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2024

**Stage 1 Quality Audit Report
Proposed Part 8 Residential
Development, Balally, Sandyford,
Dublin**

Stage 1 Quality Audit Report
Proposed Part 8 Residential Development, Balally, Sandyford, Dublin 16

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1 Introduction

This report documents the findings of a Stage 1 Quality Audit (QA) carried out with respect to a Proposed Part 8 Residential Development at Blackthorn Drive and Drummartin Link Road in Sandyford, Dublin 16.

The audit team conducted the site visit on Thursday the 18th of January 2024 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-BDR-DR-MOR-CS-P3-101- Proposed Lower GF Level Site Layout
- (2) SHB5-BDR-DR-MOR-CS-P3-102- Proposed Upper GF Level Site Layout
- (3) SHB5-BDR-DR-MOR-CS-P3-110- Swept Path Analysis Refuse Truck
- (4) SHB5-BDR-DR-MOR-CS-P3-111- Swept Path Analysis Aerial Platform Special Appliance
- (5) SHB5-BDR-DR-MOR-CS-P3-112- Proposed Sight Lines
- (6) SHB5-BDR-DR-MOR-CS-P3-121- Proposed Road Signs and Markings
- (7) SHB5-BDR-DR-MOR-CS-P3-130- FW and SW Drainage Layout
- (8) SHB5-BDR-DR-MOR-CS-P3-140- Watermain Layout.
- (9) 2972-SMK-XX-ZZ-DR-E-6033- Public Lighting Ducting Requirements.

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

ORS have been commissioned by the NDFA on behalf of Dun Laoghaire-Rathdown County Council to conduct a DMURS Quality Audit (including a stage 1 Road Safety Audit) for a proposed residential development located just off Blackthorn Drive and Drummartin Link Road in Sandyford, Dublin 16.

The proposed development includes:

- 62 no. apartment units in a 5-6 storey building over undercroft area, including 31 no. one bed units; 21 no. two bed units; and 10 no. three bed units;
- 1 no. crèche facility of 297sqm with associated external play area at upper ground level.
- Energy Centre at sixth floor level and an external plant area set back at fifth floor roof level.
- Undercroft area at lower ground level comprising (a) 1 no. ESB substation (b) car and bicycle parking; (c) bin storage; (d) bulk storage area; and (e) supporting mechanical, electrical and water infrastructure.
- Landscaping works including provision of (a) communal open space; (b) new pedestrian and cycle connections linking Blackthorn Drive with Cedar Road; and (c) public realm area fronting onto Blackthorn Drive.
- All associated site development works including (a) vehicular access off Cedar Road; (b) pedestrian and cycle access off Blackthorn Drive; (c) public lighting; (d) varied site boundary treatment comprising walls and fencing; and (e) temporary construction signage.

The site is currently a green space. The proposed development is located within land zoned as neighbourhood centre by Dun Laoghaire-Rathdown County Council. The site is within a developed residential and industrial area in Sandyford, Dublin. A topographical survey has been conducted on the site; this was used for the road levels and the layout on the site. The site slopes down from the southern end to the northern end towards the scout den.

The site can be accessed off Maples Road to the north of the application site. The vehicular traffic will make use of 3-arm Blackthorn Drive/Cedar Road junction. A segregated footpath is located along either sides of Maples Road and a segregated footpath and cycle track is located on either side of Blackthorn Drive which will help the pedestrian and cyclists' access/egress the site off Blackthorn Drive to the southeast corner of the site.

Please refer to **Figure 2.1** displayed below, 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

As previously noted, only vehicular access proposed to the site is via Maples Road to the north of the application site and the pedestrian/cyclist access/egress is towards the southeast corner of the site off Blackthorn Drive Road. However, some service vehicles like fire trucks can use the pedestrian/cyclist access to access the site in case of an emergency. All the vehicular traffic will make use of the 3-arm Blackthorn Drive/Cedar Road stop-controlled junction to access the development site. Maples road to the north of the site features footpaths of varying widths, streetlights and dropped kerbs. Segregated footpaths and cycle tracks along with streetlights, puffin style pedestrian crossings are present on Blackthorn Drive and Drummartin Link Road along the site's southern and eastern boundary respectively.

Blackthorn Road is a two-way road with two lanes in the eastbound direction of the carriageway which splits into three lanes at the junction with Blackthorn Dr/Drummartin Link Road and a single lane in the westbound direction of the carriageway. The overall width of the carriageway is approximately 11.2 metres. The junction with Blackthorn Dr/Drummartin Link Road is well

equipped with controlled pedestrian crossings, well connected pedestrian and cyclist infrastructure, road markings and signage as shown in **Figure 2.3** and **Figure 2.4** overleaf.



Figure 2.3: Pedestrian and cyclist facilities along Blackthorn Dr (Source: Google Earth)



Figure 2.4: Blackthorn Drive at the site frontage (Source: Google Maps)

Maples Road is a two-way local road to the north of the application site off which vehicular traffic access the application site and its car parking area. Maples Road features footpaths on either side of the carriageway. However, footpaths are not present along the immediate

northern boundary of the application site which is on the southern side of Maples Road (the side nearest the site). Streetlights and on street parking are present in the vicinity of the application site, as shown in **Figure 2.5** overleaf. Overall width of the carriageway is approximately 8 to 8.5 metres wide as shown in **Figure 2.6**.



Figure 2.5: Overview of Maples Rd (Source: Google Earth)



Figure 2.6: Maples Road at the site frontage (Source: Google Maps)

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 Suggestion	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.		

<p>Multiple points of access are provided to the site/place, in particular for sustainable modes.</p>	<p>3.3.1 – Street Layouts 3.3.3 – Retrofitting</p>	<p>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 and cyclists but does not restrict movement of private vehicles.</p>	<p>Design team should clearly demonstrate how vulnerable users eg. Wheelchair users will be able to access from Maples Road to the Northwestern pedestrian access to the site.</p>	
<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 shared with cyclists. 3.4.1 – The development has created a network with restrictions on the movement of private vehicles. 3.4.1 – The site provides through vehicular accessibility to the development by road from the northern boundary, which will benefit construction traffic and service vehicles. However, service vehicles utilise the pedestrian/cyclist shared surface to the southeastern corner without the presence of formal vehicular accessibility from.</p>	<p>Cyclists will have to share the surface with pedestrians on the shared surface link proposed to the east of the development. The site should provide better accessibility for service vehicles making use of the vehicular carriageway or proposing a new formal carriageway for service vehicles.</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 internal street that provides access to the internal car parking areas and consequently the apartment building. This access road does not provide a through route for vehicles. 3.2.2 – The development comprises an appealing living place enriched with valuable green attributes. 3.4.1 – The development has created a network with restrictions on the movement of private vehicles through the use of short driving distance so that drivers are more likely to maintain lower speeds over shorter distances.</p>		
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4.3 Self-Regulating Street Environment

Self-Regulating Street Environment				
Key Issues	Key DMURS Reference	Comments	Audit Suggestion	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 –Speed limit on the internal road is indicated to be 30km/hr which is appropriate for residential development. 3.2.3 – Higher levels of pedestrian/cyclist movement are catered for. 4.1.1 – The design provides for limited traffic calming measures which could result in higher speeds through the development.		
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. 4.2.3 – Active Street edges are provided through the provision of landscaping besides pedestrian/cyclist connection and car parking and building access along the vehicular carriageway. 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.		
A suitable range of	4.4.1 - Carriageway Widths	4.4.1 – The proposed internal carriageway		

<p>design standards / measures have been applied that are consistent with the applied design speeds.</p>	<p>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>will be approximately 5 to 6m wide. 4.4.4 – Forward visibility has been reduced through the provision of on-street parking and changes in horizontal alignments along the access road. 4.4.5 – Junction visibility splay 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.</p>		
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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 and, and the provision of separated pedestrian access increases 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 and street lights are provided in certain sections of the development. 4.2.9 – On-street parking is proposed throughout the site contributing to increase in driver caution.	Designers should ensure that tree canopies over time should not restrict light from street lighting.	
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 – 1 No. Pedestrian crossing is provided in the development within the car park towards the north of the scheme. However, Blackthorn Drive Road to the south of the development is well equipped with controlled pedestrian crossings. 4.3.3 – Corner radii of 3 to 4.5m have generally been provided at the vehicular access road towards the north of the development. 4.4.3 – Junction design towards the southeastern access which will be used by refuse truck is unclear.	Designers should ensure that all the proposed vehicular access/egress points should be appropriately designed with according to DMURS standards.	
Footpaths are continuous and wide enough to	3.2.1 – Movement Function.	3.2.1 – The development maximises the number of walkable routes to the		

<p>cater for the anticipated number of pedestrian movements.</p>	<p>3.2.3 – Place Context. 4.2.5 – Street Furniture 4.3.1 – Footways, Verges and Strips 4.3.2 – Pedestrian Crossings</p>	<p>south and east of the development. 3.2.3 – The development comprises an appealing living place with green attributes. 4.3.2 – The development comprises crossing point for vulnerable users at the northern end of the scheme.</p>		
<p>The particular needs of visually and mobility impaired users been identified and incorporated in the design.</p>	<p>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</p>	<p>4.3.4 – Accessible parking spaces are proposed throughout the site. Mobility impaired users will navigate into the building as accessible parking is at the same level on as shared surface. However, as Mobility impaired users might also share the surface with other vehicular traffic, measures to allow mobility impaired users to navigate safely into the building is unclear. 4.3.2 – The development comprises crossing points for vulnerable users at the northern end of the scheme.</p>	<p>Segregated or marked pedestrian surface should be considered near every accessible parking space in the car park area. This will enable mobility-impaired users to safely access the building without conflicting with vehicular traffic.</p>	
<p>Cycling facilities will cater for cyclists of all ages and abilities.</p>	<p>3.2.1 – Movement Function 3.2.3 – Place Context 4.3.5 – Cycle facilities</p>	<p>4.3.5 – Dedicated cycling lanes are not provided. Cyclists will share the carriageway with pedestrians. However, appropriate signage is provided to raise caution. 4.3.5 Cycle parking is provided to the southern boundary of the site.</p>		

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 Blackthorn Drive. 3.2.3 – The development embodies an appealing living environment with an emphasis on green features, enhancing the sense of place and discouraging excessive speeds. 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 provided does not restrict pedestrian movements.		
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	3.2.1 – Movement Function 3.2.3 – Place Context. 4.2.6 – Materials and Finishes	3.2.1 – Adequate number of walkable routes are provided to the south of the development as well to the north connecting to the	Design team should ensure that the walking route towards the north is designed according to DMURS	

<p>respond to the value of the place?</p>	<p>4.2.8 – Historic Contexts 4.3.2 – Pedestrian Crossings 4.4.2 – Carriageway Surfaces Advice Note 2 – Materials and Specifications</p>	<p>Maples Road for safe access/egress. 4.3.2 – 1 No. pedestrian crossing provided</p>	<p>standards to integrate into the carriageway on Maples Road.</p>	
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5 Additional Audits

5.1 Accessibility and Walkability Audit

The proposed site will be accessed off Maples Road to the north of the site by means of a new priority T-junction. This will be the sole vehicular entrance to the site. Another pedestrian/cyclist access is proposed off Blackthorn Drive to the southeast corner of the application site. Maples Road is then connected to the wider regional road network via a 3-arm Cedar Road/Blackthorn Drive junction.

As shared pedestrian/cyclist connection is provided to the east of the development, it is segregated from the vehicular traffic accessing from the north of the development. Another pedestrian connection is provided in form of stairs via Blackthorn Drive in front of the development and via a ramp to the southwest corner of the site which leads up to the plaza. However, it is unclear how the footpath connects with the building access. The proposed shared pedestrian and cyclist connection starts from the Blackthorn Drive Road and extends throughout the length of the eastern boundary. Blackthorn Drive is very well connected with footpaths, cycle tracks and pedestrian crossing points in the vicinity of the application site. This provides a safe environment for pedestrians and cyclists. No pedestrian access is proposed to the north of the site near the vehicular entrance.

The site is well accessible via footpaths that connects the site to several local amenities like train station, shopping centre, schools, and hospitals.

5.1.1 Public Transport Network

The proposed development is well served by public transport, as it is located in Balally, Sandymount, along Blackthorn Drive and in proximity to the 4-arm Blackthorn Drive/Drummartin Link Road junction. This strategic location facilitates seamless connectivity to the M50, offering convenient access to various areas within Dublin city. The location of the residential development will ensure great external connectivity by means of walking and public transport to future residents of the site and it should be expected that the movements to and from the site will be less car-dominated. The proposal is well-served by several bus routes in the vicinity of the site, as shown in **Figure 5.1** below.

There are 2 No. bus stops located to the southern boundary of the site entrance ca. 200 metres from the development location and several others within walking distance from the site. Kilmacud Luas stop served by Luas Green line is located ca. 850 metres north of the development site. There are continuous footpaths leading the site to the bus stops located adjacent to the site and the Luas stop, with signalised pedestrian crossings. The footpaths are deemed to be in good condition and appropriate width in the vicinity of the site entrance. The bus stop provided in the vicinity of the site on Blackthorn Drive has the provision of a bus shelter with a bench. **Table 5.1** overleaf outlines the available bus services in the area.

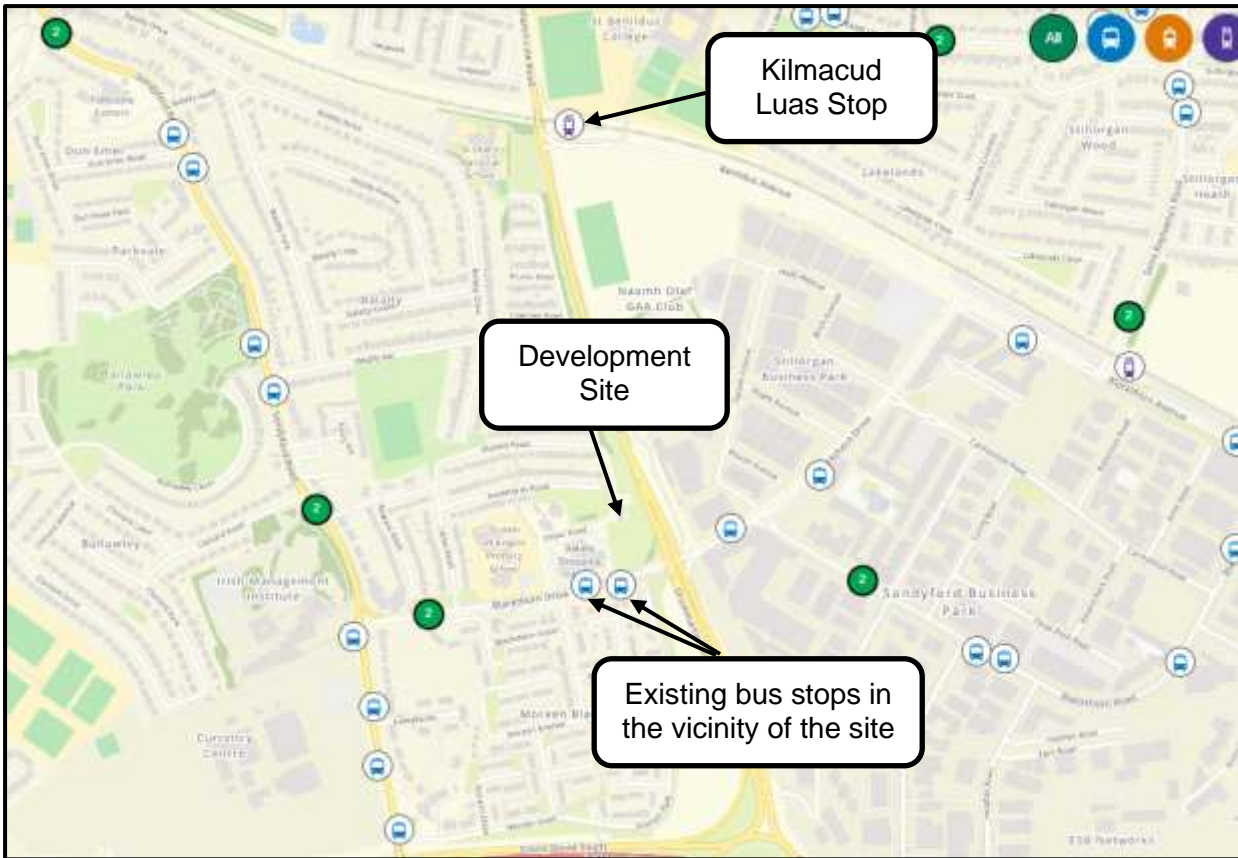


Figure 5.1: Bus stops in the vicinity of the development (Source: TFI)

Table 5.1 – Bus Services Available near Merville Place (Source: TFI)				
Route No.	Bus Operator	Origin	Destination	Weekday Services
114	Dublin Bus	Blackrock	Ticknock	Hourly
116		Whitchurch	Parnell Square	One service/day
S8	Go-Ahead Ireland	Dun Laoghaire Stn	Kingswood Avenue	Every 30 mins
44B	Dublin Bus	Glencullen	Dundrum Luas	Hourly
44		DCU	Enniskerry	Hourly

Future residents and visitors of the site will enjoy access to an extensive network of existing bus routes in the vicinity, which will be further enhanced by the major Bus Connects proposal to improve the public transport, pedestrian, and cyclist network around the site, the maps of which are included in **Figure 5.2** overleaf. The proposed Bus Connects project includes a peak time route in the vicinity of the site followed by an orbital route that connects Citywest and Dun Laoghaire. Some city bound routes will also be introduced in the vicinity of the site.

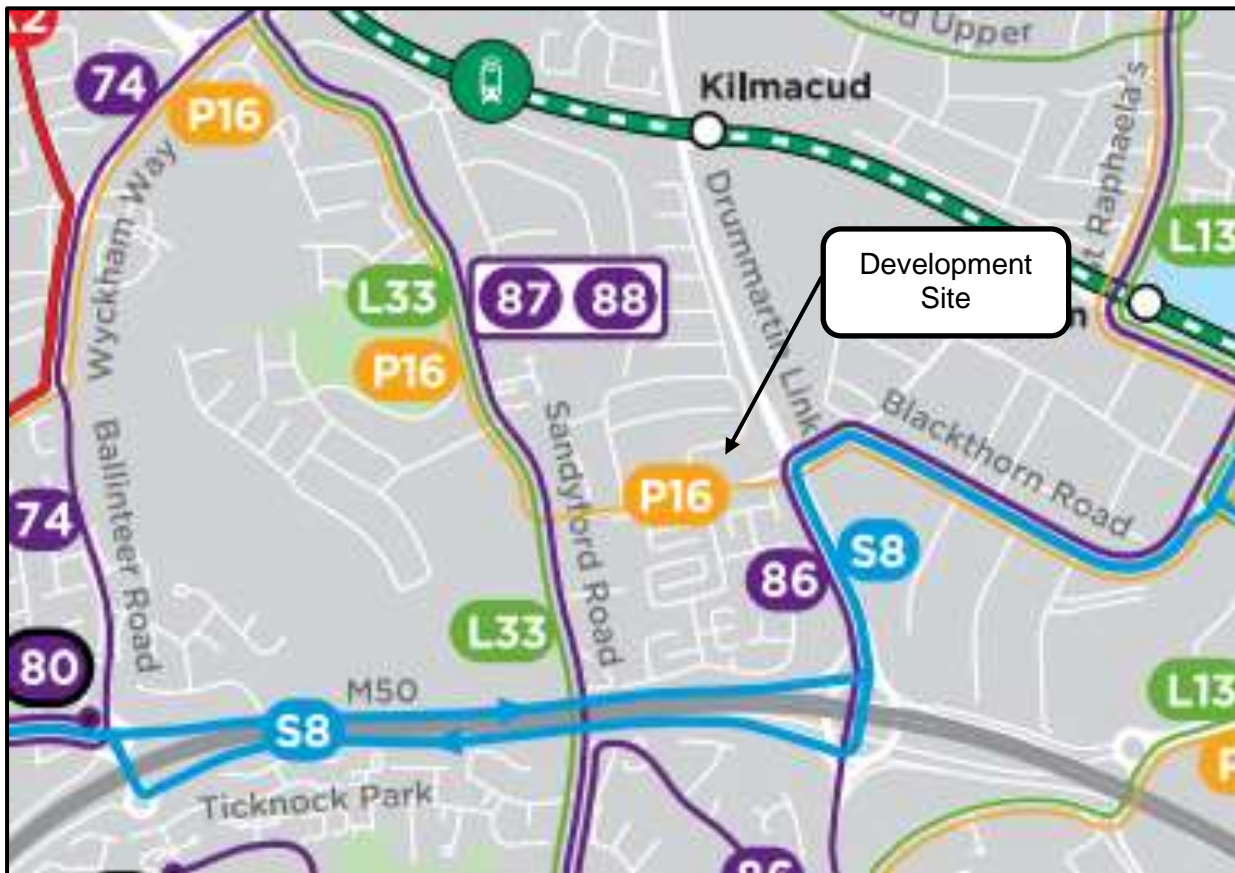


Figure 5.2: Proposed Bus Connects in the vicinity of the development (Source: Bus Connects)

5.2 Cycle Audit

Currently there are no dedicated cycle lanes in place within the scheme. Cyclists are expected to share pathways with pedestrians for access to the building. The drawings indicate the presence of 20 No. cycle parking facilities in the form of 10No. Sheffield stands located along the frontage of the site’s southern boundary. However, the provided cycle parking spaces should adhere to the specifications outlined in Dun Laoghaire-Rathdown County Development Plan 2022-2028. These specifications should ensure that the cycle parking is 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 or at property entrances, 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 Blackthorn Drive in front of the site while a Primary Radial Route is proposed on Drummartin Road to the east of the site. Overall, the site is proposed to be very well connected with cycle infrastructure in the vicinity of the site, as shown in **Figure 5.3** overleaf.

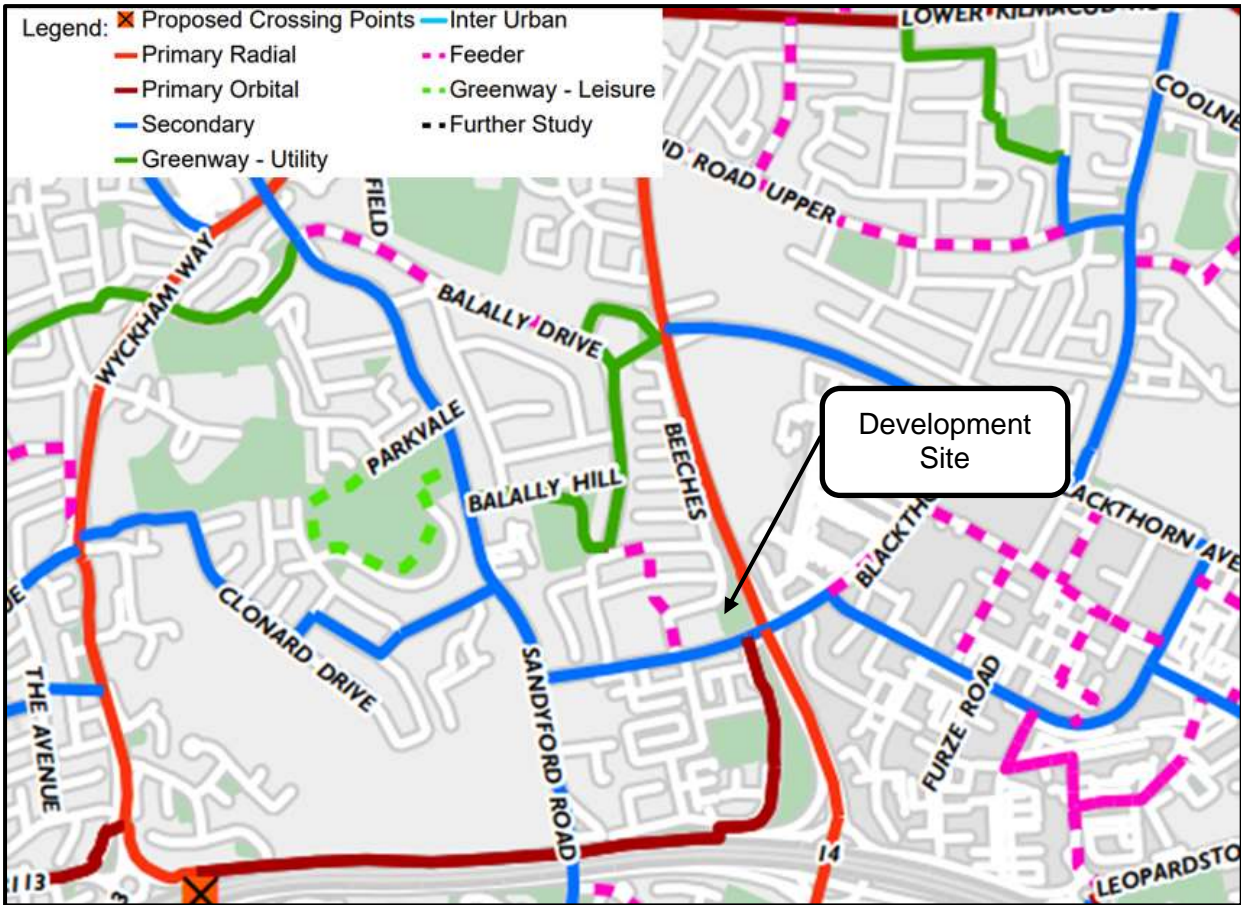


Figure 5.3: NTA GDA Cycle Network Plan in the vicinity of the development (Source: Bus Connects)

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 Proposed Residential Development at Blackthorn Drive and Drummartin Link Road in Sandyford, Dublin 16.

The audit team conducted the site visit on Thursday the 18th of January 2024. The audit was carried out in the offices of ORS on Tuesday the 27th of February 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-BDR-DR-MOR-CS-P3-101- Proposed Lower GF Level Site Layout
2. SHB5-BDR-DR-MOR-CS-P3-102- Proposed Upper GF Level Site Layout
3. SHB5-BDR-DR-MOR-CS-P3-110- Swept Path Analysis Refuse Truck
4. SHB5-BDR-DR-MOR-CS-P3-111- Swept Path Analysis Aerial Platform Special Appliance
5. SHB5-BDR-DR-MOR-CS-P3-112- Proposed Sight Lines
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7. SHB5-BDR-DR-MOR-CS-P3-130- FW and SW Drainage Layout
8. SHB5-BDR-DR-MOR-CS-P3-140- Watermain Layout.
9. 2972-SMK-XX-ZZ-DR-E-6033- Public Lighting Ducting Requirements

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.01: Tie-in to Existing Infrastructure

Location: Northern End of Site

The audit team is concerned about the lack of clarity regarding how the proposed pedestrian path will tie into the existing infrastructure to the northwest corner of the application site. There is currently no footpath on the eastern side of the 'Cash & Carry' exit which will result in pedestrians being directed into the grass verge. There is a risk of slips, trips, and falls if new surfaces are not appropriately tied into the existing infrastructure on the west side of the 'Cash & Carry' exit point.



Recommendation:

The design team should ensure that the proposed pedestrian surface is adequately tied-in to the existing road infrastructure along Maples Road.

Problem No.02: Refuge Pick Up**Location: Northern End of Site**

The audit team note that it is intended that refuge vehicles will stop on Maples Road to pick up waste due to the restricted nature of the site. However, it is unclear where the proposed bin storage area will be and if refuge vehicles will be stopped along Maples Road for extended periods of time in order to collect waste on the opposite end of the site. This could result in potential risk of conflicts if large vehicles are parked on Maples Road for long periods of time to collect waste.

Recommendation:


The design team should ensure that the bin storage area is positioned close to northern entrance which can be easily accessed by waste collection personnel in order to minimise the time a refuge vehicle is stopped along Maples Road.

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 June 2024

Audit Team Member: Mark Gallagher, MIEI

ORS

Signed: 

Date: 17th June 2024

Audit Team Observer: Ankita Kirtane: B.Arch, MSc

ORS

Date: 17th June 2024

Appendix A – Inspected Documents

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

1. SHB5-BDR-DR-MOR-CS-P3-101- Proposed Lower GF Level Site Layout
2. SHB5-BDR-DR-MOR-CS-P3-102- Proposed Upper GF Level Site Layout
3. SHB5-BDR-DR-MOR-CS-P3-110- Swept Path Analysis Refuse Truck
4. SHB5-BDR-DR-MOR-CS-P3-111- Swept Path Analysis Aerial Platform Special Appliance
5. SHB5-BDR-DR-MOR-CS-P3-112- Proposed Sight Lines
6. SHB5-BDR-DR-MOR-CS-P3-121- Proposed Road Signs and Markings
7. SHB5-BDR-DR-MOR-CS-P3-130- FW and SW Drainage Layout
8. SHB5-BDR-DR-MOR-CS-P3-140- Watermain Layout.
9. 2972-SMK-XX-ZZ-DR-E-6033- Public Lighting Ducting Requirements

Appendix B – Designer Response Form

Job: 231860 – Proposed Residential Development, Sandyford, Dublin 16

Stage of Audit: Stage 1

Date Audit Completed: 17/06/2024

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:.....Douglas Weir..... Designer

Date:...22/07/2024

Signed: Audit Team Leader

Date:...24/07/2024.....

Signed:..... Employer

Date:.....

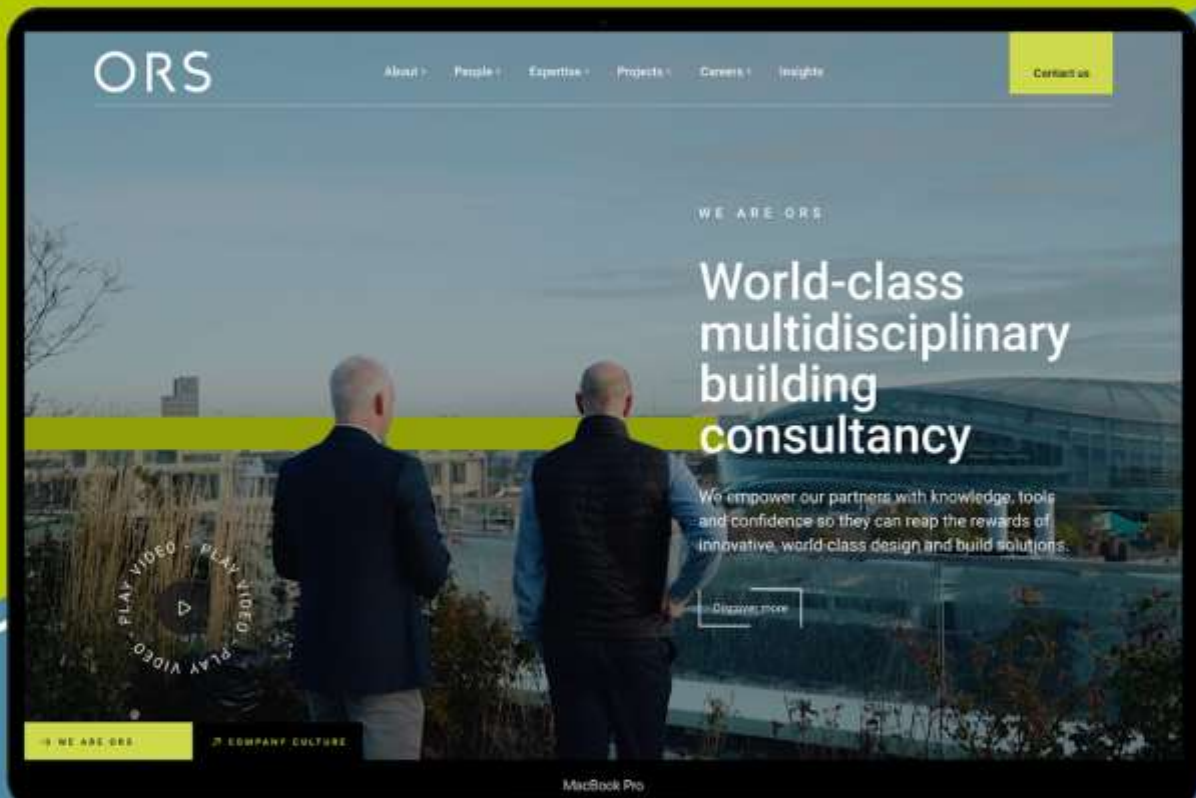
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