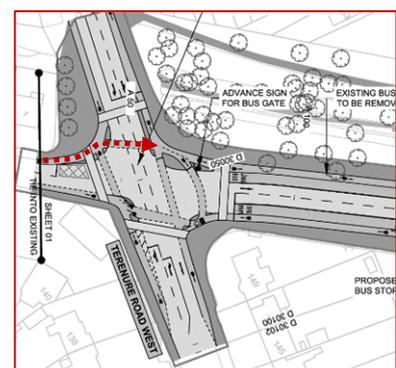
D.2 Main Report

D.2.1 Offset Cycle Lane

The northbound cycle lane which crosses the Kimmage Road West arm of its junction with Terenure Road West, is offset from the northbound through traffic route. There is a danger that left turning drivers onto Kimmage Road West at this junction may misinterpret the cycle crossing as a separate, downstream, non-motorised road user (NMU) crossing and that they have priority over cyclists wishing to proceed northbound, resulting in possible vehicular/cyclist conflict points.

Recommendation

During the design development the alignment of the northbound cycle lane should be amended to reduce the lateral displacement from the northbound traffic lane, in order to reduce the impression that this is a separate crossing. In addition, left turning drivers should be presented with a flashing left-arrow amber signal to ensure they enter Kimmage Road West with caution.



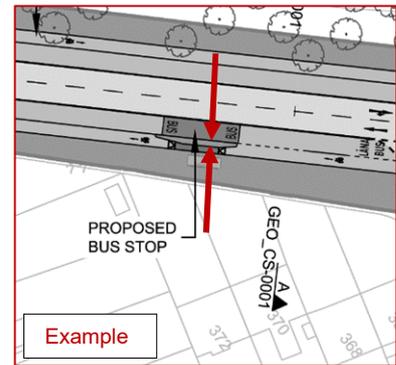
D.2.2 Cycle Lane blocked by passengers

The width of the floating islands at bus stops within the scheme is not indicated on the drawings provided, however, it appears to be narrow.

Should pedestrians waiting for a bus choose to wait within the islands, there is a risk that they could encroach into the cycle track where they would impede cyclists.

Recommendation

Ensure the floating islands at bus stops throughout the route can accommodate pedestrians such that do not encroach into the cycle track.



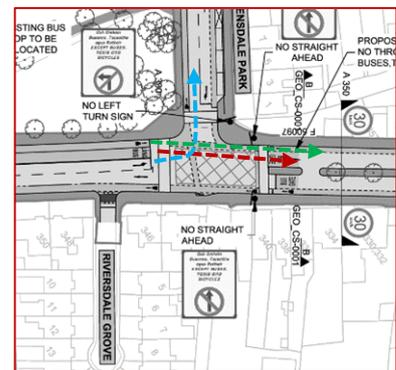
D.2.3 Signal Phasing Information - Kimmage Road Lower/Ravensdale Park junction

No information has been provided in relation to the proposed signal phasing at the Kimmage Road Lower/Ravensdale Park junction. The junction provides northbound access for buses and cyclists through the bus gate, whilst directing general traffic to turn left into Ravensdale Park.

Should all traffic proceed on the same signal phase, there is an increased risk of conflicts between left turning traffic and straight-ahead buses/cyclists.

Recommendation

Ensure that the general traffic lane operates on a separate signal phase to the bus and cycle lane(s).

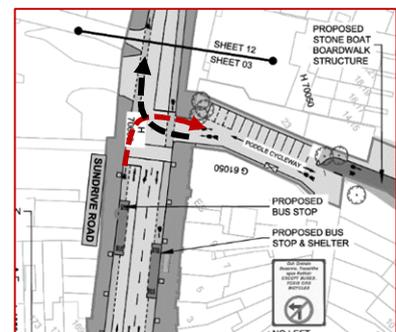


D.2.4 Intersection Signalisation- Intersection between Sundrive Road and the Poddle cycleway

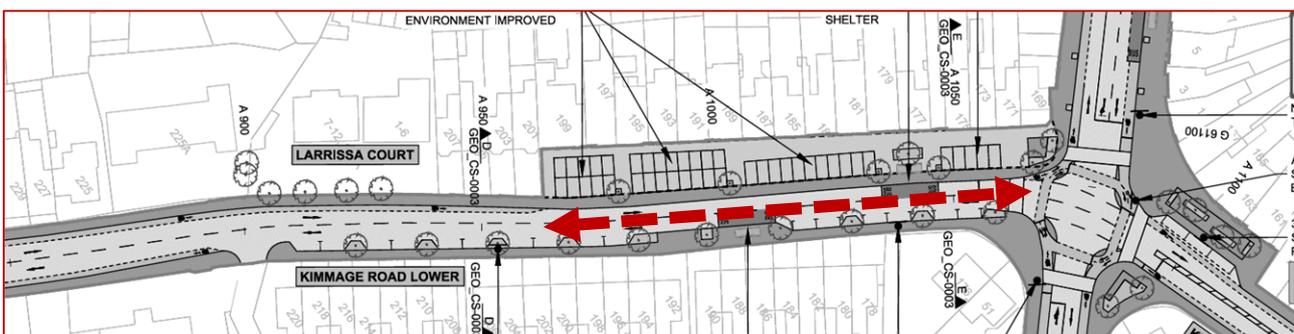
It is unclear if it is intended to signalise the intersection between Sundrive Road and the Poddle cycleway. A failure to signalise this junction could result in difficulties for cyclists entering/exiting the Poddle cycleway, particularly for those undertaking right turns into/out of the cycleway.

Recommendation

The Poddle cycleway access at Mount Argus Way should be incorporated within the signalised junction indicated on Sundrive Road.



D.2.5 Removal of Advisory Cycle Lane



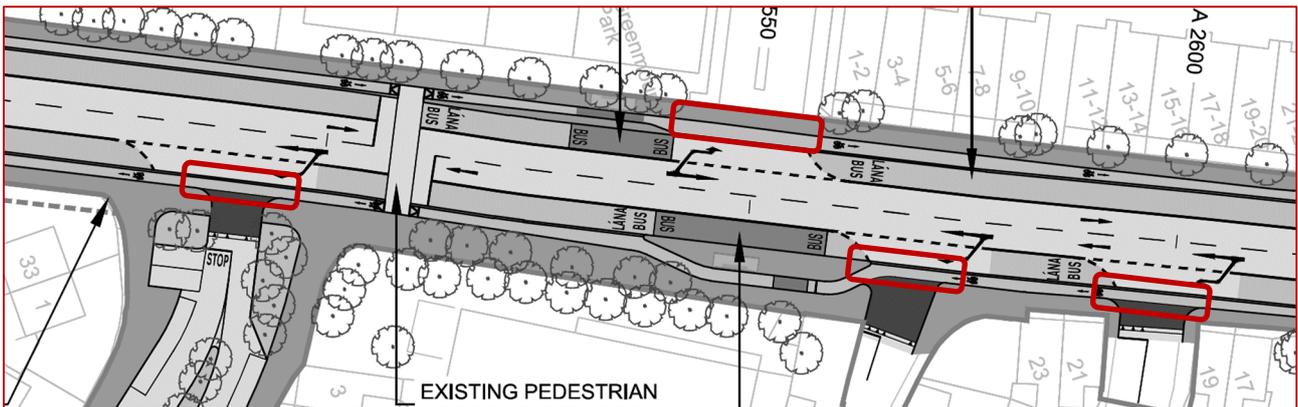
It is proposed to remove a section of an existing advisory cycle lane on either side of Kimmage Road Lower between Sundrive Road and a point 100m to the south. The removal of cycle infrastructure in this area, particularly where significant on and off-street parking exists, may complicate the interaction between drivers and cyclists.

Recommendation

Either: -

- Remove the on-street parking and retain the existing advisory cycle lanes; or
- Provide a shared-surface with traffic calming (e.g. raised tables), surface treatment, signage and road markings to ensure that cyclists and vehicles can safely use the same carriageway.

D.2.6 Cyclist Priority Confusion



The off-road cycle track is indicated as continuing through side road junctions. Drivers may believe cyclists are on the footpath, so would need to yield to turning drivers on the road. Similarly, cyclists may believe they have priority as the cycle track is continuous across the side road junction. As a result, both cyclists and drivers may be confused as to who has priority at the side road.

Recommendation

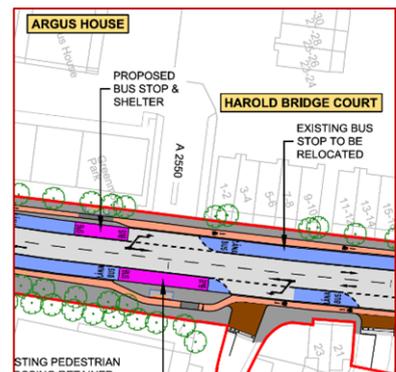
The off-road cycle track should be ramped back to the carriageway level upstream of a side road junction and red-coloured surfacing provided within the cycle track at these locations, thereby providing clarity that straight-ahead cyclists have priority at side road junctions.

D.2.7 Cyclist Visibility obscured by Stationary Bus

Drivers turning left into Argus House may not have clear visibility to cyclists on the cycle track due to a stationary bus at the bus stop.

Recommendation

The bus stop should be relocated further north, downstream of the Argus House access.

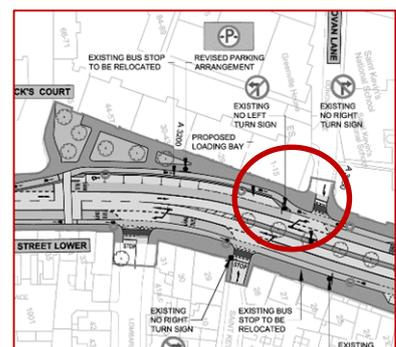


D.2.8 Cycle Track may be used for loading/unloading operations

The cycle track is directed behind parking bays and a loading bay at Ch. 3200. Loading/unloading operations could result in the cycle track being impeded, leading to cyclists entering the footpath.

Recommendation

The cycle track should be relocated in front of the parking bays, which is consistent with other cycle track/parking arrangements within the scheme extents.



D.2.9 Lack of Stop Line – Kimmage Road West/Kimmage Road Lower and Terenure Road West Junction

Northbound cyclists on Fortfield Road may enter the cycle track at the junction of Kimmage Road West, Kimmage Road Lower and Terenure Road West, and fail to stop ahead of the signalised crossing during a pedestrian phase, as no stop line has been provided on the cycle track.

Recommendation

A stop line should be provided on the cycle track upstream of the pedestrian crossing.



D.2.10 Cycle Friendly Gullies

At this early stage in the design process, details regarding drainage and the location of gullies, if any, have not been provided to the Audit Team. It is therefore unclear if, and what type of, gullies are to be proposed within the Scheme. If gullies are located within cycle tracks there is a risk that cyclists may swerve into the traffic lane to avoid these.

Recommendation

At detailed design stage, if gullies are required within cycle tracks ensure that cycle friendly gullies are provided, and that they are flush with the surrounding pavement.

D.2.11 Lack of Signalised Push Button Units

At this early stage in the design process, details regarding signalised push button units to allow cyclists to call a crossing phase have not been provided. Cyclists at the toucan crossings and signalised intersections within the scheme may, therefore, not be able to receive a green signal to cross the carriageway, which may lead to cyclist frustration resulting in them performing a crossing manoeuvre without waiting for the signal.

Recommendation

Push button units and cycle signal heads should be provided to enable cyclists to call a crossing phase safely and comfortably from within the cycle track.

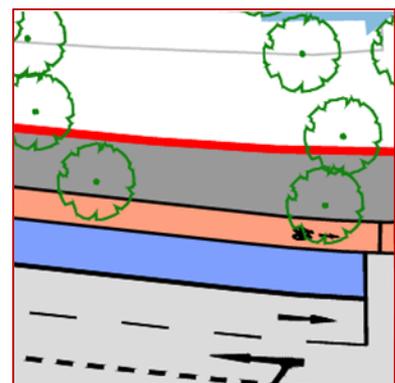
D.2.12 Overhanging trees/vegetation along the cycle route

It is unclear from the drawings provided what type of trees/vegetation will be located adjacent to the cycle route. The plan drawings appear to indicate that the tree canopies will encroach into, or overhang, the cycle track.

In addition, the trees/vegetation may shed their leaves in the autumn & winter months which may, in turn, present a slip/skid risk to cyclists using the cycle track.

Recommendation

Ensure appropriate species of trees/vegetation is used that will provide sufficient vertical clearance for cyclists, and require minimal maintenance of the cycle track to keep it clear of leaves/debris.



D.2.13 Bicycle Parking

It is unclear if cycle parking will be provided along the scheme, particularly at locations that may generate increased cycle traffic (i.e. parks, shops etc.), and, if provided, if it will be sheltered. Users may be discouraged from using cycle stands if they believe the locations are unsafe, or if their bicycle will be exposed to the weather.

Recommendation

Secure, and covered, bicycle parking should be provided at suitable locations throughout/along the scheme, particularly at destinations which would generate increased cycle traffic, and located in areas away from high pedestrian volumes.

Also, the proposed bicycle parking facilities should accommodate a mix of bicycles in order to cater for the widest possible mix of cyclists (e.g. standard bicycles, cargo bicycles, hand-operated bicycles, etc.).

D.2.14 Lack of Connectivity between Poddle cycleway and Poddle Park

It is unclear from the drawings provided whether it is intended to provide a cyclist crossing connecting Poddle Park with the Poddle cycleway. It is likely that cyclist trips generated by the path will originate in the areas along Poddle Park to the west of the road, and that there will be a cyclist desire line along and across the road.

Should no connectivity be provided, including the required road crossings, this could result in long waiting times for cyclists when crossing, or lead to informal crossings.



Recommendation

The likely cyclist desire lines to/from Poddle Park and the Poddle cycleway should be identified, and measures provided to cater for these desire lines safely.

D.2.15 Full Height Kerb

The absence of a dropped kerb at the location where cyclists may enter/exit the cycle track when traveling to/from Poddle Park may lead to cyclists having to mount/dismount a full height kerb.

Recommendation

Dropped kerbs, with an upstand that can be detected by a visually impaired pedestrian, should be provided at the entrance to/exit from the cycle track.

D.2.16 Cycle Route Connectivity

Existing pedestrian crossings are provided across the R137 Regional Road and it is proposed to retain the existing signalised pedestrian crossings in their current layout. These are not currently toucan crossings and this may, therefore, reduce connectivity at these locations for cyclists.

Recommendation

Review existing/proposed signalised crossings and where appropriate provide toucan crossings to serve identified desire lines.

