

Sweco Ireland Ltd

Jacob's Island Strategic Housing
Development, Co. Cork

Quality Audit

Sweco Ireland Ltd

Jacob's Island Strategic Housing Development, Co. Cork

Quality Audit

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2.0	TAG	AP	TAG	7 th June 2022	Final
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1 Introduction

1.1 General

This report was prepared in response to a request from Mr John Ryan of Sweco Ireland Ltd to provide a Quality Audit of the Jacob's Island Strategic Housing Development in Co. Cork. The Quality Audit shall consider the following elements:

- Road Safety Audit
- Access Audit
- Walking Audit
- Non-Motorised User Audit
- Cycle Audit

This report contains three primary sections, with each section focussing on different implications to the users of the scheme. The Road Safety Audit identifies safety implications of the scheme, whilst the Accessibility & Walking Audit focusses more on accessibility implications for vehicles and pedestrians associated with the development. Finally, the Non-Motorised User and Cycle Audit predominantly focusses on cycle use, as pedestrians have been discussed as part of the accessibility and walking audit, and there are currently no requirements for equestrians as part of this development.

2 Background

The site of the proposed Strategic Housing Development (SHD) is in Jacob's Island, Co. Cork (see Figure 2-1). The site is bounded by the N40 National Road to the north, and existing residential developments to the south, east and west.

Access to the SHD site shall be via Longshore Avenue. Longshore Avenue is a two-way single carriageway road in an urban area with a posted speed limit of 50kph. Footways and public lighting are provided on both sides of the carriageway. An existing roundabout is located at the junction between Longshore Avenue and Longshore Drive, approximately 200m from the N40 Interchange. Existing Zebra crossing are provided either side of the roundabout junction, though both are in need of repair. An additional crossing of Longshore Avenue is provided at the eastern extents of the site, via an uncontrolled crossing with road markings to highlight the crossing.

The site is located near junction 10 of the N40, with full vehicular access to the N40 provided via east and west facing ramps. The Mahon Shopping Centre and Retail Park are provided on the northern side of the N40 junction, with pedestrian links provided across the interchange.

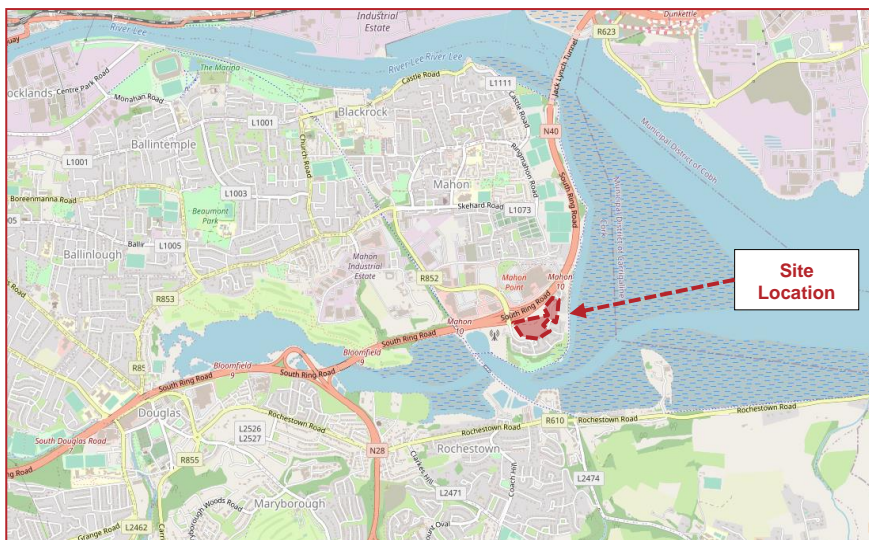


FIGURE 2-1 LOCATION PLAN

3 Proposed Scheme

The proposed development shall include the following key elements:

- The construction of 489 no. apartments, creche and offices in 5 no. buildings ranging in height from part-1 to part-8 no. storeys over lower ground and semi-basement podium levels. The development will contain 1 no. studio, 158 no. 1 bedroom apartments and 330 no. 2 bedroom apartments.
 - Blocks 12 and 13 will contain ancillary commercial areas including a creche (381 sq m) and offices (4,143 sq m). The development will also contain supporting internal resident amenity spaces (576 sq m) and external communal amenity spaces.
 - Block 11 is part-3 to part-6 no. storeys over semi-basement podium and lower ground levels and will contain 101 no. apartments.
 - Block 12 is part-1 to part-4 no. storeys over undercroft car parking and lower ground level office building (4,143 sq m) comprising 2,934 sq m of office floor area.
 - Block 13 is part-2 to part-8 no. storeys over lower ground levels and will contain a crèche over 2 no. levels (381 sq m) and 39 no. apartments.
 - Block 14 is part-3 to part-6 no. storeys over lower ground level and contains 130 no. apartments.
 - Block 15 is part-3 to part-6 no. storeys over semi-basement, podium and lower ground level and contains 219 no. apartments and ancillary resident amenity spaces (576 sq m).
- The proposed development also provides for hard and soft landscaping, boundary treatments, public realm works, car parking, bicycle parking, bin stores, signage, lighting, PV panels, sprinkler and water tank, substations, plant rooms and all ancillary site development works above and below ground.

Access to the SHD site shall be from four separate accesses on Longshore Avenue (see Figure 3-1), which runs in an east-west direction to the south of the development site, connecting with junction 10 of the N40 at its western extents.

- 1) **Primary Access** - The existing three arm roundabout on Longshore Avenue shall be upgraded to include a new northern arm, which will provide a primary access into the new development.
- 2) **Western Access** – a left-in-lane providing one-way access (from west to east).
- 3) **Eastern Access** – provides an alternative access to the SHD site.
- 4) **Access near Bus Stand** – provides access to the development's eastern extents. This access will require modification to an existing bus turnaround.

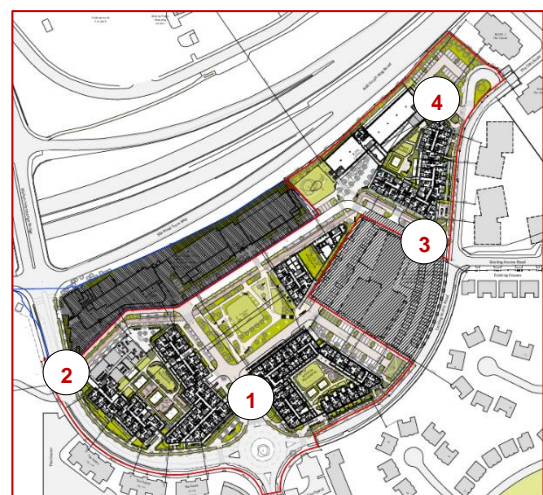


FIGURE 3-1 LOCATION OF ACCESSES

The designer has confirmed that the existing N40 junction 10 has capacity issues, though notes the development has a limited impact on the junction's future performance.

4 Road Safety Audit

4.1 Introduction

This Road Safety Audit has been carried out in accordance with the requirements of GE-STY-01024 (previously NRA HD19/15) dated December 2017, contained on the Transport Infrastructure Ireland (TII) Publication's website.

The members of the Road Safety Audit Team are independent of the design team, and include:

Mr. Aly Gleeson

(BSc, MEng, MBA, RSACert, CEng, FIEI)
Road Safety Audit Team Leader

Mr. Antonis Papadakis

(MSc, MIEI)
Road Safety Audit Team Member

The Audit took place during May 2022 and comprised an examination of the documents provided by the designers (see section 4.6). A site visit was undertaken on the 17th May 2022. At the time of the site visit the weather conditions during the site visit were dry with patchy rain, and the road surface was damp in places. Traffic volumes during the site visit were low, pedestrian and cyclist volumes were low and traffic speeds were considered to be generally within the posted speed limit.

Where problems are relevant to specific locations these are shown on drawing extracts within the main body of the report. Where problems are general to the proposals sample drawing extracts are within the main body of the report, where considered necessary. Road Safety problem locations are also shown in Appendix A - Road Safety Audit Problem Locations.

The scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety and considers the perspective of all road users. It has not been examined or verified for compliance with any other standards or criteria. The problems identified in this report are considered to require action in order to improve the safety of the scheme and minimise collision occurrence.

If any of the recommendations within this road safety audit report are not accepted, a written response is required, stating reasons for non-acceptance. Comments made within the report under the heading of Observations are intended to be for information only. Written responses to Observations are not required.

4.2 Items Not Submitted for Auditing

Details of the following items were not submitted for audit; therefore, no specific problems have been identified at this stage relating to these design elements, however where the absence of this information has given rise to a safety concern it has been commented upon in Section 4.3: -

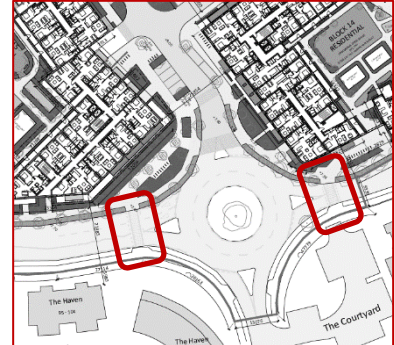
- Landscaping
- Vehicle swept paths
- Drainage
- Public Lighting
- Visibility splays

4.3 Road Safety Audit

4.3.1 Problem

Drawing: Drawing No: 1730D-OMP-00-SPG3-DR-A-1000 (Rev P13)

Summary: Existing crossings on Longshore Avenue may be unable to accommodate the increased volume of pedestrians and cyclists.



The new Strategic Housing Development may increase the volume of pedestrians wishing to cross Longshore Avenue, particularly during AM and PM peak periods. There may also be an increase in the volume of cyclists crossing Longshore Avenue. It is unclear if the existing Zebra Crossings will be capable of meeting additional crossing demand following the construction of the SHD site. Should the crossings be inadequate, there may be a risk of unsafe pedestrian and cyclist crossing movements, particularly where young children or mobility impaired pedestrians are using the crossing.

Recommendation

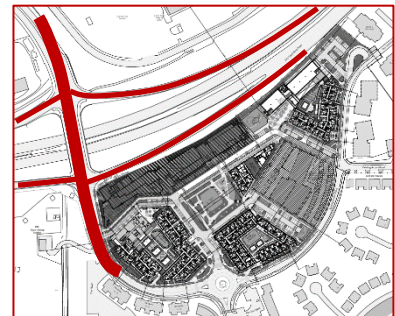
Ensure that the existing Zebra Crossings can support the expected pedestrian and cycle volumes likely to cross Longshore Avenue.

If Zebra Crossings are found to be adequate, significant maintenance/repair will be required to ensure the two existing Zebra Crossings are fully operational.

4.3.2 Problem

Drawing: General Problem

Summary: Congestion at junction 10 of the N40 may increase the risk of vehicle/pedestrian and vehicle/cyclist collisions.



The RSA Team understand that Junction 10 of the N40 is currently at, or above, capacity. The addition of the SHD site, which shall see an increase in the volume of cars, pedestrians and cyclists using the junction, may exacerbate peak hour queuing, and increase the likelihood of pedestrians and cyclists weaving through congested traffic. This may lead to vehicle/pedestrian and vehicle/cyclist collisions, particularly during winter months where road users will be passing through the junction in darkness.

Recommendation

Undertake a detailed assessment of the junction's performance with the SHD site, including future year assessments (i.e. +5 and +15 years). Ensure robust measures are in place, or will be put in place, to accommodate the increased vehicle, pedestrian and cyclist volumes generated by the SHD site.

4.3.3 Problem

Drawing: Drawing No: 1730D-OMP-00-SPG3-DR-A-1000 (Rev P13)

Summary: The location of trees may reduce intervisibility between road users.



The location of trees at side road junctions, pedestrian crossing points, perpendicular parking spaces, and the Zebra crossings on Longshore Avenue, may reduce intervisibility between drivers, and between drivers and pedestrians/cyclists. Reduced intervisibility may increase the risk of side-on collisions and vehicle/pedestrian and vehicle/cyclist collisions.

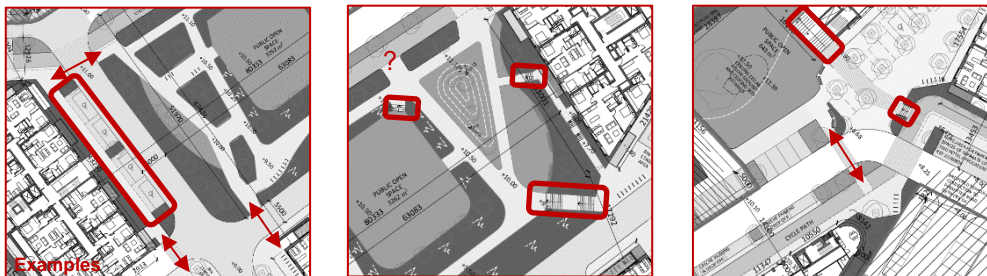
Recommendation

Ensure trees are located outside visibility splays.

4.3.4 Problem

Drawing: Drawing No: 1730D-OMP-00-SPG3-DR-A-1000 (Rev P13)

Summary: Absence of Dropped Kerb and Tactile Paving may lead to slips, trips, falls and possible vehicle/pedestrian collisions.



Mobility impaired parking spaces have been indicated within the development, however dropped kerbs and tactile paving have not been indicated adjacent these spaces. If a level difference exists between the footpath and carriageway/parking spaces the absence of dropped kerbs could lead to difficulties for mobility impaired pedestrians in accessing the footpath once they leave their vehicle, while a failure to provide tactile paving at dropped kerbs may lead to visually impaired pedestrians inadvertently entering the carriageway where there is an increased risk of being struck by a vehicle.

Additionally, the absence of tactile paving at uncontrolled pedestrian crossings, at the top and bottom of steps, and at the interface between the internal cycle track and adjoining footways may increase the risk of visually impaired pedestrians being insufficiently aware that they are approaching a hazard. This may increase the risk of visually impaired pedestrians entering a live carriageway without due care and attention, falling from height, or entering cycle tracks where there is a risk of pedestrian-cyclist collisions.

Recommendation

Dropped kerbs and tactile paving should be provided within the development.

4.3.5 Problem

Drawing: Drawing No: 1730D-OMP-00-SPG3-DR-A-1000 (Rev P13)

Summary: Junction control, and priority, has not been indicated at the crossroad junction.



The junction control (stop, yield etc.), and thus priority, at the development's internal crossroad junction has not been indicated. The absence of adequate road markings and signage may lead to driver confusion and hesitation resulting in drivers misinterpreting priority at the junction and entering the junction at the same time as opposing vehicles where there is an increased risk of side-swipe or side-on collisions.

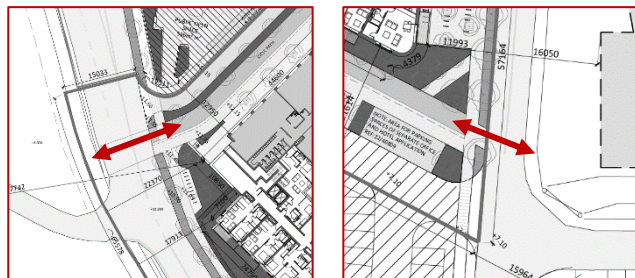
Recommendation

Ensure the junction control, and priority, at the proposed crossroad junction is clear via signage and road markings.

4.3.6 Problem

Drawing: Drawing No: 1730D-OMP-00-SPG3-DR-A-1000 (Rev P13)

Summary: It is unclear how cyclists will safely cross Longshore Avenue at the extremities of the internal cycle track.



An internal cycle track is provided within the SHD site. The cycle facility connects with Longshore Avenue to the east and west of the development, however, no crossings have been indicated within the plan. It is therefore unclear how cyclists will safely access the opposite side of the road, where they can continue their journey. The absence of a crossing facility may lead to cyclists mounting a full height kerb to access the facility, which can increase the risk of falls and personal injuries, or cycling straight into the carriageway in front of a vehicle, leading to vehicle/cyclist collisions.

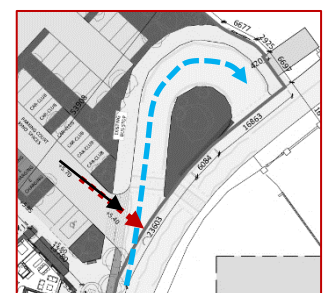
Recommendation

Additional facilities should be provided where the internal cycle track interfaces with Longshore Road, ensuring cyclists can safely access the cycle track from Longshore Avenue, or cross to the opposite side of Longshore Avenue when wishing to continue their journey toward Mahon in the north, or the amenities south of Longshore Drive.

4.3.7 Problem

Drawing: Drawing No: 1730D-OMP-00-SPG3-DR-A-1000 (Rev P13)

Summary: Junction layout may increase the risk of side-on collisions.



Access to the proposed Office (Block 12) and Residential Area (Block 11) carpark at the eastern extents of the scheme is provided via a new junction that is offset from the existing bus turnaround entry. The proposed layout is

complicated by the location of trees to the south of the access, and trees within the bus turnaround island, as well as the location of the access which is offset from Longshore Avenue/The Sanctuary. This may lead to drivers exiting the carpark with limited visibility to vehicles on Longshore Avenue/The Sanctuary, and to buses which may carry high speeds into the 'Bus Only' turnaround area. It may also lead to drivers exiting the carpark junction and abruptly stopping within the bus turnaround access before entering Longshore Avenue, increasing the risk of rear-end-shunt and side-on collisions.

The layout may also lead to drivers continuing through the junction without due care and attention, believing the edge of Longshore Avenue to be the stop/yield line, further increasing the risk of side-on collisions.

Recommendation

The access arrangement should be modified to ensure the junction interface is with Longshore Avenue/The Sanctuary, not the internal edge of the bus turnaround.

4.3.8 Problem

Location: Site Observation

Summary: Existing pedestrian crossing may lead to confusion and possible vehicle/pedestrian collisions.



The existing layout near the bus turnaround includes black and white road markings, but no Belisha Beacons or red tactile paving. Pedestrians, particularly children, may believe this is a Zebra crossing, and enter the road in front of a driver, leading to vehicle/pedestrian collisions.

Additionally, the crossing extends across the bus turnaround access, approximately on the same line. Pedestrians may continue straight across the second crossing without due care and attention, increasing the risk of vehicle/pedestrian collisions.

Recommendation

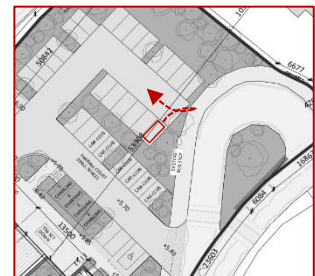
A controlled pedestrian crossing (e.g. Zebra, Toucan, etc.) should be provided in this location.

Additionally, the crossings on Longshore Avenue/The Sanctuary and the Bus Turnaround should be staggered.

4.3.9 Problem

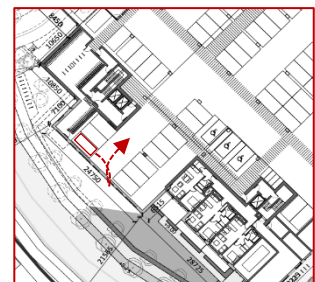
Drawing: Drawing Nos: 1730D-OMP-00-SPG3-DR-A-1000 (Rev P13) & 1730D-OMP-00-SPG2-DR-A-1000 (Rev P07)

Summary: It is unclear if there is sufficient space for drivers to safely enter/exit all parking spaces within the development.



It is unclear if there will be sufficient space available for drivers to enter and exit all parking spaces within the proposed basement, and surface level, carparks, particularly those at the end of aisles where physical boundary constraints are located.

Should there be insufficient space available to safely enter and exit all parking spaces there is an increased risk of low speed material damage collisions with other parked vehicles or building boundaries within the carparks.



Recommendation

A swept path analysis should be undertaken within the carparks to ensure safe entry and exit to/from potentially constrained spaces, and the layout revised if necessary.

4.3.10 Problem

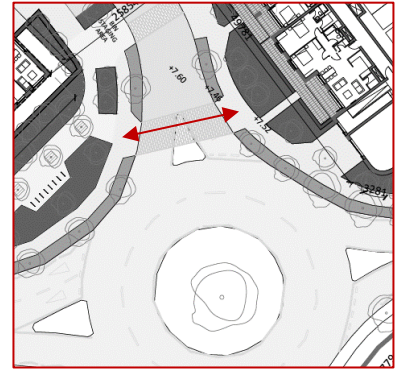
Drawing: Drawing No: 1730D-OMP-00-SPG3-DR-A-1000 (Rev P13)

Summary: Possible slips, trips, and falls.

The proposed layout indicates an uncontrolled pedestrian crossing of the primary development access at the northern arm of the Longshore Avenue roundabout. However, the crossing appears to be on a ramp gradient, which may increase the risk of pedestrians crossing on a surface that is not level, leading to slips, trips, and falls.

Recommendation

Ensure the uncontrolled pedestrian crossing is located on a flat, level, surface, and that provision for the crossing is made within the splitter island. Tactile paving and dropped kerbs should be provided at the crossing.



4.3.11 Problem

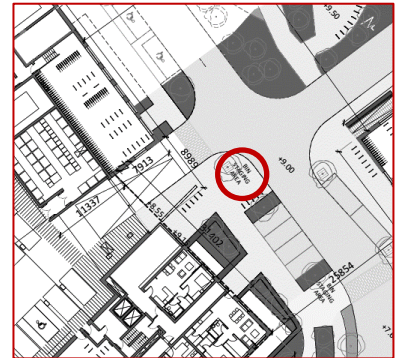
Drawing: Drawing No: 1730D-OMP-00-SPG2-DR-A-1000 (Rev P07)

Summary: Bins storage areas may obstruct visibility for drivers when located at accesses or side roads.

Bin Staging areas are located within the development. However, some areas are located near side road junctions or vehicle accesses, which may reduce visibility for drivers using the development. This may lead to drivers entering the road when it is unsafe to do so, leading to side-on or vehicle/cyclist collisions.

Recommendation

Ensure bin storage areas do not reduce or block visibility.



4.3.12 Problem

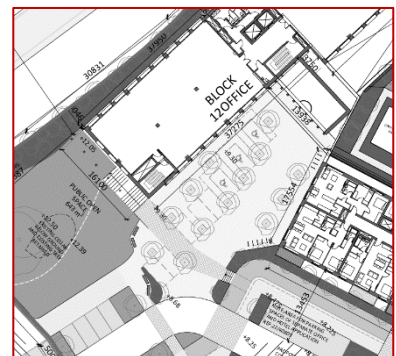
Drawing: Drawing No: 1730D-OMP-00-SPG3-DR-A-1000 (Rev P13)

Summary: Planter boxes may obstruct the safe entry and exit of vehicles in the Office Block 12 carpark.

Several planter boxes have been located near mobility parking spaces within the Office Block 12 carpark. It is unclear if these planter boxes will obstruct safe entry/exit movements for drivers using the carpark. Should the planter boxes restrict vehicle movement, there is an increased risk of material damage collisions.

Recommendation

Ensure planter boxes near Mobility Parking spaces do not interfere with a vehicle's swept path near Block 12.



4.3.13 Problem

Drawing: Drawing No: 1730D-OMP-00-SPG2-DR-A-1000 (Rev P07)

Summary: Possible loss of control collisions for cyclists using the basement ramps.

The gradient of the proposed basement carpark access ramp has not been indicated. If the ramp is too steep, it may lead to possible loss of control collisions for cyclists, who may use the ramp to access the basement carpark.



Recommendation

Ensure the gradient of the ramp is sufficient for all types of vehicles that will require access to the carpark without experiencing difficulties when ascending/descending the ramp.

4.3.14 Problem

Drawing: Drawing No: 1730D-OMP-00-SPG3-DR-A-1000 (Rev P13)

Summary: It is unclear if the carriageway within the proposed development will sufficiently shed surface water.

Information regarding the drainage provision within the proposed development has not been provided to the Audit Team. Should insufficient drainage measures be provided, this could lead to ponding within the development's access road or pedestrian routes, leading to loss of traction during wet or icy weather and possible loss of control collisions, or slips and falls for pedestrians.

Recommendation

Ensure the carriageway within the development is sufficiently drained and that ponding does not occur.

4.3.15 Problem

Drawing: Drawing No: 1730D-OMP-00-SPG3-DR-A-1000 (Rev P13)

Summary: It is unclear if the proposed development will be sufficiently lit during the hours of darkness.

Information regarding public lighting within the proposed development has not been provided to the Audit Team and it is therefore unclear if the development will be sufficiently lit during the hours of darkness.

If the proposed development is not sufficiently lit during the hours of darkness, there is a risk that inter-visibility between drivers and non-motorised road users will be reduced resulting in an increased risk of vehicle-pedestrian collisions

Recommendation

Ensure the proposed development is sufficiently lit during the hours of darkness.

4.4 Road Safety Audit Team Statement

We certify that we have examined the drawings referred to in this report. The examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified in order to improve the safety of the scheme.

The problems identified have been noted in this report together with associated safety improvement suggestions, which we would recommend should be studied for implementation.

The Road Safety Audit Team has not been involved in the design of this scheme.

ROAD SAFETY AUDIT TEAM LEADER

Aly Gleeson

Signed:



Dated:

7th June 2022

ROAD SAFETY AUDIT TEAM MEMBER

Antonis Papadakis

Signed:



Dated:

7th June 2022

4.5 Road Safety Audit Brief Checklist

Have the following been included in the audit brief?: (if 'No', reasons should be given below)

	Yes	No
1. The Design Brief	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Departures from Standard	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Scheme Drawings	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Scheme Details such as signs schedules, traffic signal staging	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Collision data for existing roads affected by scheme	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Traffic surveys	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Previous Road Safety Audit Reports and Designer's Responses/Feedback Form	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Previous Exception Reports	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Start date for construction and expected opening date	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Any elements to be excluded from audit	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Any other information? (if 'Yes', describe below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.6 Documents Submitted to the Road Safety Audit Team

DOCUMENT/DRAWING TITLE	DOCUMENT/DRAWING NO.	REVISION
Site Layout Plan (Level G2)	1730D-OMP-00-SPG2-DR-A-1000	P07
Site Layout Plan (Level G3)	1730D-OMP-00-SPG3-DR-A-1000	P13

4.7 Road Safety Audit Feedback Form

Scheme: Jacob's Island Strategic Housing Development, Co. Cork

Route No.: N40

Audit Stage: Stage 1 RSA Date Audit Completed: 27th May 2022

To be Completed by Designer				To be Completed by Audit Team Leader
Paragraph No. in Safety Audit Report	Problem Accepted (Yes/No)	Recommended Measure(s) Accepted (Yes/No)	Describe Alternative Measure(s). Give reasons for not accepting recommended measure	Alternative Measures or Reasons Accepted by Auditors (Yes/No)
4.3.1	Yes	Yes		
4.3.2	No	No	A Traffic Assessment has been undertaken. There is currently no evidence of traffic queuing across the crossings, street lighting is provided at this junction which should alleviate any potential issues with darkness in winter periods.	Yes
4.3.3	Yes	Yes		
4.3.4	Yes	Yes		
4.3.5	Yes	Yes		
4.3.6	Yes	No	Whilst any such works on Longshore Avenue are outside the scope of this project, the Design team shall work with the Local Authority to investigate opportunities for improving connectivity to Mahon, and the local Greenway.	Yes
4.3.7	Yes	Yes		
4.3.8	Yes	Yes		
4.3.9	Yes	Yes		
4.3.10	Yes	Yes		
4.3.11	Yes	Yes		

4.7 Road Safety Audit Feedback Form


Scheme: Jacob's Island Strategic Housing Development, Co. Cork

Route No.: N40

Audit Stage: Stage 1 RSA **Date Audit Completed:** 27th May 2022

To be Completed by Designer				To be Completed by Audit Team Leader
Paragraph No. in Safety Audit Report	Problem Accepted (Yes/No)	Recommended Measure(s) Accepted (Yes/No)	Describe Alternative Measure(s). Give reasons for not accepting recommended measure	Alternative Measures or Reasons Accepted by Auditors (Yes/No)
4.3.12	Yes	No	<p>All trees scheduled in close proximity to the mobility parking spaces at Office Block 12 are all 'in ground' and to fully clarify there are no above planters proposed within this zone.</p> <p>All 'in ground' trees proposed shall have a clear stem of 2.0m in height to offer intervisibility through the space.</p> <p>All specimen trees shall also be fastigate in nature which in effect will ensure they are narrow in form in terms of their canopy width and will retain their shape and compactness upon establishment. In this instance, the buffer area (i.e. 1200mm width) at each of the designated parking spaces has been duplicated to ensure the trees can be included throughout whilst not impacting on the Part M Building Regulations relating to the same.</p>	<p>Yes</p> <p><i>(Note, tree canopies should be cut to a height of 2.5m to permit cyclists)</i></p>
4.3.13	Yes	No	<p>B15 – The ramp is split into 2 sloped sections, with a level landing between them. The sloped sections have gradients of 1:15 and 1:12 – it is our understanding that 1:12 is a permissible gradient for roads under DMURS.</p> <p>B12 – There is a short section of access ramp at 1:10 – the section is c. 8m in length. Given that the length of the ramp is very short, we think this may be acceptable.</p>	<p>Yes</p> <p><i>(Ensure there is sufficient head room for cyclists)</i></p>
4.3.14	Yes	Yes		
4.3.15	Yes	Yes		

Signed: _____ **Designer** **Date** _____

Signed:  _____ **Audit Team Leader** **Date** 7th June 2022

Signed: _____ **Employer** **Date** _____

5 Accessibility & Walkability Audit

5.1 Introduction

The proposed development is in an urban area that includes a comprehensive network of existing footways and pedestrian crossing facilities on Longshore Avenue, with strong links to the Mahon Shopping Centre, Retail Park and the associated businesses and schools north of the development. Public lighting is also provided on Longshore Avenue, through junction 10 of the N40, and north to business, retail, and leisure amenities, as well as amenities south of the development toward Longshore Drive and the waterfront.



The proposed development also includes new pedestrian footways and crossings, which will support increased pedestrian permeability within the development, and at the interface between the SHD site and the surrounding footway network.

As such, the development's location is supported by existing pedestrian infrastructure that will promote walking to and from the development.

5.1.1 Access to local bus network

The proposed development is well served by Transport for Ireland bus routes. The closest bus stops are less than a 2-minute walk from the proposed development. A list of bus routes serving the area is provided in Table 5-1, including the distance from these bus stops to the proposed development. The distances indicated have their origin at the proposed site access.

TABLE 5-1 BUS ROUTE NEAR DEVELOPMENT

Bus Stop (Name)	Bus Stop (Number)	Proximity to the development	Bus Route	Travelling between
The Sanctuary	242901	300m	215	Cloghroe – Mahon Point
			215A	Mahon Point – South Mall
Jacobs Island	242911	60m	215	Cloghroe – Mahon Point
			215A	Mahon Point – South Mall
Jacobs Island	242921	58m	215	Cloghroe – Mahon Point
			215A	Mahon Point – South Mall
St Michael's Drive	246362	640m	219	Ringmahon Road – Cork Institute of Technology
Mahon Point Shopping Centre	247121	505m	202	Mahon Point Omniplex – Hollyhill
			202A	Mahon Point Omniplex - Hollyhill
			212	Outside Kent Station Cork - Mahon Point Omniplex

5.1.2 Access to the Train

Kent Station in Cork City can be accessed from the development in 40 minutes via bus, or 26 minutes by bicycle.

5.1.3 Local Amenities

The proposed development is located in close proximity to the Mahon Business and Retail parks, which are located north of the N40 South Ring Road. This location provides the development with access to a wide range of amenities within short walking and cycling distances. These amenities include various retail outlets, cafés, restaurants, shopping centres, supermarkets, departments stores, cinemas, theatres, pharmacies and many more. Table 4.2 includes a selection of amenities which can be accessed in a short journey time, on foot or by bicycle, from the proposed development.

TABLE 5-2: LOCAL AMENITIES CLOSE TO THE PROPOSED DEVELOPMENT

Amenity	Distance (approx.)	Journey Time on Foot / Bicycle (approx.)	Direction from Development
John McHugh Park	200m	4mins / 1 mins	South
Mahon Point Shopping Centre	505m	13mins / 6mins	North
Mahon Point Retail Park	465m	10mins / 4mins	North-west
Green Way Mahon Cork	430m	8mins / 2mins	West
St Michaels (Cork) GAA Club	820m	22mins / 10mins	North

5.2 Building Accesses

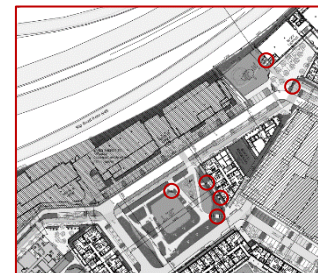
No accessibility issues have been identified relating to Building Accesses.

5.3 Pedestrian Crossing Facilities

Accessibility issues relating to Pedestrian Facilities have been discussed in Section 4.3.4 and 4.3.10

5.3.1 Issue

Several pedestrian routes within the development include sections of steps which may prevent mobility impaired users from being able to fully access the developments Public Open Spaces, or may require mobility impaired users to travel longer distances to reach certain destinations within the development. This may create difficulty for mobility impaired users, and possibly discourage mobility impaired users from using the public open spaces within the development.



Recommendation

Steps should be replaced by ramped footways that can safely accommodate mobility impaired users within the SHD site.

5.4 Target Groups

No accessibility issues have been identified relating to Target Groups.

5.5 Subways

No accessibility issues have been identified relating to Subways.

5.6 Junctions

No accessibility issues have been identified relating to Junctions.

5.7 Signage

No accessibility issues have been identified relating to Signage.

5.8 Public Transport

No accessibility issues have been identified relating to Public Transport.

5.9 Lighting

Accessibility issues relating to Lighting have been discussed in Section 4.3.15.

5.10 Visibility

Accessibility issues relating to Visibility have been discussed in Section 4.3.3 and 4.3.11.

5.11 Waste Facilities within the Development

No accessibility issues have been identified relating to Waste Facilities within the Development.

5.12 Carriageway Markings for Pedestrians

No accessibility issues have been identified relating to Carriageway Markings for Pedestrians.

5.13 Parking

5.13.1 Issue

Electric Vehicle (EV) parking spaces have not been indicated within the development's basement carpark; however it is likely that a portion of the parking spaces will be required for EVs. These spaces typically require additional width to support a buffer zone to account for potentially different charging port connections on vehicles. The additional width allows space for electric cables, as well as user access to connect/disconnect the charging cables.

All the parking spaces, with the exception of mobility impaired parking spaces, within the carpark, appear to have similar dimensions. There is a risk therefore that, should any of these spaces be designated for EVs as the design progresses, the required space will not be available to accommodate the necessary buffer zone and infrastructure for EV parking spaces.

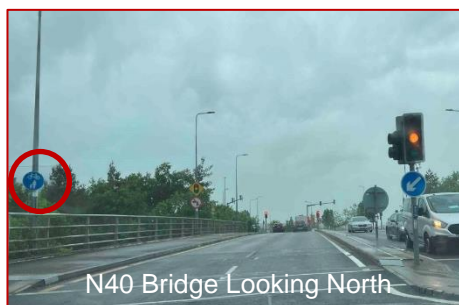
Recommendation

A sufficient number of parking spaces within the development's carparks should be designated as EV parking spaces and sufficient space should be provided at these spaces in accordance with Section 7.6.16 of the Traffic Signs Manual (2019), Chapter 7 'Road Markings.'

6 Cycle Audit

Existing cycle facilities are provided on the N40 bridge, with a shared use pedestrian/cycle path provided on both sides of the bridge. Both facilities lead to signalised pedestrian crossings on either side of the N40. These cycle facilities connect to a more comprehensive cycle network to the north of the N40, with dedicated off road cycle tracks and on-street cycle lanes provided on Mahon Link Road.

There are currently no cycle facilities to the south of the N40.

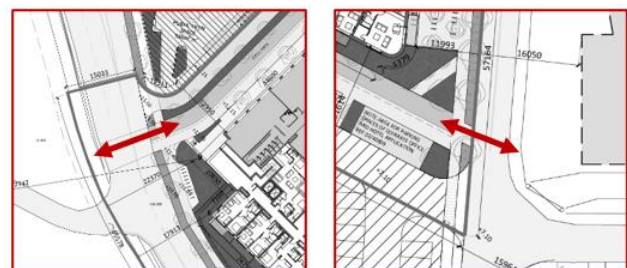


The proposed development includes a segregated cycle track that runs in an east-west direction through the development, and connects to Longshore Avenue at the western and eastern extents of the scheme. The segregated cycle track will be constructed at the same level as the adjacent footway. Cycle parking is provided within the proposed development, with cycle stands strategically located near Public Open Spaces, hotels, office buildings and the segregated cycle track.

6.1 External Cycle Provision

6.1.1 Issue

The proposed cycle track within the SHD site connects externally with Longshore Avenue to the east and west of the development, however, no crossings have been indicated within the plan. It is therefore unclear how cyclists will safely access the opposite side of the road, where they can continue their journey. This may discourage cyclists from travelling to and from the development.



Recommendation

Additional facilities should be provided where the internal cycle track interfaces with Longshore Road.

6.2 Internal Cycle Provision

Accessibility issues relating to Intern Cycle Provision have been discussed in Section 4.3.13.

6.2.1 Issue

It is unclear if the proposed cycle parking stands near office blocks, the hotel or the Creche will be sheltered. Users, such as employees working at these locations, may be discouraged from using cycle stands if they believe the locations are unsafe, or if their bicycle will be exposed to the weather. This may discourage users from choosing cycling as a sustainable form of transport.

Recommendation

Ensure sheltered cycle parking is provided in certain locations, and strategically located to benefit cyclists within the development.

6.2.2 Issue

The cycle track within the SHD site will be constructed at the same level as the adjoining footway. As such, there is a risk that visually impaired pedestrians may enter the cycle track without due care and attention.

Recommendation

The material used to construct the cycle track should offer clear colour contrast to the material used for the footway, and tactile paving should be used throughout the development to clearly warn visually impaired pedestrians when they are entering or crossing the cycle track.

6.3 Quality Audit Action Plan

Issue	Situation	Action/Adjustment	Priority	Cost
5.3	Absence of Dropped Kerb and Tactile Paving may lead to slips, trips, falls and possible vehicle/pedestrian collisions.	Dropped kerbs and tactile paving should be provided within the development.	1	B
5.3	Possible slips, trips, and falls at the primary junction access.	Ensure the uncontrolled pedestrian crossing is located on a flat, level, surface, and that provision for the crossing is made within the splitter island. Tactile paving and dropped kerbs should be provided at the crossing.	1	A
5.3.1	Several pedestrian routes within the development include sections of steps which may prevent mobility impaired users from being able to fully access the developments Public Open Spaces, or may require mobility impaired users to travel longer distances to reach certain destinations within the development. This may create difficulty for mobility impaired users, and possibly discourage mobility impaired users from using the public open spaces within the development.	Steps should be replaced by ramped footways that can safely accommodate mobility impaired users within the SHD site.	1	B
5.9	It is unclear if the proposed development will be sufficiently lit during the hours of darkness.	Ensure the proposed development is sufficiently lit during the hours of darkness.	1	C
5.10	The location of trees may reduce intervisibility between road users.	Ensure trees are located outside visibility splays.	1	A

Issue	Situation	Action/Adjustment	Priority	Cost
5.10	Bins storage areas may obstruct visibility for drivers when located at accesses or side roads.	Ensure bin storage areas do not reduce or block visibility.	1	A
5.13	<p>Electric Vehicle (EV) parking spaces have not been indicated within the development's basement carpark; however it is likely that a portion of the parking spaces will be required for EVs. These spaces typically require additional width to support a buffer zone to account for potentially different charging port connections on vehicles. The additional width allows space for electric cables, as well as user access to connect/disconnect the charging cables.</p> <p>All the parking spaces, with the exception of mobility impaired parking spaces, within the carpark, appear to have similar dimensions. There is a risk therefore that, should any of these spaces be designated for EVs as the design progresses, the required space will not be available to accommodate the necessary buffer zone and infrastructure for EV parking spaces.</p>	A sufficient number of parking spaces within the development's carparks should be designated as EV parking spaces and sufficient space should be provided at these spaces in accordance with Section 7.6.16 of the Traffic Signs Manual (2019), Chapter 7 'Road Markings.'	1	C
6.1.1	The proposed cycle track within the SHD site connects externally with Longshore Avenue to the east and west of the development, however, no crossings have been indicated within the plan. It is therefore unclear how cyclists will safely access the opposite side of the road, where they can continue their journey. This may discourage cyclists from travelling to and from the development.	Additional facilities should be provided where the internal cycle track interfaces with Longshore Road.	1	B
6.2	Possible loss of control collisions for cyclists using the basement ramps.	Ensure the gradient of the ramp is sufficient for all types of vehicles that will require access to the carpark without experiencing difficulties when ascending/descending the ramp.	1	A
6.2.1	It is unclear if the proposed cycle parking stands near office blocks, the hotel or the Creche will be sheltered. Users, such as employees working at these locations, may be discouraged from using cycle stands if they believe the locations are unsafe, or if their bicycle will be exposed to the weather. This may discourage users from choosing cycling as a sustainable form of transport.	Ensure sheltered cycle parking is provided in certain locations, and strategically located to benefit cyclists within the development.	1	B

Issue	Situation	Action/Adjustment	Priority	Cost
6.2.2	The cycle track within the SHD site will be constructed at the same level as the adjoining footway. As such, there is a risk that visually impaired pedestrians may enter the cycle track without due care and attention.	The material used to construct the cycle track should offer clear colour contrast to the material used for the footway, and tactile paving should be used throughout the development to clearly warn visually impaired pedestrians when they are entering or crossing the cycle track.	1	B

Priority

- 1 – Immediate works required;
- 2 – Essential works required within 1 year;
- 3 - Desirable works required within 2 years;
- 4 – Long term works;
- 5 - Specific needs (e.g. pedestrian desire line not catered for)

Cost (Indicative cost only)

- A – Up to €2,500
- B – From €2,500 up to €10,000
- C - Between €10,000 up to €20,000

7 Appendix A - Road Safety Audit Problem Locations

