



Contact us  
+353 1 5242060  
info@ors.ie  
www.ors.ie

2024

**Quality Audit Report  
Proposed Part 8 Residential  
Development, Oldtown Mill Road,  
Celbridge, Co. Kildare**

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**Proposed Part 8 Residential Development, Oldtown Mill Road, Celbridge, Co. Kildare**

**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 60 no. residential units at Oldtown Mill Road, Celbridge, Co. Kildare.

The audit team conducted the site visit on Friday the 1<sup>st</sup> 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:  
Angeliki Kalatha                              MEng, MSc, MIEI

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

- (1) SHB5-OCK-DR-MOR-CS-P3-101 Rev 6 - Site Layout
- (2) SHB5-OCK-DR-MOR-CS-P3-117 Rev 5 - Swept Path Analysis Refuse Truck
- (3) SHB5-OCK-DR-MOR-CS-P3-118 Rev 5 - Swept Path Analysis Fire Tender
- (4) SHB5-OCK-DR-MOR-CS-P3-120 Rev 4 - Sightline Layout
- (5) SHB5-OCK-DR-MOR-CS-P3-121 Rev 4 - Proposed Road Signs and Markings
- (6) SHB5-OCK-DR-MOR-CS-P3-130 Rev 8 - Drainage Layout
- (7) SHB5-OCK-DR-MOR-CS-P3-140 Rev 5 - Watermain
- (8) SHB5-OCK-DR-SMK-ME-6033-P04 - Public Lighting
- (9) SHB5-OCK-DR-MAL-L-P-0100-REV\_03 - Landscape and biodiversity - Masterplan
- (10) SHB5-OCK-DR-MAL-L-P-0101-REV\_03 - Landscape and biodiversity, Western Park
- (11) SHB5-OCK-DR-MAL-L-P-0102-REV\_03 - Landscape and biodiversity, Eastern and Central Parks
- (12) SHB5-OCK-DR-MAL-L-P-0200-REV\_02 – Landscape, Sections
- (13) SHB5-OCK-DR-MAL-L-P-0201-REV\_02 – Landscape, Sections.

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 Kildare County Council to accompany a Part 8 proposal for the development of 60 no. residential units at Oldtown Mill Road, Celbridge, Co. Kildare.

The proposed development includes:

- i. 60 no. residential units including 40 no. houses and 20 no. apartments comprising 20 no. one bed units; 15 no. two bed units; 21 no. three bed units; and 4 no. four bed units; with renewable energy design measures (which may be provided externally) for each housing unit.
- ii. Landscaping works including provision of (a) open space and kick about areas; (b) natural play features; and (c) new pedestrian and cycle connections.
- iii. Associated site and infrastructural works including provision for (a) 2 no. ESB substations and switchrooms; (b) car and bicycle parking; (d) public lighting; (e) temporary construction signage; (f) estate signage; and (g) varied site boundary treatment comprising walls and fencing.
- iv. All associated site development works, including removal of existing spoil from the site in advance of construction works.

The subject site is located on residential zoned lands, on the northwestern outskirts of Celbridge town and will be accessed via a new priority junction on the Oldtown Road. The speed limit along the Oldtown Road is 50km/h with a section of a posted speed limit of 15km/h. This road is equipped with footpaths on both sides, segregated by a grass verge from the carriageway, except for the section in front of the site entrance. These continuous footpaths connect to the junction with Shackleton Road enhancing accessibility to the broader road network and public transport.

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



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

Figure 2.2 shows the proposed site layout provided by Malone O'Regan Consulting Engineers.



Figure 2.2: Site Layout (Source: Malone O'Regan Consulting Engineers)

## 2.2 Existing Road Network

The Oldtown Road is a two-way single carriageway connecting a wide residential zone to Shackleton Road and the town centre. 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 uncontrolled crossing points featuring dropped kerbs are present in close proximity to the proposed project site. Currently, the Oldtown Road lacks dedicated cycling facilities.

The existing road network is equipped with road markings and signage, while the pavement is generally in good condition, as shown in **Figure 2.3**. Drainage, at the frontage of the development, primarily relies on piped gullies.



**Figure 2.3:** Oldtown Road at the site frontage (Source: ORS, Dec. 2023)

## 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. 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 carriageway adjacent footpaths and footpaths at open spaces. 3.3.3 – The development creates a permeable network for pedestrians with restrictions on the movement of private vehicles and pedestrian links along the		

		northern and southern site boundary.		
Accessibility throughout the site is maximised for pedestrians and cyclists, ensuring route choice.	3.3.1 – Street Layouts 3.3.2 – Block Sizes 3.4.1 – Vehicle Permeability	3.3.1 – Adequate number of footpaths. 3.3.2 – The maximum block dimension does not exceed 120m. Mitigation measures of traffic calming provided on the main road. 3.4.1 – The development has created a network with restrictions on the movement of private vehicles. The site provides though accessibility by road, which will benefit construction traffic and service vehicles.		
Through movements by private vehicles on local streets are discouraged by an appropriate level of traffic calming measures.	3.2.1 – Movement Function 3.2.2 – Place Context 3.4.1 – Vehicle Permeability	3.2.1 – The development comprises local (internal) street network which only provides access within the site and does not provide a through route for vehicles. Main vehicle route is provided with traffic calming measures to keep velocities low. 3.2.2 – The development comprises an appealing living place enriched with valuable green attributes and great pedestrian connectivity. 3.4.1 – The site has created a network with restrictions on the movement of private vehicles through the use of cul-de-sacs.		

## 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 – Appropriate speed limit of 30km/h is proposed with additional speed ramps added along the main access road. Internal speed clearly sign-posted. 3.2.3 – Self-regulating street environments providing for lower speeds. 4.1.1 – While a 30 kph speed limit is enforced throughout the development, additional traffic calming measures should effectively maintain speeds significantly below this limit.		
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. 4.2.3 – Active Street edges are provided through the provision of own door accessed dwellings throughout the development. 4.2.4 – Signage kept to minimum. 4.2.7 – Planting is used to create a softer landscape and encourage slower speeds. 4.4.2 – To reinforce narrower carriageways each parking bay is finished so that it is clearly distinguishable from the main carriageway. Extensive use of alternate colours is made at crossings as a traffic		

		<p>calming measure and to alert drivers to changes in priority.</p> <p>4.4.9 – On-street parking has been provided throughout the site which will visually narrow the carriageway.</p> <p>Advice Note 1 – The entrance to the scheme utilises a blend of landscaping and traffic calming measures to clearly indicate the transition to drivers.</p>		
<p>A suitable range of design standards / measures have been applied that are consistent with the applied design speeds.</p>	<p>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</p>	<p>4.4.1 – The proposed internal carriageway will be 6m wide.</p> <p>4.4.4 – Forward visibility has been reduced through the provision of on-street parking and trees, increasing driver’s caution.</p> <p>4.4.5 – Junction visibility splays in accordance with DMURS.</p> <p>4.4.6 – The development features changes in horizontal curvature which promotes lower speeds.</p> <p>4.4.7 – Vertical deflections in the form of raised tables and raised crossings designed to DMURS standards.</p> <p>Advice Note 1 – Entrance to the scheme designed according to the TII Geometric Design of Junctions.</p>		

## 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 – Limitations in cross-sectional width and the emphasis on delivering segregated footpath on both sides of the road, and the provision of direct access to building entrances enhance pedestrian safety. 4.2.3 – Active Street edges provide passive surveillance of the street environment and promote pedestrian activity. 4.2.5 – Street furniture such as seatings, picnic tables etc are provided throughout the site, and those are limited to the open public spaces. 4.2.9 – On-street parking is proposed throughout the site contributing to pedestrian comfort by providing a buffer between the carriageway and the footpath.		
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 4.4.7 – Horizontal and Vertical Deflections	4.3.2 – Pedestrian crossings are provided throughout the development along or adjacent pedestrian desire lines and are a combination of courtesy (raised surface) crossings and dropped kerb crossings. 4.3.3 – Corner radii of 4.5m have generally been provided throughout the site and appear to be appropriate for the type of development. 4.4.3 – Junctions are designed with crossings.		

		4.4.7 – Vertical deflections in the form of raised tables and raised crossings designed to DMURS standards.		
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 between destinations within the development. 3.2.3 – The development comprises an appealing living place with green attributes. 4.2.5 – The use of street furniture is limited to the open spaces. No street furniture proposed for the road areas. 4.3.1 – Footways are 2m in certain locations, but they are generally of a wider nature throughout the development which is compliant with DMURS. Mostly segregated from vehicles through the provision of on-street parking. 4.3.2 – Pedestrian crossings are provided throughout the site, at strategic locations, and are a blend of courtesy crossings (with raised surfaces) and dropped kerb crossings.		
The particular 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	4.3.1 – Segregated footpaths provided on main desire lines with separation from vehicles. 4.3.2 – All crossings are provided with tactile paving. 4.3.4 – Accessible parking space is proposed throughout the site with measures to allow mobility impaired users to enter adjacent footpaths.	Ensure provision of dropped kerbs at the car park area, close to every accessible parking space.	Details have been incorporated as noted

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		4.3.4 – The thresholds to all pedestrianised/open spaces areas are provided with tactile paving.		
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	3.2.1 – Cyclists will share the carriageway with motorised road users. 3.2.3 – Restrictions on the movement of private vehicles. 4.3.5 – Bike parking is provided on curtilage for residents and visitor and in the main green spaces.		

## 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 throughout the development. 3.2.3 – The development embodies an appealing living environment with an emphasis on green features, enhancing the sense of place. 4.2.2 – The inclusion of street trees across the site enhances the sense of enclosure achieving both a sense of place and a traffic calming effect. 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	3.2.1 – Street furniture is sparingly used throughout the site and mostly limited to the public open spaces. 3.2.3 – The selection of street furniture is suitable for the context. 4.2.5 – The selection of street furniture is suitable and detailed within the landscape drawings. 4.3.1 – Street furniture has been limited to signposts and street light columns.		
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	3.2.3, 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	3.2.1 – Movement Function 3.2.3 – Place Context.	3.2.1 – Materials and finishes have been carefully chosen to facilitate movement by providing		

<p>from a limited palette and respond to the value of the place?</p>	<p>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</p>	<p>visual distinctions between surfaces.          3.2.3, 4.2.6 – Materials and finishes have been used to define crossing points and parking spaces.          4.3.2 – Different surface textures and materials at pedestrian crossings and at the entrance act as traffic calming and indicate the crossing location to drivers.          4.4.2 – Carriageway surfaces have been defined by colour differences to make drivers aware of changes in priority.</p>		
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## 5 Additional Audits

### 5.1 Accessibility and Walkability Audit

The proposed site will be connected to Oldtown Road to the northeast of the site, by means of a new priority T-junction. This will be the sole vehicular entrance to the site.

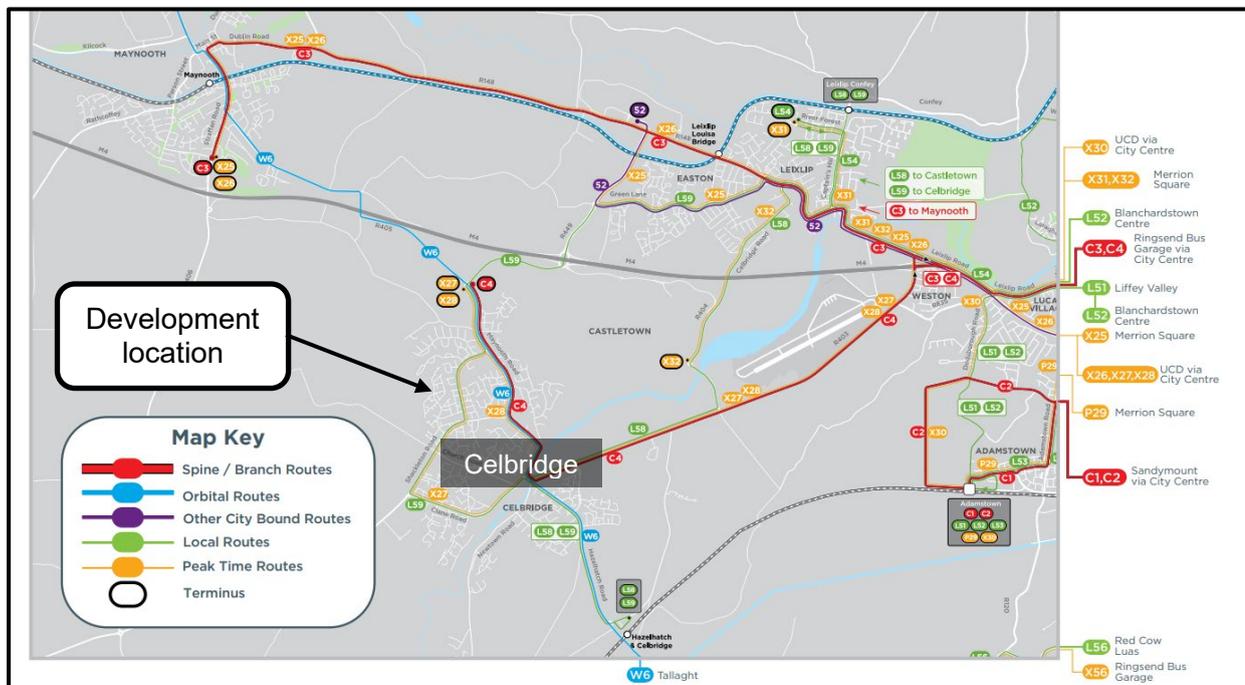
Pedestrians will have separate points of entry to the development along the Oldtown Road. From these entrances, footpaths will extend throughout the development area. No accessibility issues have been identified relating to dwelling accesses.

The proposed footpath running along the northeastern 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 absent along the Oldtown Road and its vicinity. Consequently, the site does not include dedicated cycling facilities. Furthermore, the Oldtown Road features uncontrolled pedestrian crossings throughout its stretch until it reaches Shackleton Road, providing a safer passage towards the town centre.

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 Shackleton Road using the extensive infrastructure network in place.

### 5.2 Public Transport Network

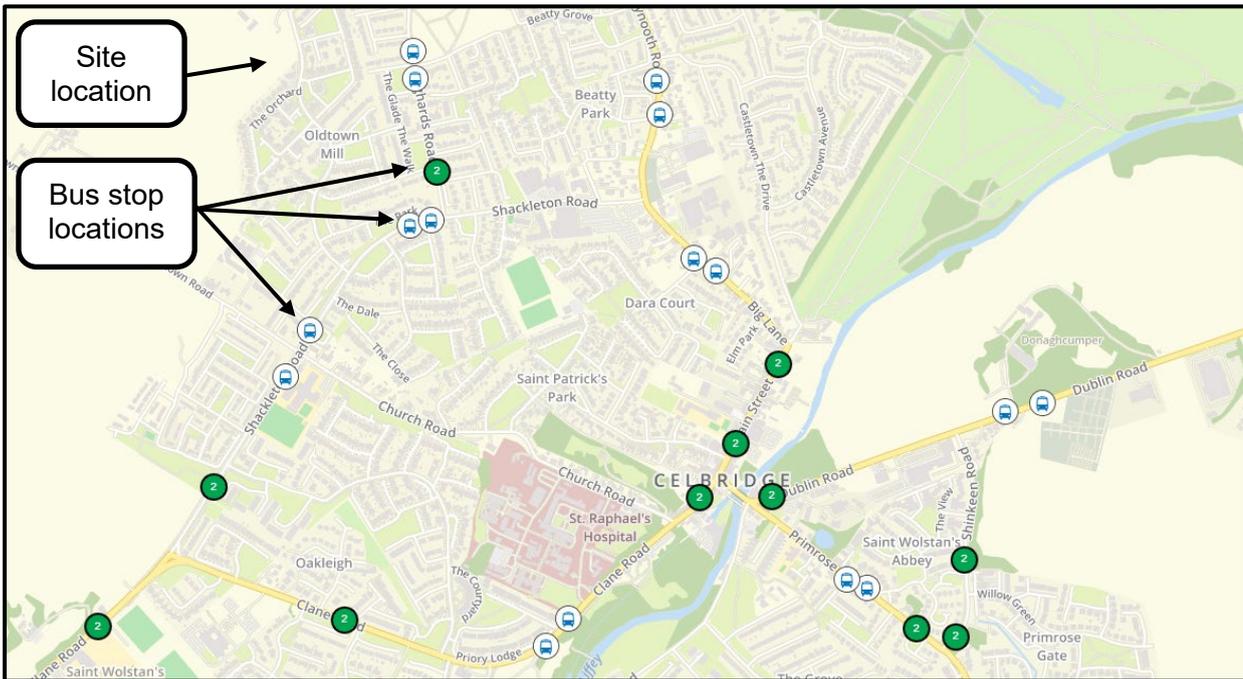
The proposal is well-served by several bus routes in the vicinity of the site, as shown in **Figure 5.1** below.



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

Public transport accessibility is provided by 2No. bus stops located approximately 800 metres from the proposed development, as shown in **Figure 5.2**, corresponding to a walking time of roughly 10 minutes. This bus stops service the L59 Dublin Bus route, facilitating travel between Celbridge and Leixlip. There are continuous footpaths leading the site to the bus stops. A third bus stop located southeast of the site, within a walking time of 11 minutes, services the X27 Dublin Bus route to Dublin University College. None of the bus stops are designed for disabled users.

The available bus services within the Celbridge town are presented in **Table 5.1** below.



**Figure 5.2:** Bus stops in the vicinity of the development (Source: TFI)

Table 5.1 - Bus Services Available (Source: TFI)				
Route No.	Bus Operator	Route	Services	
120	Go-Ahead Ireland	Edenderry/Newbridge to Prosperous and Dublin	Several services from 07:00 to 00:00	
C4	Dublin Bus	Maynooth - Ringsend	Several services from 05:00 to 23:00	
C6		Maynooth – Ringsend (night)	Hourly from 00:00 to 04:00	
L59		River Forest to Hazelhatch	Several services from 05:45 to 23:15	
X27		Salesian College to Belfield UCD		4/4 services
X28				5/4 services

Continuous footpaths lead from the site to the nearby bus stops, featuring uncontrolled pedestrian crossings along the route. These footpaths maintain a good condition and an appropriate width, remaining segregated from the carriageway for enhanced safety.

### **5.3 Cycle Audit**

Currently there is no dedicated cycle infrastructure in place within the scheme. Cyclists are expected to share the public 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 Kildare County Council's Development Plan (KCDP 2023 - 2029) 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.

## 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 60 no. residential units at Oldtown Mill Road, Celbridge, Co. Kildare.

The audit team conducted the site visit on Friday the 1<sup>st</sup> of December 2023. The audit was carried out in the offices of ORS on Wednesday the 7<sup>th</sup> of March 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:

Angeliki Kalatha                              MEng, MSc, MIEI

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-OCK-DR-MOR-CS-P3-101 Rev 6 - Site Layout
- (2) SHB5-OCK-DR-MOR-CS-P3-117 Rev 5 - Swept Path Analysis Refuse Truck
- (3) SHB5-OCK-DR-MOR-CS-P3-118 Rev 5 - Swept Path Analysis Fire Tender
- (4) SHB5-OCK-DR-MOR-CS-P3-120 Rev 4 - Sightline Layout
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- (7) SHB5-OCK-DR-MOR-CS-P3-140 Rev 5 - Watermain
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- (11) SHB5-OCK-DR-MAL-L-P-0102-REV\_03 - Landscape and biodiversity, Eastern and Central Parks
- (12) SHB5-OCK-DR-MAL-L-P-0200-REV\_02 – Landscape, Sections
- (13) SHB5-OCK-DR-MAL-L-P-0201-REV\_02 – Landscape, Sections.

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**.

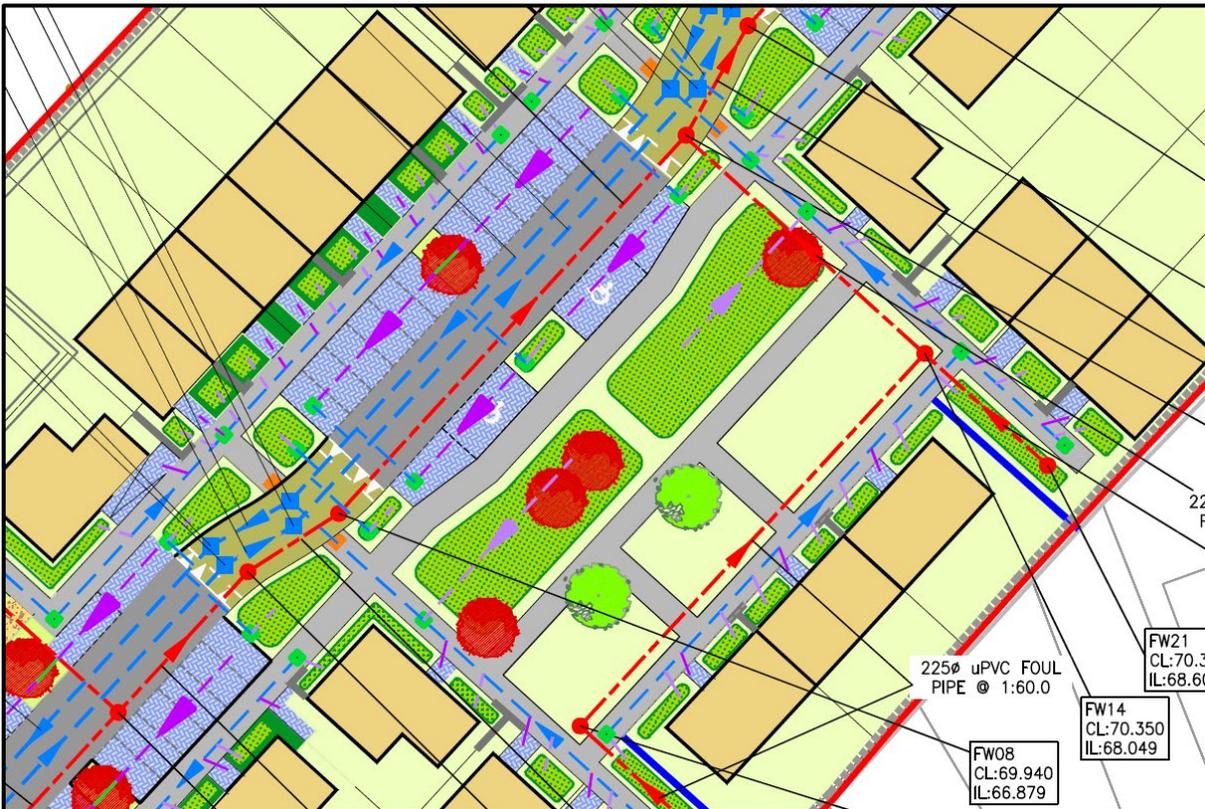
A feedback form for the Designer to complete is contained in **Appendix B**.



**Problem No.2: Manholes Along Pedestrian Routes**

**Location: Throughout the Site**

The audit team noted from the provided drawings that several manholes are proposed along pedestrian routes and crossing points within the project area. However, there is a concern regarding the slip resistance surfacing of these manholes which could create a trip hazard for vulnerable users particularly those with mobility or visual impairments, potentially resulting in injuries.



**Recommendation:**

The design team should ensure that all proposed manhole covers along pedestrian routes have appropriate anti-slip surfacing and are installed level with the surrounding footpath to mitigate the potential for trip and falls.

## 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: 15<sup>th</sup> January 2024

**Audit Team Member:** Mark Gallagher, MIEI

ORS

Signed:



Date: 15<sup>th</sup> January 2024

**Audit Team Observer:** Angeliki Kalatha: MEng, MSc, MIEI

ORS

Date: 15<sup>th</sup> January 2024

## Appendix A – Inspected Documents

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

- (1) SHB5-OCK-DR-MOR-CS-P3-101 Rev 6 - Site Layout
- (2) SHB5-OCK-DR-MOR-CS-P3-117 Rev 5 - Swept Path Analysis Refuse Truck
- (3) SHB5-OCK-DR-MOR-CS-P3-118 Rev 5 - Swept Path Analysis Fire Tender
- (4) SHB5-OCK-DR-MOR-CS-P3-120 Rev 4 - Sightline Layout
- (5) SHB5-OCK-DR-MOR-CS-P3-121 Rev 4 - Proposed Road Signs and Markings
- (6) SHB5-OCK-DR-MOR-CS-P3-130 Rev 8 - Drainage Layout
- (7) SHB5-OCK-DR-MOR-CS-P3-140 Rev 5 - Watermain
- (8) SHB5-OCK-DR-SMK-ME-6033-P04 - Public Lighting
- (9) SHB5-OCK-DR-MAL-L-P-0100-REV\_03 - Landscape and biodiversity - Masterplan
- (10) SHB5-OCK-DR-MAL-L-P-0101-REV\_03 - Landscape and biodiversity, Western Park
- (11) SHB5-OCK-DR-MAL-L-P-0102-REV\_03 - Landscape and biodiversity, Eastern and Central Parks
- (12) SHB5-OCK-DR-MAL-L-P-0200-REV\_02 – Landscape, Sections
- (13) SHB5-OCK-DR-MAL-L-P-0201-REV\_02 – Landscape, Sections.

## Appendix B – Designer Response Form

Job: 231860 – Proposed Residential Development at Oldtown Road, Celbridge, Co. Kildare

Stage of Audit: Stage 1

Date Audit Completed: 07/03/2024

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		

Signed: *Patrice Brewster* ..... Designer Date: 15/03/2024 .....

Signed: *ALP* ..... Audit Team Leader Date: 15/03/2024 .....

Signed: ..... Employer Date: .....

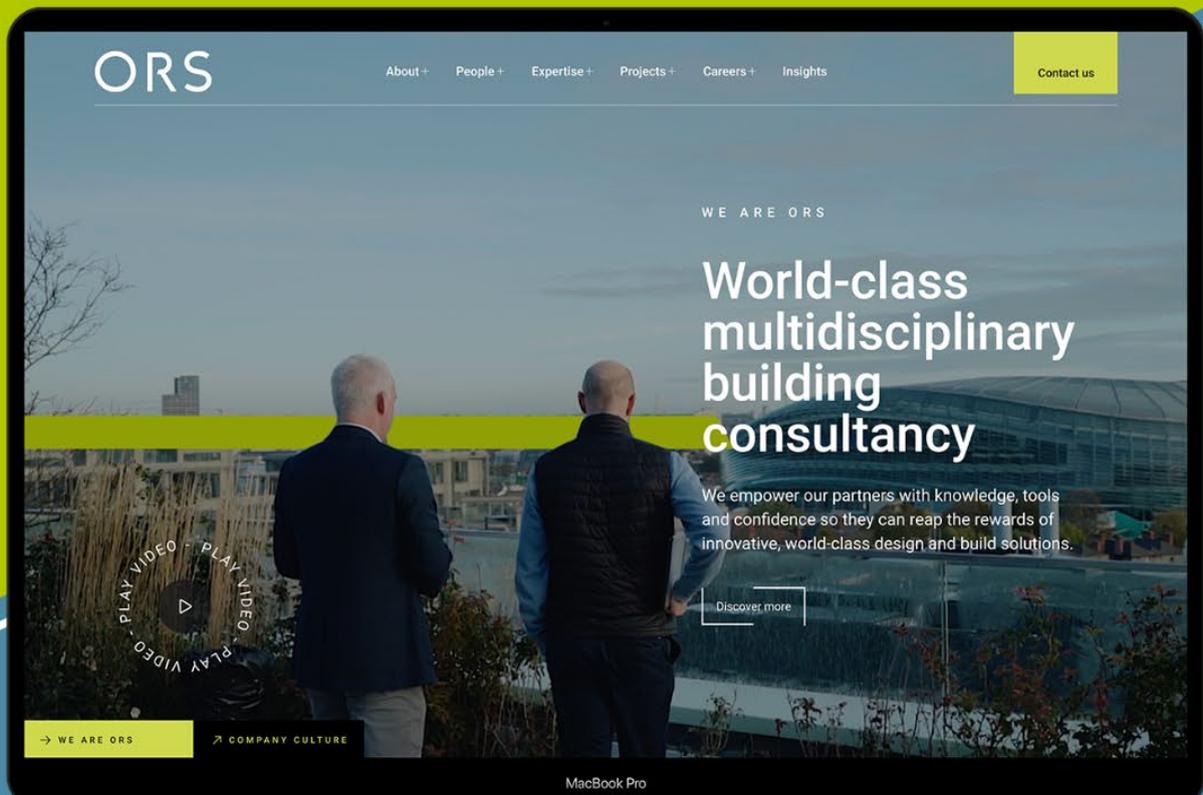
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Ireland, H91 A2WD

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Donegal Town, Co. Donegal,  
Ireland, F94 KT35

 Office 4, Spencer House,  
High Road, Letterkenny,  
Co. Donegal,  
Ireland, F92 PX8N

 NSQ2,  
Navigation Square,  
Albert Quay, Cork  
Ireland, T12 W351