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2024

**Quality Audit Report
Proposed Part 8 Residential
Development, Lamb's Cross, Dublin 18**

Quality Audit Report
Proposed Part 8 Residential Development, Lamb's Cross, Dublin

Document Control Sheet

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1 Introduction

This report documents the findings of a Quality Audit (QA) carried out with respect to a Part 8 proposal for the development of 37 no. residential units at Lamb's Cross, Dublin 18 situated at the junction of Sandyford Road and Hillcrest Road.

The audit team conducted the site visit on Friday the 1st of December 2023 in order to identify elements within the road environment that could impact the accessibility and mobility of road users as well as safety issues observed in the proposed scheme.

The audit team comprised of the following people:

Audit Team Leader:
Adam Price BEng (Hons), CEng, MIEI

Audit Team Member:
Mark Gallagher AEng, MIEI

Audit Team Observer
John Igoe BEng (Hons), MEng

The audit team reviewed the following documents and drawings provided Malone O'Regan Consulting Engineers:

- SHB5-LDR-DR-MOR-CS-P3-101 – Site Layout
- SHB5-LDR-DR-MOR-CS-P3-113 – Sight Lines
- SHB5-LDR-DR-MOR-CS-P3-114 – Swept Path Analysis Fire Tender
- SHB5-LDR-DR-MOR-CS-P3-115 – Swept Path Analysis Refuse Truck
- SHB5-LDR-DR-MOR-CS-P3-121 – Road Signs and Markings
- SHB5-LDR-DR-MOR-CS-P3-130 – Drainage Layout
- SHB5-LDR-DR-MOR-CS-P3-140 – Watermain Layout
- SHB5-LDR-DR-MOR-CS-P3-150-SuDS Layout
- SHB4-LDR-DR-SMK-ME-P1-6000 Illuminance Plot.

Documents/Information not supplied:

- Speed Survey
- Departures from Standards.

Guidance and information on the completion of the Quality Audit was found in:

- Design Manual for Urban Roads and Streets (DMURS), Department of Transport, Tourism and Sport;
- DMURS Supplementary Material – Advice Note 4 – Quality Audits;
- DMURS Supplementary Material – DMURS Street Design Audit (May 2019);
- Traffic Advisory leaflet 5/11, Department of Transport UK; and

- Building for Everyone - A Universal Design Approach, National Disability Authority.

The audit examined only those issues within the design relating to the road safety implications and accessibility of the scheme and has therefore not examined or verified the compliance of the design in any other criteria.

The Quality Audit should not be treated as a design check. The problems identified and described in this report are considered by the Audit Team to require action to improve the safety of the development and minimise accident occurrence.

All comments, references and recommendations in this audit are in respect of the review of information supplied by Malone O'Regan Consulting Engineers and a subsequent site visit by the audit team.

The information supplied to the Audit Team is also listed in **Appendix A**.

2 Background

2.1 Description of the Proposed Development

This report is prepared on behalf of the NDFA and Dún Laoghaire-Rathdown County Council to accompany a Part 8 proposal for the development of 37 no. residential units at Lamb's Cross, Dublin 18 situated at the junction of Sandyford Road and Hillcrest Road.

The proposed development includes:

- i. 37 no. apartment units in a 3 - 5 storey building over undercroft area, including 29 no. one bed units; and 8 no. two bed units;
- ii. 1 no. community facility of 147sqm;
- iii. Energy Centre at fourth floor level;
- iv. Undercroft area at lower ground level comprising (a) 2 no. ESB substations (b) car, bicycle and motorcycle parking; (c) bin storage; (d) bulk storage area; and (e) supporting mechanical, electrical and water infrastructure.
- v. Landscaping works including provision of (a) communal open space; and (b) public realm area fronting onto Sandyford Road and Hillcrest Road.

The subject site is located at the crossroads where Hillcrest Road on R113 meets the Sandyford Road on R117, on the southwestern outskirts of Sandyford town and will be accessed via a new minority junction on the Hillcrest Road. The crossroad junction has recently been redeveloped with the addition of cycle lanes. Controlled pedestrian crossings and drop kerbs are at each corner of the junction allowing pedestrians easy access to Sandyford and Hillcrest Road. The speed limit along the Hillcrest Road is 50km/h and the road is equipped with footpaths on both sides. These continuous footpaths connect the redeveloped crossroad junction with Sandyford Road enhancing accessibility to the broader road network and public transport.

Please refer to **Figure 2.1** and **Figure 2.2** displayed overleaf, which provides an overview of the site location.



Figure 2.1: Site Location Map (Source: Google Earth)



Figure 2.2: Redeveloped Crossroad Junction with Cycle Lanes and Controlled Pedestrian Crossings

Figure 2.3 shows the site layout provided by Malone O'Regan Consulting Engineers.

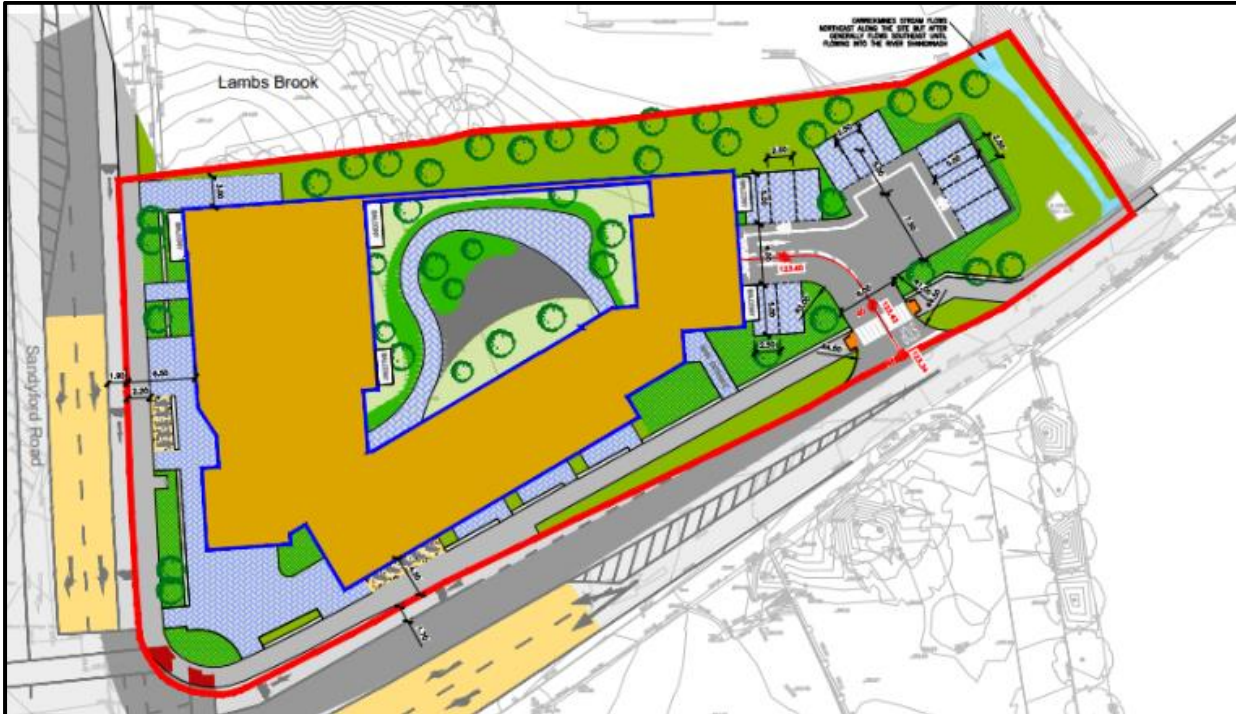


Figure 2.3: Site Layout (Source: Malone O'Regan Consulting Engineers)

2.2 Existing Road Network

The Hillcrest Road is a two-way single carriageway connecting a wide residential zone to Sandyford Road. In the area surrounding the proposed development, the road features a carriageway width of approximately 6.5 metres. Street lighting, footways of varying widths and controlled crossing points featuring dropped kerbs are present in close proximity to the proposed project site. Currently, there is a designated cycle lane where Hillcrest Road meets the crossroad junction. This cycle lane merges onto the carriageway forcing cyclists to use the footpaths or carriageway.

The existing road network around the site is equipped new road markings and signage, while the pavement is in good condition, as shown in **Figure 2.4**.



Figure 2.4: Site location along Hillcrest Road and Lambs Cross

3 Quality Audit Scope

The primary goal of a Quality Audit is to ensure that high-quality places are delivered and maintained by all relevant parties, ultimately benefiting all end users. During that process, the Quality Audit team considers access for disabled people, pedestrians, cyclists, and drivers of motor vehicles to ensure that the scheme is inclusive and caters to the needs of all users.

The scope of this Quality Audit is to review the proposed layouts supplied by the Design Team and make recommendations in line with guidelines as per the Design Manual for Urban Roads and Streets (DMURS) and the Transport Infrastructure Ireland Road Safety Audit Standard GE-STY-01024, in order to ensure compliance and good practice of regulations defined in these standards documents.

The introduction of DMURS have sought to improve the design of streets in urban areas and to facilitate the implementation of policy on sustainable living by achieving a better balance between all modes of transport and road users. The introduction of DMURS is intended to encourage more people to walk, cycle or use public transport by making the experience safer and more pleasant.

In general, the principles of DMURS are intended to lower traffic speeds, reduce unnecessary car use, and create a built environment that promotes healthy lifestyles and responds more sympathetically to the distinctive nature of the individual communities and places.

DMURS Quality Audits are undertaken to demonstrate that appropriate consideration has been given to the relevant aspects of the design from a DMURS point of view. The benefits of undertaking a DMURS Quality Audit are as follows:

- The needs of all user groups and the design objectives of the project are fully considered
- An audit enables the project's objectives to be delivered by putting in place a check procedure
- It can contribute to cost efficiency in design and implementation
- A DMURS Quality Audit encourages engagement with stakeholders.

This Quality Audit will be divided into the following assessments:

- A DMURS Street Design Audit
- Additional Audits (Access, Walking and Cycling Audits)
- A Road Safety Audit.

A DMURS audit template, consisting of a series of short tables, is available online by the Department for Transport, Tourism and Sport (DTTAS) and has been adopted into this report.

This Quality Audit was carried out to identify any potential difficulties road users, particularly mobility impaired users, older people and families with children may encounter when accessing the proposed housing development and also to address any safety issues associated with the proposal. The elements found in this Audit that require further consideration with the guidelines set out in DMURS are outlined at the following pages.

4 DMURS Street Design Audit

4.1 Overview

The DMURS Street Design Audit is an essential tool for evaluating the compliance of street designs with the principles outlined in the Design Manual for Urban Roads and Streets (DMURS). This audit serves to ensure that key considerations outlined in DMURS have been appropriately addressed. The audit focuses on four critical aspects of street design, namely:

- Connectivity;
- Self-Regulating Street Environment;
- Pedestrian and Cycling Environment; and
- Visual Quality.

4.2 Connectivity

Connectivity				
Key Issues	Key DMURS Reference	Comments	Audit Suggestions	Design Team Response
Strategic routes/major desire lines been identified and are clearly incorporated into the design.	3.1 – Integrated Street Network 3.2.1 – Movement Function 3.3.1 – Street layouts 3.3.4 – Wayfinding	3.1 – The internal network connects dwelling entrances with parking area and open spaces. 3.2.1 – The development creates a permeable network for pedestrians restricting private vehicles. 3.3.1 – The design creates a strong sense of enclosure by using landscaping to enclose the streets and development as a whole. 3.3.4 – Site layout is legible directing users towards site and building entrances.		
Multiple points of access are provided to the site/place, in particular for sustainable modes.	3.3.1 – Street Layouts 3.3.3 – Retrofitting	3.3.1 – The development maximises the number of walkable routes between destinations within the development through the provision of footpaths at open spaces. 3.3.3 – The development creates a permeable network for pedestrians with restrictions on the movement of private vehicles along the western site boundary.		

<p>Accessibility throughout the site is maximised for pedestrians and cyclists, ensuring route choice.</p>	<p>3.3.1 – Street Layouts 3.3.2 – Block Sizes 3.4.1 – Vehicle Permeability</p>	<p>3.3.1 – Adequate number of footpaths on the outskirts of the development. However, there are no footpath provisions from the main access point into the development. 3.3.2 – The maximum block dimension does not exceed 120m. 3.4.1 – The site provides though accessibility to the development by road from the southern entrance, which will provide parking spaces and benefit service vehicles entering the development.</p>	<p>Separate cyclist tracks have only been provided at the crossroad junction and not at the site entrance. Cyclists will be required to share the road with vehicles at and around the site entrance. Scheme should provide pedestrian accessibility from main entrance.</p>	
<p>Through movements by private vehicles on local streets are discouraged by an appropriate level of traffic calming measures.</p>	<p>3.2.1 – Movement Function 3.2.2 – Place Context 3.4.1 – Vehicle Permeability</p>	<p>3.2.1 – The development comprises an entrance that provides access to the internal car parking areas and consequently the development building. This local (internal) street network does not provide a through route for vehicles around the development and the vehicles are restricted to one entrance/exit. 3.2.2 – The development comprises an appealing living place enriched with valuable green attributes and pedestrian connectivity. 3.4.1 – The development is restricted to one main internal access road which terminates within the lower level which restricts the movement of private vehicles through the use of short driving distance so that drivers are more likely to maintain lower speeds over shorter distance.</p>		

4.3 Self-Regulating Street Environment

Self-Regulating Street Environment				
Key Issues	Key DMURS Reference	Comments	Audit Suggestions	Design Team Response
A suitable range of design speeds have been applied with regard to context and function.	3.2.1 – Movement Function 3.2.3 – Place Context 4.1.1 – A Balanced Approach to Speed	3.2.1 – It is not clear what the intended speed limit on the internal road is. 3.2.3 – An appropriate speed limit should be applied in the context of the proposed design. 3.2.3 – Higher levels of pedestrian/cyclist movement are catered for. 4.1.1 – The design provides for limited traffic calming measures which is acceptable for such a small-scale development	The development is located along the Hillcrest Road where the speed limit is 50km/h. Since the proposed scheme is a residential development, a speed limit <30km/h should be applied.	
The street environment will facilitate the creation of a traffic calmed environment via the use of 'softer' or passive measures.	4.2.1 – Building Height and Street Width 4.2.2 – Street Trees 4.2.3 – Active Street Edges 4.2.4 – Signage and Line Marking 4.2.7 – Planting 4.4.2 – Carriageway Surfaces 4.4.9 - On-Street Parking Advice Note 1 – Transitions and Gateways	4.2.2 – Tree plantings are proposed in the layout plan. Appropriately sized and spaced tree planting is proposed to ensure sightlines are not blocked at the entrance of the development. 4.2.4 – Signage kept to minimum. 4.4.2 – To reinforce narrower carriageways each parking bay is finished so that it is clearly distinguishable from the main carriageway	No on street parking has been provided on the street as the development run adjacent existing public roads. Parking spaces have been provided internally at the development.	
A suitable range of design standards / measures have been applied that are consistent with the applied design speeds.	4.4.1 - Carriageway Widths 4.4.4 – Forward Visibility 4.4.5 – Visibility Splays 4.4.6 – Alignment and curvature 4.4.7 – Horizontal and Vertical Deflections Advice Note 1 – Transitions and Gateways	4.4.1 – The proposed internal carriageway is 6m in width 4.4.5 – Junction visibility splays in accordance with DMURS. 4.4.6 – The development features changes in horizontal curvature which promotes lower speeds. 4.4.7 Vertical deflections are not proposed in the design	Vertical deflections in the form of a raised table should be considered at the entrance to promote the reduction of vehicles speed at the developments entrance.	

4.4 Pedestrian and Cycling Environment

Pedestrian and Cycling Environment				
Key Issues	Key DMURS Reference	Comments	Audit Suggestion	Design Team Response
The built environment contributes to the creation of a safe and comfortable pedestrian environment.	4.2.1 – Building Height and Street Width 4.2.3 – Active Street Edges 4.2.5 – Street Furniture 4.4.9 – On-Street parking	4.2.1 – The provision of direct and separate access to building entrances along the frontage of the site enhances pedestrian safety. 4.2.3 – Active Street edges provide passive surveillance of the street environment and promote pedestrian activity.		
Junctions been designed to ensure the needs of pedestrians and cyclists are prioritised.	4.3.2 – Pedestrian Crossings 4.3.3 – Corner Radii 4.4.3 – Junction Design	4.3.2 – Pedestrian crossing is provided at the main access point 4.3.3 – Corner radii is provided which appears appropriate 4.4.3 – Main access junction has an appropriate crossing point with tactile paving		
Footpaths are continuous and wide enough to cater for the anticipated number of pedestrian movements.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.5 – Street Furniture 4.3.1 – Footways, Verges and Strips 4.3.2 – Pedestrian Crossings	3.2.1 – The development maximises the number of walkable routes to the south and western sides of the development. 3.2.3 – The development comprises an appealing living place with green attributes.		
The needs of visually and mobility impaired users been identified and incorporated in the design.	4.2.5 – Street Furniture 4.3.1 – Footways, Verges and Strips 4.2.5 – Street Furniture 4.3.2 – Pedestrian Crossings 4.3.4 – Pedestrianised and Shared Surfaces	4.3.4 – Accessible parking spaces are proposed.		
Cycling facilities will cater for cyclists of all ages and abilities.	3.2.1 – Movement Function 3.2.3 – Place Context 4.3.5 – Cycle facilities	4.3.5 – Dedicated cycling lanes are not provided. Cyclists will share the carriageway with pedestrians. However, cycle parking is provided to within the scheme.		

4.5 Visual Quality

Visual Quality				
Key Issues	Key DMURS Reference	Comments	Audit Suggestion	Design Team Response
The landscape plan responds to the street hierarchy and the value of the place.	3.2.1 – Movement Function 3.2.3 – Place Context 4.2.2 – Street Trees 4.2.7 – Planting Advice Note 1 – Transitions and Gateways	3.2.1 – Adequate number of attractive walkable routes are provided to connect users to Hillcrest and Sandyford Road 3.2.3 – The development embodies an appealing living environment with an emphasis on green features where possible. enhancing the sense of place. 4.2.2 – The inclusion of street trees across the site enhances the sense of enclosure achieving a sense of place. 4.2.7 – Planting is proposed to create a softer landscape.		
Street furniture is orderly placed.	3.2.1 – Movement Function 3.2.3 – Place Context 4.2.5 – Street Furniture 4.3.1 Footways, Verges and Strips	4.2.5 – Street furniture is proposed within the scheme.		
The use of signage and line marking has been minimised.	3.2.1 – Movement Function 3.2.3 – Place Context 4.2.4 – Signage and Line Marking	4.2.4 – Details of signage are provided, and signage is kept to the minimum required.		
Materials and finishes used throughout the scheme have been selected from a limited palette and respond to the value of the place?	3.2.1 – Movement Function 3.2.3 – Place Context. 4.2.6 – Materials and Finishes 4.2.8 – Historic Contexts 4.3.2 – Pedestrian Crossings 4.4.2 – Carriageway Surfaces Advice Note 2 – Materials and Specifications	3.2.1 – Adequate number of walkable routes are provided to the south and west of the development. 4.3.2 – Surface differential is provided at crossing point to clearly distinguish crossing locations		

5 Additional Audits

5.1 Accessibility and Walkability Audit

As mentioned previously, the proposed site will be accessed off the R113 (Hillcrest Road) to the southeast of the site. The proposed site will be connected to Hillcrest Road by means of a new T-junction. This will be the sole vehicular entrance to the site.

Pedestrians will have multiple points of entry to the development along the Sandyford Road R117 and along the Hillcrest Road R113. The pedestrian footpaths along the Sandyford Road tie in with the existing footpaths and green spaces. From these entrances, footpaths will extend throughout the development area. No accessibility issues have been identified relating to dwelling accesses.

The proposed footpath running along the southwestern boundary of the development will also link to existing adjacent footpaths. Currently, footpaths are present on both sides of the road. Designated cycle facilities are present along the Sandyford Road and its vicinity. Controlled pedestrian crossings are provided at Lambs Cross junction to the southwest of the development, providing a safer passage for pedestrians to cross.

The site is located near several local amenities, such as schools, shops, parks, and sports facilities, which will be easily accessed by pedestrians and cyclists from Sandyford and Hillcrest Road using the extensive infrastructure network in place.

5.2 Public Transport Network

The proposal is well-served by several bus routes in the vicinity of the site, as shown in **Figure 5.1** below.



Figure 5.1: BusConnects network (Source: BusConnects.ie)

Public transport accessibility is provided by 2 No. bus routes that directly drive past the proposed development, as shown in **Figure 5.1**, corresponding to a walking time of roughly 2 minutes. This bus stops service the 87 and 88 Dublin Bus route, facilitating travel between Sandyford and Dublin City Centre. There are continuous footpaths leading the site to the bus stops.

Approximately 5 minutes cycling from the site is located the Glencairn LUAS stop, serving the LUAS green line in a frequency of approximately 9 minutes during peak hours and 16 minutes during off-peak hours on weekdays. The green line connects the Cherrywood Business Park to the south to Broombridge, Cabra, to the north. Please refer to **Figure 5.2** below.

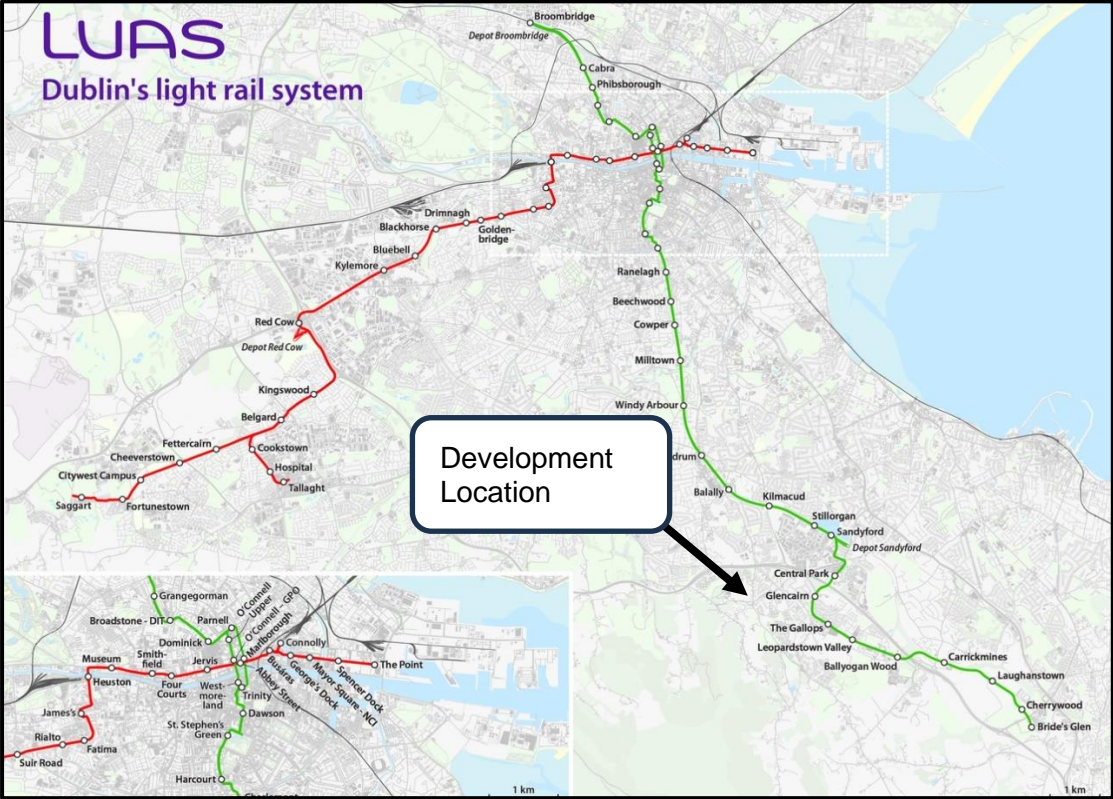


Figure 5.2: LUAS Lines (Source: luas.ie)

Sandyford Business District is also 10 minutes' walk from the site that regularly has buses going towards Dublin City Centre. Please refer to **Figure 5.3** below for details.

Buses leave terminus at	Monday – Friday			Saturday				Sunday				
		06:30	06:50	07:10	07:30	06:30	07:00	07:30	08:00	09:15	09:45	10:15
	07:50	08:10	08:35	09:00	08:30	09:00	09:30	10:00	11:15	11:45	12:15	12:45
	09:25	09:50	10:15	10:35	10:30	11:00	11:30	12:00	13:15	13:45	14:15	14:45
	10:55	11:25	11:55	12:25	12:30	13:00	13:30	14:00	15:15	15:45	16:15	16:45
	12:55	13:25	13:55	14:25	14:30	15:00	15:30	16:00	17:15	17:45	18:15	18:45
	14:55	15:15	15:30	15:45	16:30	17:00	17:30	18:00	19:15	19:45	20:15	20:45
	16:00	16:20	16:40	17:00	18:30	19:00	19:30	20:00	21:15	21:45	22:15	22:45 ^d
	17:20	17:40	18:00	18:25	20:30	21:00	21:30	22:00	23:10 ^c	23:30 ^c		
	18:50	19:10	19:30	20:00	22:30	23:00 ^d	23:30 ^c					
	20:30	21:00	21:30	22:00								
	22:30	22:50 ^d	23:30 ^c									

Route Variations
^d From Sandyford and departs O'Connell St. at 23:30
^c From Sandyford to Parnell Sq. only

Sandyford Business District (Blackthorn Rd.) » 10 mins » Clonskeagh » 20 mins » Ranelagh » 25 mins » O'Connell St. » 25 mins » Wadelai Park

Figure 5.3: Bus Timetable in the vicinity of the development (Source: Dublinbus.ie)

5.3 Cycle Audit

There are dedicated cycle lanes along the Sandyford Road and at the crossroad junction along the Hillcrest Road. Cyclists are expected to merge onto the public Hillcrest Road network with motorists. Bike parking is provided on curtilage for residents and visitor and in the main green spaces. However, these facilities are important to adhere to the specifications outlined in Dublin County Council's Development Plan (2023 - 202) requirements. These specifications advise that the cycle parking should be both secure and aligned with the standards (sheltered or unsheltered).

Creating a sense of safety is crucial for encouraging the use of cycle stands. Cyclists may be deterred from utilising them if they perceive the locations as unsafe or if their bicycles will be exposed to weather. Such concerns could potentially lead to informal parking on footways resulting in reduced pedestrian accessibility.

NTA GDA Cycle Network Plan consisting of the Urban Network, Inter-Urban Network and Green Route Network for each of the seven Local Authority areas comprising the GDA was adopted as part of the GDA Transport Strategy 2022-2042. Secondary Route is proposed on Sandyford Road at the western side of the site and along Hillcrest Road at the southern side of the development. Overall, the site is proposed to be well connected with cycle infrastructure in the vicinity of the site, as shown in Figure 5.3.

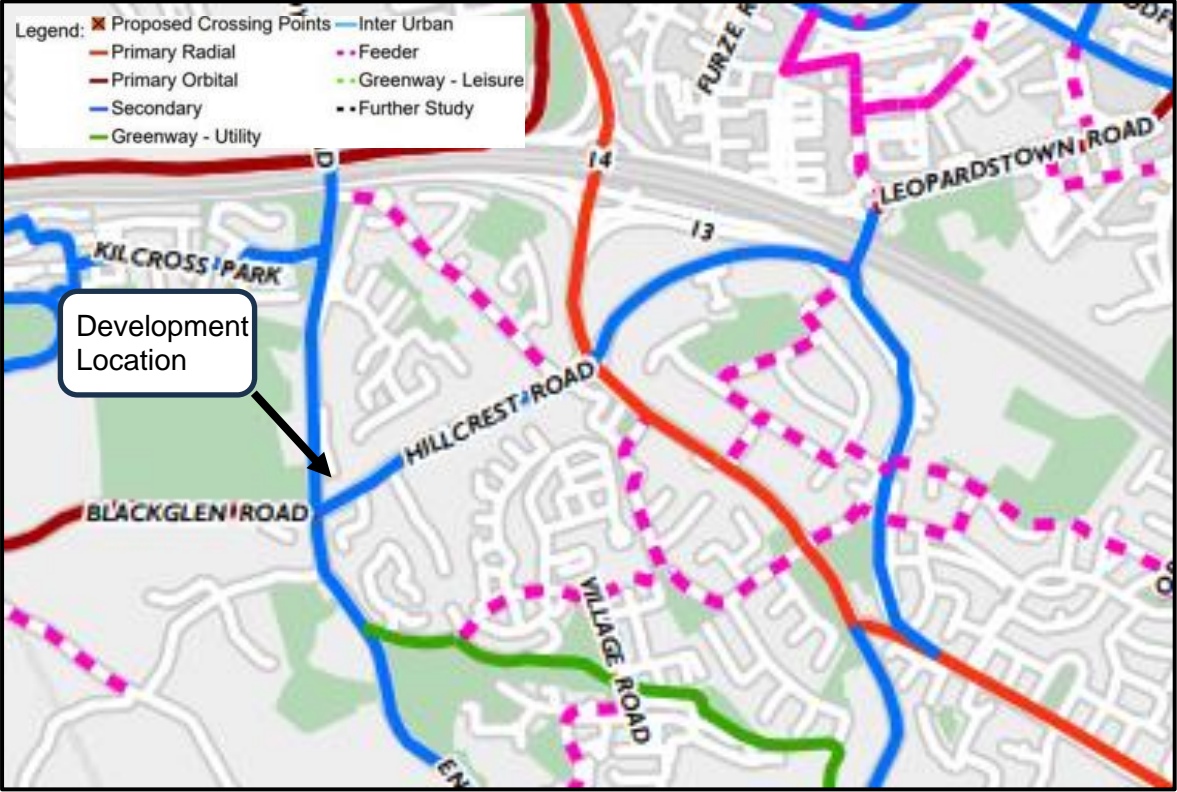


Figure 5.3: NTA GDA Cycle Network Plan in the vicinity of the development (Source: Bus Connects)

6 Road Safety Audit

6.1 Introduction

This report documents the findings of a Stage 1 Road Safety Audit (RSA) carried out with respect to a Part 8 proposal for the development of 37 no. residential units at Lamb's Cross, Dublin 18 situated at the junction of Sandyford Road and Hillcrest Road.

The audit team conducted the site visit on Friday the 1st of December 2023. The audit was carried out in the offices of ORS on Wednesday the 25th of June 2024.

The audit team comprised of the following people:

Audit Team Leader:
Adam Price BEng (Hons), CEng, MIEI

Audit Team Member:
Mark Gallagher AEng, MIEI

Audit Team Observer
John Igoe BEng (Hons), MEng

During the site visit the weather was partly cloudy with occasional sun. The road surface was dry, and the traffic levels were noted to be low across the audit period.

Previous Road Safety Audits were not available for review. The audit team reviewed the following documents and drawings provided by Malone O'Regan Consulting Engineers.

- (1) SHB5-LDR-DR-MOR-CS-P3-101 – Site Layout
- (2) SHB5-LDR-DR-MOR-CS-P3-113 – Sight Lines
- (3) SHB5-LDR-DR-MOR-CS-P3-114 – Swept Path Analysis Fire Tender
- (4) SHB5-LDR-DR-MOR-CS-P3-115 – Swept Path Analysis Refuse Truck
- (5) SHB5-LDR-DR-MOR-CS-P3-121 – Road Signs and Markings
- (6) SHB5-LDR-DR-MOR-CS-P3-130 – Drainage Layout
- (7) SHB5-LDR-DR-MOR-CS-P3-140 – Watermain Layout
- (8) SHB5-LDR-DR-MOR-CS-P3-150-SuDS Layout
- (9) SHB4-LDR-DR-SMK-ME-P1-6000 Illuminance Plot.

Documents/Information not supplied:

- Speed Survey
- Departures from Standards.

The terms of reference / procedure for the Audit were as per the relevant sections of the **Transport Infrastructure Ireland Road Safety Audit Standard GE-STY-01024**. The audit examined only those issues within the design relating to the road safety implications of the

scheme and has therefore not examined or verified the compliance of the designs to any other criteria. The Road Safety Audit should not be treated as a design check.

The problems identified and described in this report are considered by the Audit Team to require action to improve the safety of the development and minimise accident occurrence.

All comments, references and recommendations in this safety audit are in respect of the review of information supplied by Malone O'Regan Consulting Engineers.

Section 6.2 of this report presents the findings of the Stage 1 Road Safety Audit of the proposed residential development. For development's description and site layout please refer to **Section 2**.

The information supplied to the Audit Team is also listed in **Appendix A**.

A feedback form for the Designer to complete is contained in **Appendix B**.

6.2 Problems Raised from the Road Safety Audit

The following are problems and recommendations to address the safety issues associated with the proposal. The recommendations are proposed to the designer of the scheme to reduce any safety risks associated with it.

Due to ongoing review of road traffic collision data by the Road Safety Authority website, no traffic collision data could be obtained for the vicinity of the proposed development site.

6.2.1 Potential Problems Identified

Problem No.1: Sightlines Encroaching Neighbouring Property Wall

Location: Main Access

The audit team note from the drawings provided that the sightlines at the main access appear to encroach over the neighbouring boundary wall which could restrict visibility for exiting vehicles. This could potentially result in potential collisions with vehicles on the mainline due to unsafe exits.



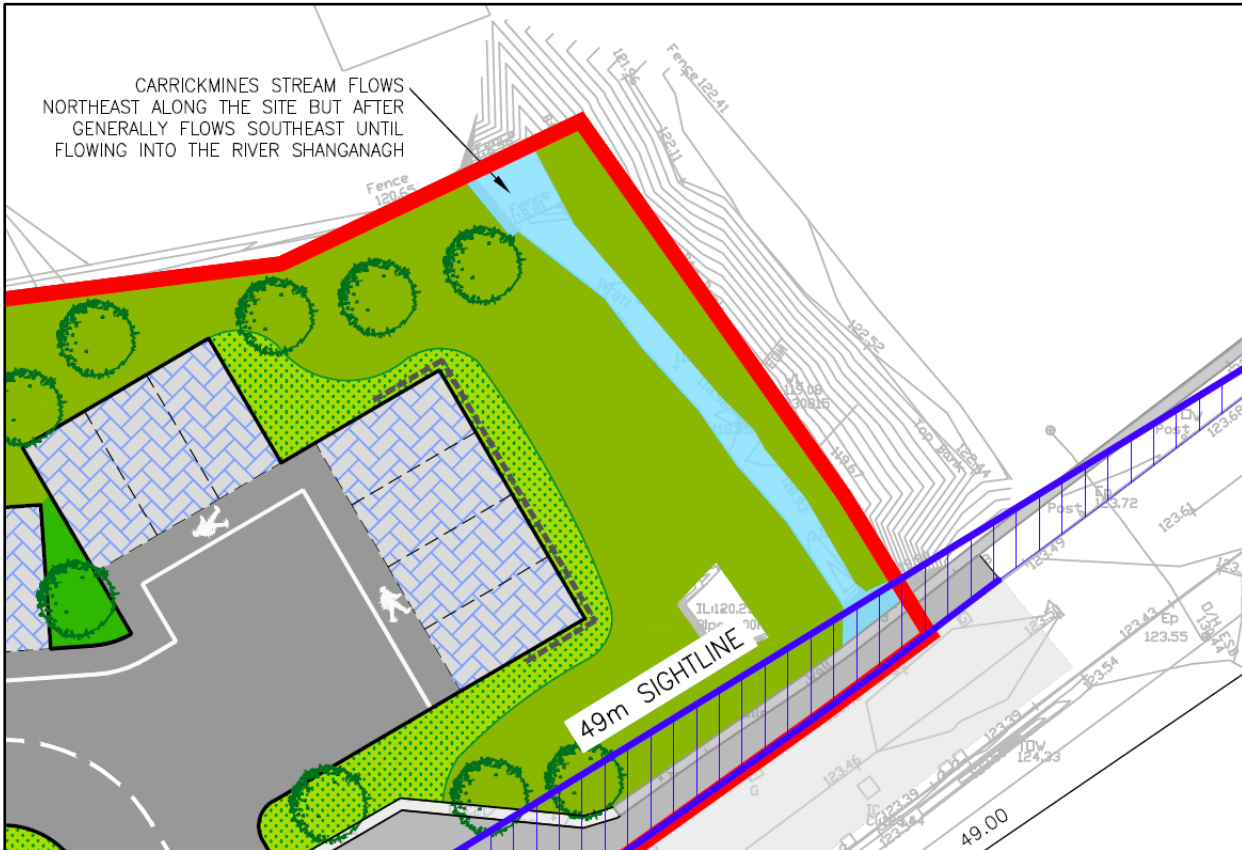
Recommendation:

The design team should ensure that the sightlines from the development are not restricted by existing boundary walls.

Problem No.2: Protection at Existing Stream

Location: Eastern Side of Scheme

The audit team note from the drawings and site visit that there is an existing stream along the eastern boundary to the site which is unprotected. The audit team is concerned that if a vulnerable user fell into the stream that it would result in potential injuries to the vulnerable user.



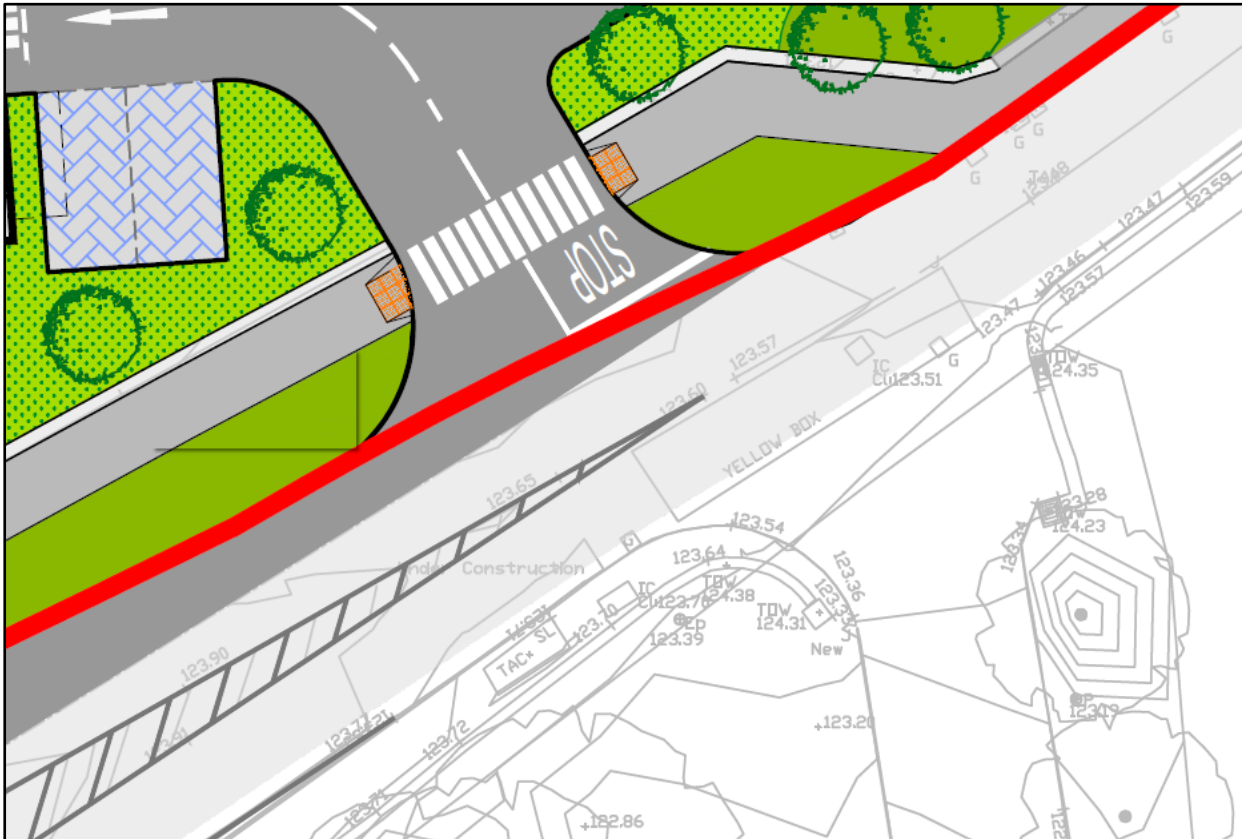
Recommendation:

The design team should ensure that protective measures are provided along the top of the bank to mitigate the potential for vulnerable users to fall down the bank into the stream.

Problem No.3: Solid Centreline

Location: Entrance at Hillcrest Road

The audit team note from the site visit that there is an existing solid centreline on Hillcrest Road which would indicate that vehicles approaching from the east are not permitted to cross the road/centreline to gain access to the development. This could result in potential confusion among motorists which could lead to unsafe manoeuvres.



Recommendation:

The design team should ensure that the centreline is dashed or has a break at the access point to allow vehicles to cross.

Problem No.4: Existing Pedestrian Crossing

Location: Entrance at Hillcrest Road

The audit team note from the site visit that there is an existing pedestrian crossing and tactile paving in the vicinity of the carpark access into the development. The design allows for the northern crossing to be removed, however there is not detail on how the southern crossing is to be dealt with. There is a risk that visually impaired users approaching from the south will use the existing crossing and become disoriented when they do not meet a corresponding crossing facility on the opposite side of the road.



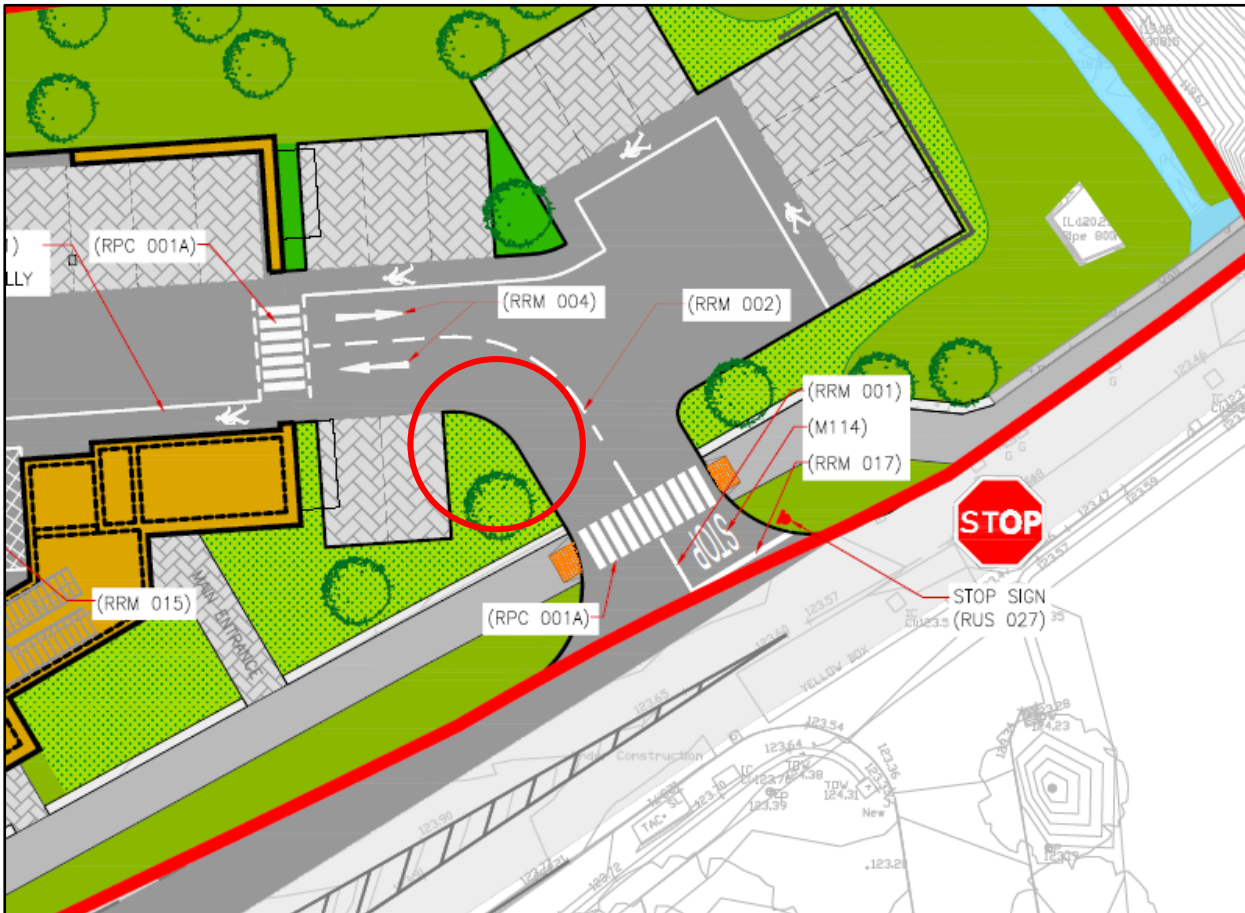
Recommendation:

The design team should ensure the existing crossing is removed on both sides.

Problem No.5: Advanced Signage for Crossing

Location: Entrance at Hillcrest Road

The audit team note from the drawings that there is no advanced warning for motorists in advance of the pedestrian crossing within the carpark. This could lead to an increased risk of vehicle conflicts with vulnerable users due to the lack of awareness of the impending hazard.



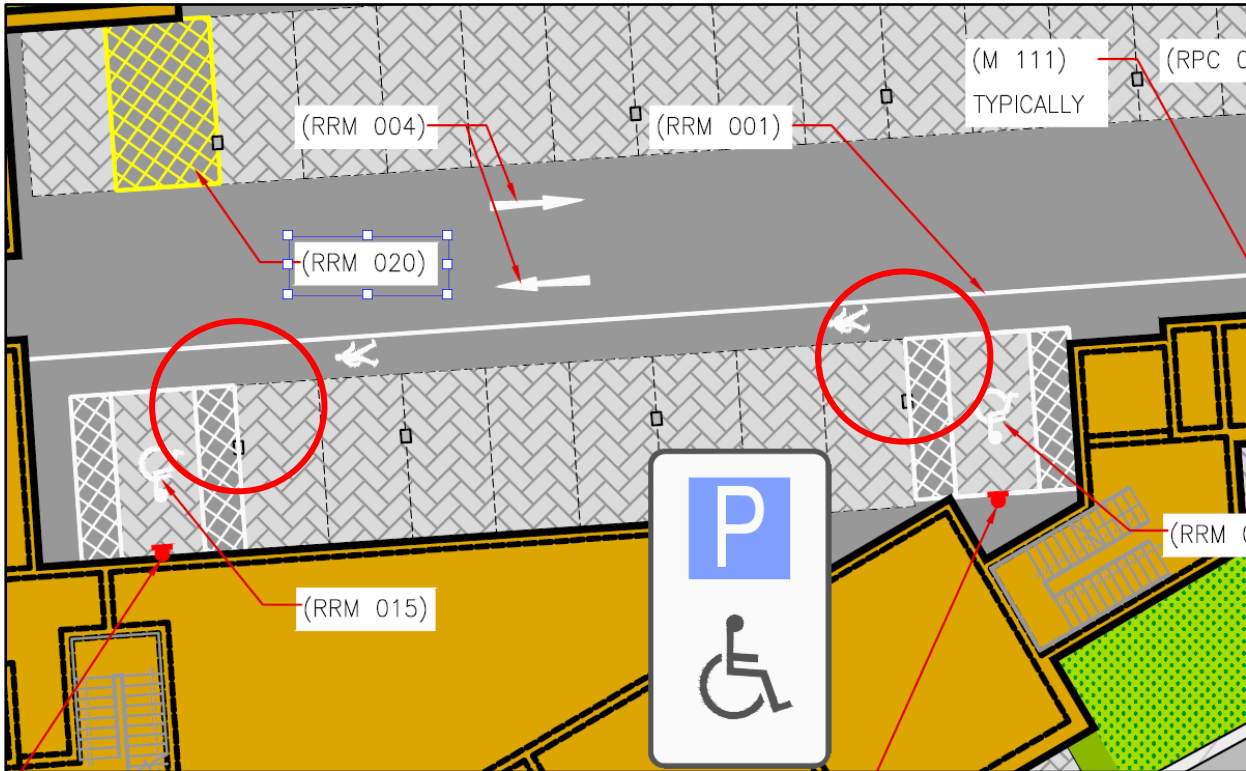
Recommendation:

The design team should ensure that an advanced warning side is provided in advance of the crossing to alert motorists of the impending hazard.

Problem No.6: Restricted Accessible Spaces

Location: Under Croft Carpark Area

The audit team note from the drawings that there are columns proposed next to the accessible spaces which could potentially restrict the movement for vulnerable users.



Recommendation:

The design team should ensure that the columns do not restrict the movement of vulnerable users.

7 Audit Team Statement

We certify that we have examined the drawings listed in Appendix A and examined the site by means of a site visit. This examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified to improve the DMURS compliance and safety of the scheme. The issues that we have identified have been noted in the report, together with suggestions for improvement, which we recommend should be studied for implementation.

Audit Team Leader: Adam Price: BEng (Hons), CEng, MIEI

ORS

Signed:



Date: 17th July 2024

Audit Team Member: Mark Gallagher, MIEI

ORS

Signed:



Date: 17th July 2024

Audit Team Observer: John Igoe BEng (Hons), MEng

ORS

Date: 17th July 2024

Appendix A – Inspected Documents

The audit team reviewed the following documents and drawings provided by Malone O'Regan Consulting Engineers:

- (1) SHB5-LDR-DR-MOR-CS-P3-101 – Site Layout
- (2) SHB5-LDR-DR-MOR-CS-P3-113 – Sight Lines
- (3) SHB5-LDR-DR-MOR-CS-P3-114 – Swept Path Analysis Fire Tender
- (4) SHB5-LDR-DR-MOR-CS-P3-115 – Swept Path Analysis Refuse Truck
- (5) SHB5-LDR-DR-MOR-CS-P3-121 – Road Signs and Markings
- (6) SHB5-LDR-DR-MOR-CS-P3-130 – Drainage Layout
- (7) SHB5-LDR-DR-MOR-CS-P3-140 – Watermain Layout
- (8) SHB5-LDR-DR-MOR-CS-P3-150-SuDS Layout
- (9) SHB4-LDR-DR-SMK-ME-P1-6000 Illuminance Plot.

Appendix B – Designer Response Form

Job: 231860 – Proposed Part 8 Residential Development, Lamb’s Cross, Dublin 18

Stage of Audit: Stage 1

Date Audit Completed: 23/07/2024

Problem Reference in Safety Audit Report	To Be Completed by the Designer			To be Completed Audit Team Leader
	Problem Accepted (Yes/No)	Recommendation Accepted (Yes/No)	Alternative Option (Describe) (Only complete if recommendation not accepted)	Alternative Option Accepted by Auditors (Yes/No)
P1	Yes	Yes		
P2	Yes	Yes		
P3	Yes	Yes		
P4	Yes	Yes		
P5	Yes	Yes		
P6	Yes	Yes		

Signed:.....*Frank Moran*..... Designer

Date:....06/08/2024..

Signed:.....*ALP*.....Audit Team Leader

Date:....14/08/2024...

Signed:..... Employer

Date:.....

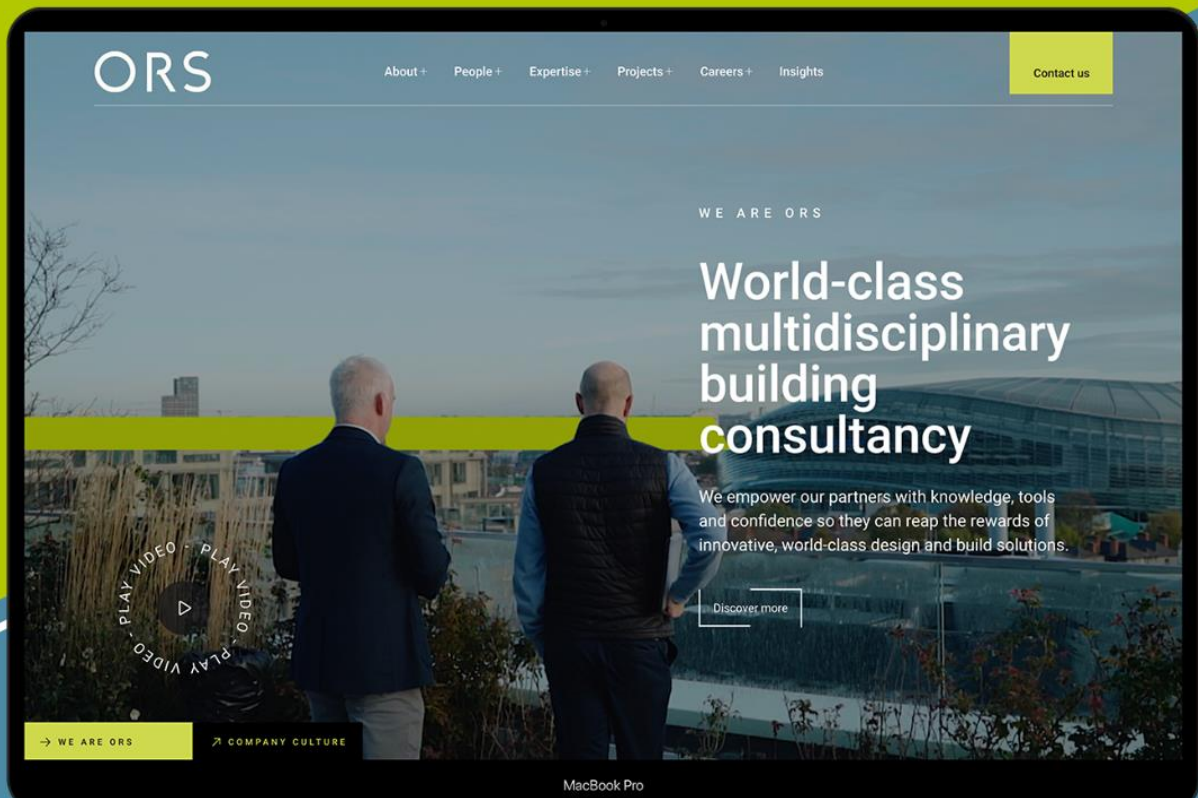
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