Roughan & O Donovan

# Proposed Residential Development, Dalguise House, Monkstown Road, Co. Dublin

## Quality Audit

P·M·C·E

**October 2022**

# Roughan & O Donovan

# Proposed Residential Development, Dalguise House, Monkstown Road, Co. Dublin

# Quality Audit

| Document Ref: | P22-148-UQA-GEN-RP-001 |
|---|---|

| Rev | Prepared By | Reviewed By | Approved By | Issue Date | Reason for Revision |
|---|---|---|---|---|---|
| 2.0 | MAH/RF | PJM | PJM | 4th October 2022 | Final |
| 1.0 | MAH/RF | PJM | PJM | 14th Sep. 2022 | Draft Report |
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# Table of Contents

# 1 Introduction

## 1.1 General

This report was prepared in response to a request from Mr Eoin O'Catháin of Roughan & O Donovan to provide a Quality Audit of a development on Proposed Residential Development, Dalguise House, Monkstown Road, Co. Dublin. The Quality Audit shall consider the following elements: -

- Road Safety Audit;
- Access Audit;
- Walking Audit;
- Non-Motorised User Audit; and
- Cycle Audit.

The Quality Audit followed a site visit on the 3rd May 2022. At the time of the site visit the weather was dry and the road surface was dry. Traffic volumes during the site visit were moderate, pedestrian and cyclist volumes were low and traffic speeds were considered to be generally within the posted speed limit.

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

# 2 Background


**FIGURE 2-1: LOCATION PLAN (SOURCE: WWW.OPENSTREETMAP.ORG)**

The proposed development is located in Monkstown Co. Dublin. It is proposed to provide two vehicular accesses to the development using an existing private access that runs parallel to Drayton Close onto Monkstown Road and the 'Purbeck' road that currently serves 7 residential units.

The proposed development will be constructed on c. 35,760m$^2$ of land and will consist of 476 apartments – a mix of studio, 1 bed, 2 bed and 3 bed apartments, a Créche, residential amenities, and a basement car park.

The car park is to be located under Blocks D, E, F & G, would be accessed via Purbeck and would accommodate 80% of the traffic/parking for the development. This audit doesn't include reviewing the underground car park layout.

The development would include 224 car parking spaces, a number of which are mobility-impaired parking spaces including 2 mobility-impaired parking spaces at ground level for access to adjacent Blocks, 5 mobility-impaired parking spaces located in the basement car park with access to the cores of Blocks D, E, F & G, and additional mobility-impaired spaces located at the undercroft of Blocks B & C with direct access via the core.

The development would also include 1,071 bicycle parking spaces, 713 of which are for secure long-stay parking for residents and 346 are for use by visitors, at various locations throughout the site. In addition, 12 cargo bike spaces and 8 motorcycle parking spaces would be provided.

Vehicular access to the proposed development would be via Purbeck Avenue, from which the main underground car park would be accessed, and via the existing Dalguise House Access Avenue. The Dalguise House Access Avenue would be amended to include passing bays to facilitate two-way vehicular traffic. The Traffic & Transport Assessment Report provided to the Audit Team states that traffic to/from Blocks A to G (i.e. the blocks in front of Dalguise House) will access the site via Purbeck Avenue, representing approx. 80% of total development traffic. Traffic to/from Blocks H to I will access the site via the Dalguise House Access Avenue.

Green space and play areas are proposed within the development with footpaths linking them with the residential blocks.

Five existing units on the lands will be retained (North West Houses, Brick Gate Lodge and Coach House), with vehicular access to these to be via the proposed access road.

# 3 Road Safety Audit

## 3.1 Introduction

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

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

**Mr. Peter Monahan**
(BE MSc CEng FIEI RSACert)
Road Safety Audit Team Leader

**Mr. Mazen Al Hosni**
(BEng, MIEI)
Road Safety Audit Team Member

The Audit took place during May, and September 2022 and comprised an examination of the documents provided by the designers (see section 3.8). A site visit was undertaken on the 3rd May 2022. Traffic volumes were moderate, pedestrian and cyclist volumes were low and traffic speeds were considered to be generally within the posted speed limit.

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

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

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

## 3.2 Items Not Submitted for Auditing

Details of the following items were not submitted for audit; therefore, no specific problems have been identified at this stage relating to these design elements, however where the absence of this information has given rise to a safety concern it has been commented upon in Section 3.5: -

- Drainage
- Public Lighting
- Visibility splays

## 3.3 Previous Road Safety Audit

The Stage 1 Road Safety Audit was previously undertaken for the proposed development in May 2022 (Report Ref: P22-062-RSA-PD-RP-001). This Stage 1 Road Safety Audit has been undertaken to reflect amendments/changes to the proposals on foot of this original Audit, and also for incorporation into the Quality Audit for the proposed development.

## 3.4 Collision History

The Road Safety Authority website (www.rsa.ie) was consulted to identify historical collisions in the vicinity of the proposed scheme. The website previously included summary information on recorded collision occurrence for the period 2005 to 2016, although this is currently not available. However information had been obtained from the RSA website for the previous audit (see Figure 3-1).

Two collisions were recorded during the period 2005 February, 2016, their details are as follows: -

1) 1 Serious Injury Collision in 2009 involving a Pedestrian, which occurred at Monkstown Road on a Thursday between 16:00-19:00.

2) 1 Minor Injury Collision in 2009 involving a Car, which occurred at Monkstown Road on a Sunday between 23:00-03:00.

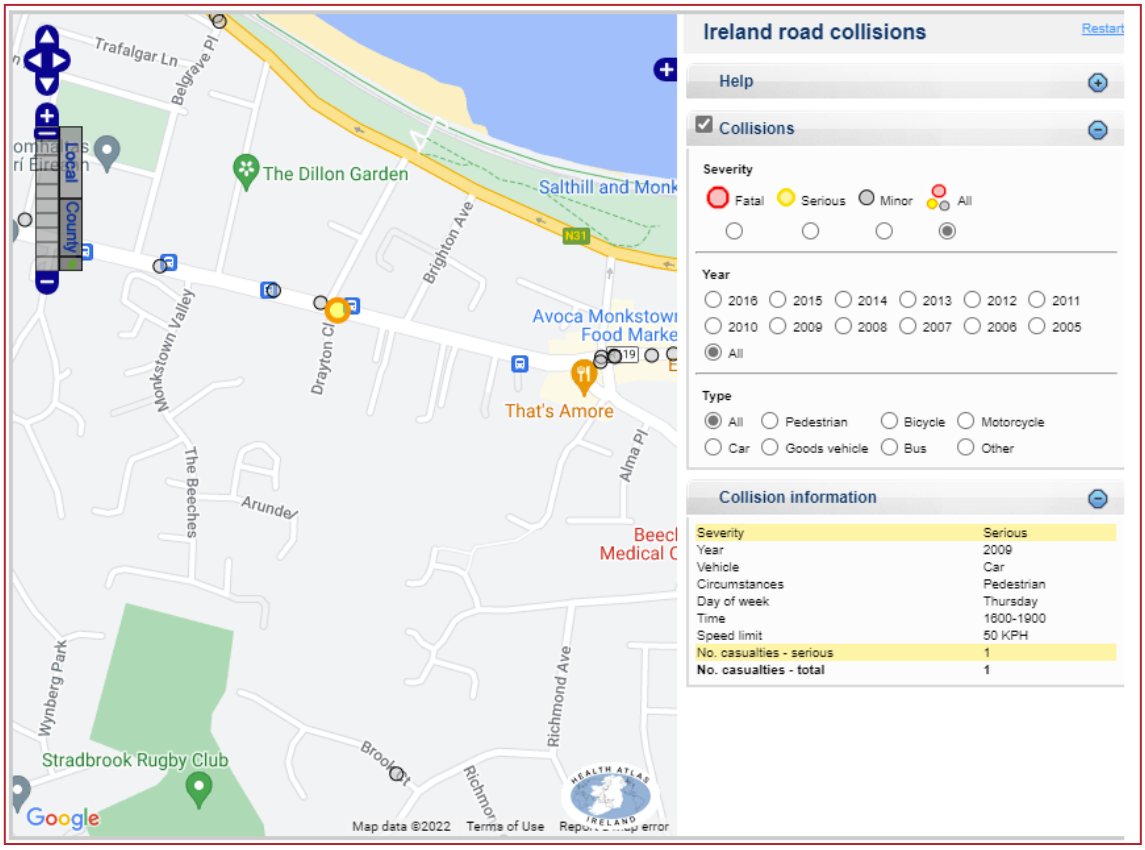


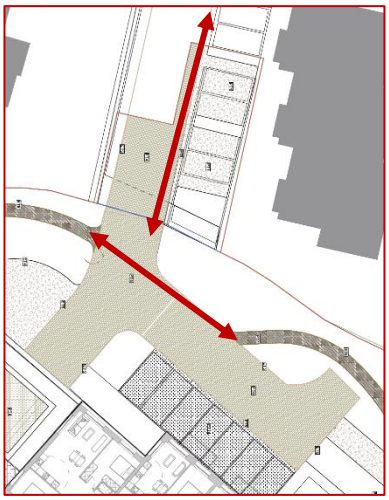

**FIGURE 3-1: HISTORICAL COLLISIONS IN THE VICINITY OF THE DEVLEPOMNT PROPSED ACCESS (SOURCE WWW.RSA.IE)**

## 3.5 Road Safety Audit

### 3.5.1 Problem

*Location:* *Shared Carriageway at Purbeck*

*Summary:* *Lengthy pedestrian routes through busy area of shared carriageway.*



It is unclear where the existing footpath on Purbeck will tie-in with the internal development footpaths. It appears that the existing footpath will connect into a shared carriageway, at a location where 80% of vehicular traffic entering/exiting the development will also be using the carriageway.

In addition, proposed loose bark surfaced paths connect with this shared carriageway in the vicinity of the proposed crèche, and in order to continue along the path of pedestrians will be required to travel within the shared carriageway over a longer than necessary distance.

Lengthy pedestrian routes through a relatively busy section of carriageway would lead to an increased risk of vehicle/pedestrian collisions.

#### Recommendation

The existing footpath provision along Purbeck should be extended into the proposed development, with appropriate crossings on likely crossing desire lines. The layout of the loose bark surfaced paths should be amended in order to provide a crossing which is as short as practicable.

On the approaches to the interface with the carriageway, a section of the loose bark surfaced paths should be paved and tactile paving provided to warn pedestrians of the upcoming crossing.

### 3.5.2 Problem

*Location:* *North West Houses*

*Summary:* *Offset parking spaces at the North West Houses may lead to unsafe reversing manoeuvres onto the carriageway.*

The design indicates parking spaces at the North West Houses being offset from the access road.

Drivers exiting these parking spaces may be required to reverse over a relatively long distance when entering the access road, with limited visibility towards approaching traffic, including pedestrians or cyclists, on the access road. This may increase the risk of vehicle/pedestrian and side-on collisions or rear-end shunts.

#### Recommendation

The parking spaces should be relocated closer to the access road carriageway with sufficient visibility towards approaching vehicles, bicycles and/or pedestrians on the Avenue.

### 3.5.3 Problem

*Location:* *Existing Dalguise House Access Avenue*

*Summary:* *Narrow shared access road may not be able to accommodate opposing traffic and narrow gateway could increase the risk for pedestrians/cyclists.*

It is proposed to retain the existing Dalguise House Access Avenue as one of the accesses to the proposed development. The Avenue is not indicated as being modified and is to be used by two-way vehicular traffic and by pedestrians and cyclists.

The existing avenue consists of a single lane without footpaths, with a narrow gateway onto Monkstown Road. The avenue is not wide enough to accommodate vehicles passing in opposite directions.

The narrow carriageway and the absence of dedicated facilities for pedestrians/cyclists may increase the risk of collisions, particularly during poor weather conditions or during the hours of darkness when visibility could be limited by the absence of lighting along the route.

The narrow gateway could lead to vehicles wishing to turn into the development having to wait on Monkstown Road due to an exiting vehicle waiting for a gap in Monkstown Road traffic before exiting. In addition, the narrow gateway could result in insufficient inter-visibility between drivers of entering/exiting vehicles and pedestrians/cyclists.

#### Recommendation

The avenue should be amended so that it can safely accommodate two-way traffic (e.g. a widened carriageway or the provision of appropriately located passing bays)

A footpath and public lighting should be provided along the avenue, and the existing trees/vegetation cut back to ensure adequate visibility and so as not to impede the public lighting.

The existing gateway either should be widened to safely accommodate vehicles, pedestrians & cyclists, or a layby should be provided immediately inside the gate with a pedestrian gate to facilitate pedestrian and cyclist entry/exit without the need to interface with vehicles entering/exiting the narrow gateway.

### 3.5.4 Problem

*Location:* *Dalguise House Access Avenue*

*Summary:* *Narrow access may result in delays for Emergency Vehicles.*

Emergency Vehicle may seek to access the development along the Dalguise House Access Avenue. The existing avenue and entrance gateway is narrow, and there is a consequent risk of delays for Emergency Vehicle access, in particular at the narrow gates.

Delays in emergency services response times may increase injury severity.

#### Recommendation

Safe access for emergency vehicles should be available without unnecessary delays.

### 3.5.5 Problem

*Location:* *Block F & G*

*Summary:* *Items blocking building entrances may constitute a hazard.*

Cycle parking has been indicated at the steps into Blocks F & G. The proposed location of the bicycle parking may result in difficulties for bike users in safely accessing the parking provisions.

In addition, there is a concern that the bicycle parking may impede emergency egress from the building entrance, resulting in an increased risk of injury in emergency situations.

#### Recommendation

The bicycle parking should be relocated away from the immediate entry/exit & steps into the buildings.

### 3.5.6 Problem

*Location:* *Junction immediately north of Block H*

*Summary:* *Lack of junction control and insufficient visibility at the internal junction may result in unsafe exiting manoeuvres*

The internal road which will provide access to Blocks I (East) and I (West) intersects with the main access road at a junction to the north of Block H.

Visibility for drivers exiting from the minor arm at this junction may be impeded by the proposed position of the planting/trees at the junction. Insufficient visibility could result in unsafe exiting manoeuvres from the side road leading to side-on collisions with through traffic on the main access road.

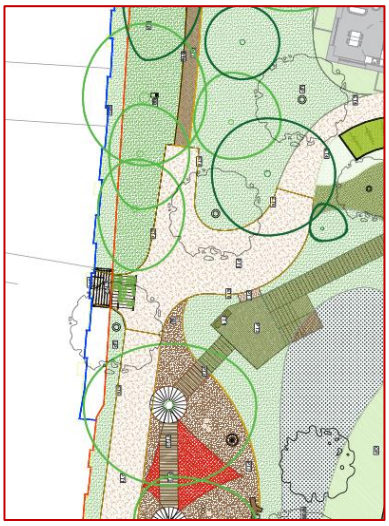
#### Recommendation

The junction priority should be clearly signed/marked and landscaping/planting/trees should be positioned where they will not impede visibility for drivers at the junction.

### 3.5.7 Problem

*Location:* *Intersection of Paved Path with Paved Shared Road*

*Summary: Drivers may enter path from shared road.*



Some drivers may be unaware that the shared road transitions to a path near the pedestrian access in the western boundary, and inadvertently enter the path, mistaking it for another roadway, with a resulting increased risk of vehicular/NMU collisions.

### Recommendation

Measures should be put in place to prevent vehicles continuing from the shared paved road onto the paved path.

### 3.5.8 Problem

*Location:* *General problem*

*Summary:* *Lack of edge protection may result in falls from height.*

At a number of locations throughout the development level differences are indicated, some adjacent to shared roads/footpaths. It is unclear from the information provided if edge protection is proposed at these locations. A lack of edge protection may result in pedestrians or cyclists falling from height, resulting in personal injury.

### Recommendation

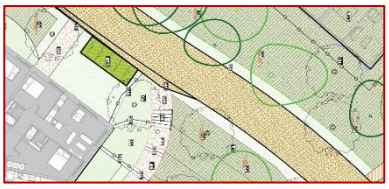
During the design development edge protection should be provided at all locations where there is a risk of falls from height.

### 3.5.9 Problem

*Location:* *General Problem*

*Summary:* *Carriageway width may result in drivers attempting to pass when there is insufficient width to do so leading to material damage collisions.*

The internal access road is indicated as being between 4m & 4.2m in width (approximately) with regular passing bays to facilitate the passage of opposing vehicles.



The proposed width of the carriageway may lead drivers to mistakenly believe that there is adequate room to pass an oncoming vehicle away from the passing bay locations, resulting in possible side-swipe collisions and material damage.

### Recommendation

The width of the road should be such that drivers understand that it is either: -

a) sufficiently narrow that there is insufficient room for two opposing vehicles to pass thus encouraging drivers to wait within the passing bays where necessary (e.g. 3m wide carriageway), or

b) wide enough to permit two vehicles to pass (e.g. 4.8m wide carriageway in accordance with the Design Manual for Urban Roads and Streets).

### 3.5.10 Problem

*Location:* *Dalguise House Avenue Access*

*Summary:* *Visibility to the left at the access may result in overhang into carriageway/cycle lane.*

The existing visibility at the Dalguise House Access Avenue gateway on Monkstown Road may result in an exiting vehicle encroaching into the carriageway/cycle lane on Monkstown Road before sufficient visibility is available towards approaching vehicles.

This could result in cyclist avoidance measures (swerving) which may not be anticipated by following drivers resulting in vehicular/cyclist collisions.

#### Recommendation

Visibility for drivers exiting the Dalguise House Access Avenue should be available without need for the exiting vehicle to encroach into the carriageway/cycle lane.

### 3.5.11 Problem

*Location:* *Brick Gate Lodge*

*Summary:* *Lateral clearance to Brick Gate Lodge.*

It is proposed to retain the Brick Gate Lodge, with the internal road indicated in close proximity to the lodge building. It is unclear if there is sufficient lateral clearance between the building and the proposed carriageway, insufficient setback could result in the building being struck by passing vehicles resulting in material damage.

#### Recommendation

Adequate lateral clearance should be provided between the edge of the carriageway and the Brick Gate Lodge building.

### 3.5.12 Problem

*Location:* *Monkstown Road*

*Summary:* *Safe pedestrian movement for pedestrians wishing to access the amenities/bus stops on Monkstown Road.*

Given the likely pedestrian volumes expected to use public transport links in the vicinity of the proposed development, pedestrians may want to cross Monkstown Road when accessing the amenities/bus stops on the northern side of the road. There is no existing crossing in the vicinity of the proposed development accesses, and a lack of safe crossing facilities for pedestrians, particularly partially sighted or mobility impaired pedestrians, may lead to unsafe crossings resulting in personal injury collisions.

It is acknowledged that a number of pedestrian accesses are proposed which would connect onto the existing residential road network in the vicinity of the proposed development, and that these would facilitate alternative routes to/from public transport facilities and other amenities apart from the primary vehicular accesses onto Monkstown Road.

#### Recommendation

An assessment of the need for a crossing of Monkstown Road in the vicinity of the proposed development accesses should be undertaken and, where necessary, an appropriate crossing should be provided.

### 3.5.13 Problem

*Location:* *General problem*

*Summary:* *Rills may represent a hazard for visually impaired.*

Rills of 150 mm depth height are proposed alongside the paths. The proposed rills may represent a height hazard for visually-impaired or inattentive pedestrians. Insufficient warming of the height hazard may result in the visually-impaired being unable to detect the hazard.

#### Recommendation

Provide warning paving to advise visually-impaired or inattentive pedestrians of the hazard.

### 3.5.14 Problem

*Location:* *General problem*

*Summary:* *Rills could give rise to slips and falls, in particular during wet or icy weather*


Rills of 150 mm depth height are proposed alongside the paths. Should the proposed rills become blocked or overflow, this could result in ponding within the adjacent paths. This could give rise to slips and falls, in particular during wet or icy weather.

#### Recommendation

Ensure the rills are designed so that any overflow will be directed away from paths.

### 3.5.15 Problem

*Location:* *General Problem – Loose Bark Surfaced Paths*

*Summary:* *Unbound road surface may represent slip and trip hazard*


It is proposed to provide unbound “Loose Bark Chip” path material for some of the internal footpaths. The unbound material may deteriorate over time, creating unstable or uneven ground, leading to slips, trips or falls.

It is also unclear if unbound surfacing is proposed on the steps along the unbound paths. Loose material on the steps may exacerbate the risk of slips, trips or falls.

#### Recommendation

During the design development the proposed path surface and step surfaces should be designed so as not to present a slip or trip hazard.

### 3.5.16 Problem

*Location:* *Shared Paths/Roads*

*Summary:* *Absence of a "Safe Zone" for visually-impaired pedestrians within the proposed shared paths/roads.*

It is proposed to provide unbound "Loose Bark Chip" path material for some of the internal footpaths. Unbound material can present particular difficulties for the mobility-impaired, in particular wheelchair users, and for the visually-impaired. This will result in mobility impaired or visually impaired being unable to use the proposed unbound paths and are more likely to use the shared carriageways.

However, No "Safe Zone" has been indicated within the shared carriageways for visually-impaired pedestrians, which can lead to them being unable to safely & independently navigate the proposed shared roads.

#### Recommendation

Safe Zones should be provided within shared areas/carriageways in accordance with the guidance provided by the National Disability Authority.

### 3.5.17 Problem

*Location:* *General problem*

*Summary:* *"Ha-ha" may present a height hazard.*

It is proposed to provide a 'Ha-ha' feature, with associated water basin and water shoots, within the Central Plaza. The Ha-ha may present a height hazard for visually impaired or inattentive pedestrians on upper level, leading to possible falls from height.

#### Recommendation

Edge protection should be provided at the Ha-ha.

### 3.5.18 Problem

*Location:* *Central Approach*

*Summary:* *Stramps may present a height-hazard for the visually-impaired.*


It is proposed to provide stramps (combined steps & ramps) within the Central Approach area of the proposed development. It is unclear from the information provided whether it is intended to provide hazard warning tactile paving at the proposed stramps. The proposed stramps could present a hazard for the visually-impaired should be the insufficiently aware of the height-hazard leading to possible trips or falls.

#### Recommendation

Hazard tactile paving should be provided at the proposed stramps.

## 3.6 Road Safety Audit Team Statement

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

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

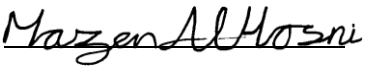
The Road Safety Audit Team has not been involved in the design of this scheme.

**ROAD SAFETY AUDIT TEAM LEADER**

Peter Monahan Signed: 

Dated: 4th October 2022

**ROAD SAFETY AUDIT TEAM MEMBER**

Mazen Al Hosni Signed: 

Dated: 4th October 2022

## 3.7 Road Safety Audit Brief Checklist

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

| | | Yes | No |
|---|---|---|---|
| 1. | The Design Brief | ☐ | ☑ |
| 2. | Departures from Standard | ☐ | ☑ |
| 3. | Scheme Drawings | ☑ | ☐ |
| 4. | Scheme Details such as signs schedules, traffic signal staging | ☐ | ☑ |
| 5. | Collision data for existing roads affected by scheme | ☐ | ☑ |
| 6. | Traffic surveys | ☑ | ☐ |
| 7. | Previous Road Safety Audit Reports and Designer's Responses/Feedback Form | ☑ | ☐ |
| 8. | Previous Exception Reports | ☐ | ☐ |
| 9. | Start date for construction and expected opening date | ☐ | ☑ |
| 10. | Any elements to be excluded from audit | ☐ | ☑ |

**Any other information?** ☐ ☑
*(if 'Yes', describe below)*

## 3.8 Documents Submitted to the Road Safety Audit Team

| DOCUMENT/DRAWING TITLE | DOCUMENT/DRAWING NO. | REVISION |
|---|---|---|
| Dalguise House, Design and Access Statement | C0135 | 01 |
| Landscape General Arrangement, Ground Floor – Sheet 1 | C0135 L100 | 00 |
| Landscape General Arrangement, Ground Floor – Sheet 2 | C0135 L101 | 00 |
| Landscape General Arrangement, Ground Floor – Sheet 3 | C0135 L102 | 00 |
| General Arrangement Plan – 7th Floor | C0135 L107 | 00 |
| General Arrangement Plan – 8th Floor | C0135 L108 | 00 |
| Combined Roof Level Plan General Arrangement | C0135 L110 | 00 |
| Hardworks Plan – Ground Floor – Sheet 1 | C0135 L200 | 00 |
| Hardworks Plan – Ground Floor – Sheet 2 | C0135 L201 | 00 |
| Hardworks Plan – Ground Floor – Sheet 3 | C0135 L202 | 00 |
| Softworks Plan – Ground – Sheet 1 | C0135 L300 | 00 |
| Softworks Plan – Ground – Sheet 2 | C0135 L301 | 00 |
| Softworks Plan – Ground – Sheet 3 | C0135 L302 | 00 |
| Section 1 | C0135 L500 | 00 |
| Section 2 | C0135 L501 | 00 |
| Section 3 | C0135 L502 | 00 |
| Illustrative Landscape Masterplan Ground Floor | C0135 L1000 | 02 |
| Illustrative Landscape Masterplan Roof Plan | C0135 L1001 | 02 |
| Landscape Design Rationale | C0135 LDR | Final |

## 3.9 Road Safety Audit Feedback Form

**Scheme:** Proposed Residential Development, Dalguise House, Monkstown Road, Co. Dublin

**Route No.:** R119

**Audit Stage:** 1 **Date Audit Completed:** 14th September 2022

| | To be Completed by Designer | | | To be Completed by Audit Team Leader |
|---|---|---|---|---|
| **Paragraph No. in Safety Audit Report** | **Problem Accepted (Yes/No)** | **Recommended Measure(s) Accepted (Yes/No)** | **Describe Alternative Measure(s). Give reasons for not accepting recommended measure** | **Alternative Measures or Reasons Accepted by Auditors (Yes/No)** |
| **3.5.1** | Yes | Yes | | |
| **3.5.2** | Yes | Yes | | |
| **3.5.3** | Yes | Yes | The access road has been widened in certain areas in order to allow for passing bays on the way in. This access road is a shared space for pedestrians and cyclists and there will be minimal traffic on this route. The gateway will be widened and a passing area provided just inside. | |
| **3.5.4** | Yes | Yes | This access route will be widened to allow for emergency vehicle access. | |
| **3.5.5** | Yes | Yes | The Bicycle Sheffield Stands outside Blocks F+G have now been moved from in front of the Entrances. | |
| **3.5.6** | Yes | Yes | A Yield or Stop arrangement will be provided here to control vehicles exiting this road on to the main access route. | |
| **3.5.7** | Yes | Yes | | |
| **3.5.8** | Yes | Yes | | |

## 3.9 Road Safety Audit Feedback Form

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**Audit Stage:** 1 **Date Audit Completed:** 14th September 2022

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|---|---|---|---|---|
| **Paragraph No. in Safety Audit Report** | **Problem Accepted (Yes/No)** | **Recommended Measure(s) Accepted (Yes/No)** | **Describe Alternative Measure(s). Give reasons for not accepting recommended measure** | **Alternative Measures or Reasons Accepted by Auditors (Yes/No)** |
| **3.5.9** | Yes | No | The existing road width is to be maintained to protect the adjacent mature trees. The carriageway width must be greater than 3m to safely accommodate pedestrians and cyclists.<br>During the design progression the layout will clearly indicate to drivers that two-way passing is only possible at the passing bay areas and that they have to give way to oncoming vehicles. | Yes |
| **3.5.10** | Yes | No | A 49m sightline is available from a 2.4m setback in line with DMURS.<br>The vegetation on either side will be trimmed to ensure this visibility remains unimpeded. | Yes |
| **3.5.11** | Yes | Yes | Drawings will be updated to show the existing clearance between laneway and building is to be maintained. | |
| **3.5.12** | Yes | No | This will be brought to the attention of the Local Authority. | Yes |
| **3.5.13** | Yes | Yes | | |
| **3.5.14** | Yes | Yes | | |
| **3.5.15** | Yes | Yes | | |
| **3.5.16** | Yes | Yes | | |

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| **3.5.17** | Yes | Yes | | |
| **3.5.18** | Yes | Yes | | |

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

**Signed:** Peter J. Monsher Audit Team Leader **Date** 4th October 2022

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

# 4 Accessibility & Walkability Audit

## 4.1 Introduction

It is proposed to construct a new residential development in Monkstown Co. Dublin, on an existing greenfield site which currently comprises of 7 residential units. The proposed development would consist of 476 apartments, with a mix of studio, 1 bed, 2 bed and 3 bed apartments, a créche, residential amenities and a basement car park. The surrounding area is predominantly residential in nature and the proposed development is bounded by Monkstown Road to the north and existing residential developments on the remaining sides.

### 4.1.1 Pedestrian Routes

Pedestrian access to the proposed development is provided through the existing Dalguise House Access Avenue on Monkstown Road. This access will be amended to a shared surface and is intended to be used solely by pedestrians and cyclists with the exception of service, maintenance, emergency vehicles and vehicles using the surface level parking.

It is proposed to construct a network of pedestrian footpath and shared surface routes throughout the development. These paths connect residents and visitors to all apartment blocks and amenities within the development. In addition, it is proposed to provide non-motorised road user (NMU) connections within the eastern & western boundaries of the site, which will improve permeability for residents of the development when accessing the adjacent areas and also improve permeability for residents of existing developments on either side affording alternative active travel routes, in particular to/from Monkstown village for residents of the residential areas to the west of the proposed development.

**FIGURE 4-1: PEDESTRIAN ACCESS TO THE PROPOSED DEVELOPMENT**

### 4.1.2 Access to Public Transport

There are existing bus stops located on Monkstown Road, one in each direction, to the north of the proposed development. The nearest bus stops are listed in Table 4-1 below, their proximity to the development was measured from the proposed shared pedestrian access on Monkstown Road and includes the use of the controlled pedestrian crossings where necessary.

**TABLE 4-1 BUS ROUTES NEAR THE PROPOSED DEVELOPMENT**

| Bus Stop (Name) | Bus Stop (Number) | Proximity to the development | Bus Route | Travelling between |
|---|---|---|---|---|
| Albany Avenue | 3039 | 500m | 7 | Mountjoy Square Park – Bride's Glen |
| | | | 7A | Mountjoy Square Park – Loughlinstown Wood Estate |
| Drayton Close | 3074 | 77m | 7 | Bride's Glen – Mountjoy Square Park |
| | | | 7A | Loughlinstown Wood Estate – Mountjoy Square Park |

It is considered that the development will have good access to the bus network as shown in Table 4-1 above.

The proposed development is located approximately 550m southwest of the Salthill and Monkstown Train Station, which provides access to all rail stops on the Dublin Area Rapid Transit (DART) line between Howth/Malahide and Greystones, as well as connecting services with commuter rail services, the LUAS Red Line, and other Public Transport services. This train station can be accessed on foot from the proposed developments shared pedestrian access in approximately 7 minutes.

Given its proximity to Salthill and Monkstown Train Station, and the pedestrian crossing facilities at the Salthill and Monkstown Train Station, the proposed development is considered to have good access to the local rail network.

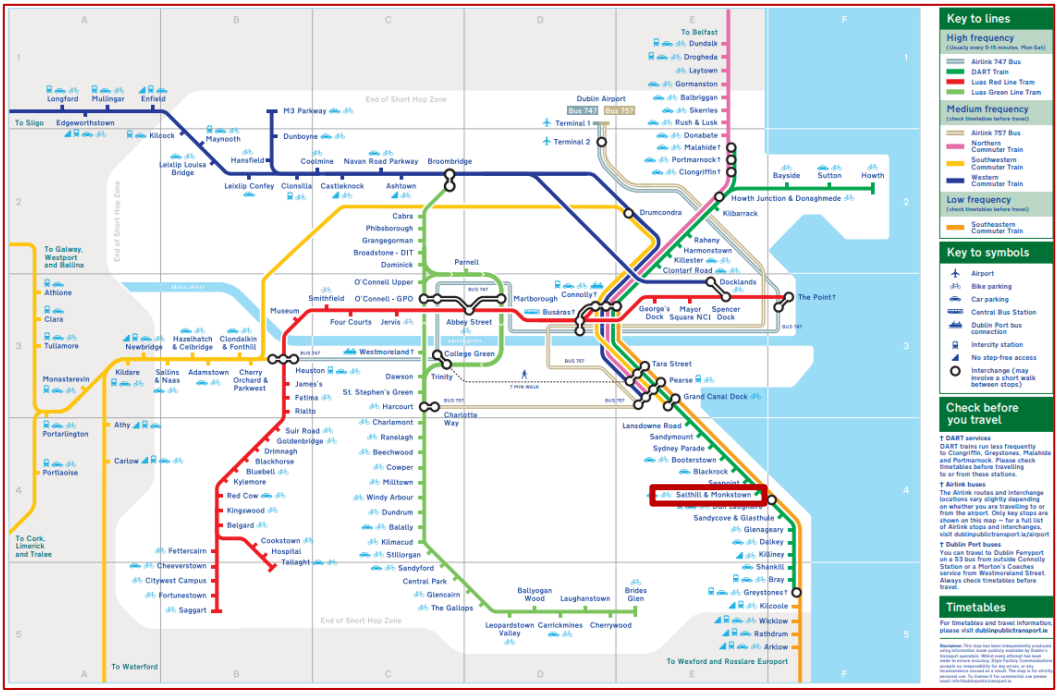



**FIGURE 4-2: MAP OF DUBLIN RAIL AND AIRPORT BUS SERVICES**

### 4.1.3 Local Amenities

The proposed development is located a densely populated residential area in close proximity to the suburbs of Dun Laoghaire to the east and Blackrock to the west. The area provides a wide range of amenities within walking distance of the proposed development including grocery shops, schools, sports facilities, restaurants, cafés, parks, and many more. Table 4-2 below includes a selection of amenities which can be accessed in a short journey time, on foot or bicycle, from the proposed shared access on Monkstown Road.

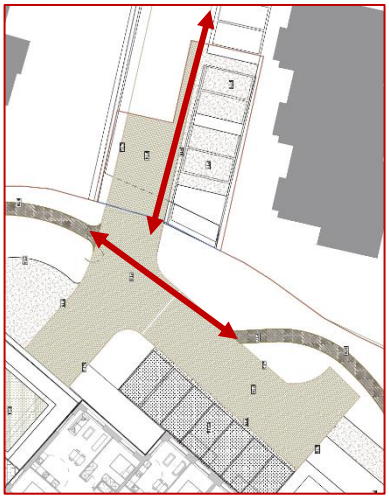
**TABLE 4-2: LOCAL AMENITIES CLOSE TO THE PROPOSED DEVELOPMENT**

| Amenity | Distance (approx.) | Journey Time on Foot / Bicycle (approx.) | Direction from Development |
|---|---|---|---|
| Spar | 300m | 4 minutes / 2 minutes | East |
| Seapoint Park | 700m | 9 minutes / 2 minutes | North |
| Seapoint Beach | 550m | 7 minutes / 3 minutes | Northwest |
| Cosgrove's Pharmacy | 300m | 4 minutes / 2 minutes | East |
| Generation Health Medical Clinic | 500m | 6 minutes / 2 minutes | East |
| Beechlawn Medical Centre | 550m | 7 minutes / 3 minutes | Southeast |
| The Friendly Dentist | 1.0km | 12 minutes / 4 minutes | Northwest |
| Monkstown Park Junior School | 1.0km | 13 minutes / 5 minutes | Southeast |
| St. Oliver Plunkett Special School | 450m | 6 minutes / 2 minutes | Southeast |
| Rockford Manor Secondary School | 1.4km | 19 minutes / 6 minutes | South |
| Christian Brothers College | 1.0km | 14 minutes / 5 minutes | Southeast |
| Church of Ireland Monkstown | 300m | 4 minutes / 2 minutes | East |
| De Vesci Tennis Club | 1.0km | 13 minutes / 5 minutes | East |
| Blackrock College RFC | 1.3km | 17 minutes / 5 minutes | Southwest |
| Monkstown Swimming Pool & Fitness Centre | 1.2km | 15 minutes / 5 minutes | Southeast |
| Newpark Sports Centre | 1.6km | 20 minutes / 6 minutes | Southwest |
| Avoca Monkstown Food Market | 400m | 5 minutes / 2 minutes | East |
| The Butler's Pantry | 900m | 12 minutes / 4 minutes | West |
| Blackrock Village Centre | 1.7km | 22 minutes / 8 minutes | Northwest |

## 4.2 Building Accesses

Accessibility issues relating to Building Accesses have been discussed in Section 3.5.5.

## 4.3 Pedestrian Crossing Facilities



### 4.3.1 Issue

A shared carriageway is proposed at the Purbeck entrance, a location where 80% of vehicular traffic entering/exiting the development will also be using the carriageway.

The existing footpath along Purbeck terminates, with vulnerable road users expected to travel within the shared carriageway. The proposed loose bark surfaced paths connect with this shared carriageway in the vicinity of the proposed crèche, and in order to continue along the path of pedestrians will be required to travel within the shared carriageway over a longer than necessary distance.

The proposed arrangements at this location are likely to create difficulties for pedestrians, and in particular visually-impaired & mobility-paired non-motorised road users, travelling along and through this area.

**Recommendation**

Segregated footpaths with defined crossings of the carriageway should be provided at this location.

## 4.4 Target Groups

Accessibility issues relating to Mobility Impaired Access have been discussed in Sections 3.5.1, 3.5.3, 3.5.7, 0, 0, 3.5.14, 0 & 3.5.17.

### 4.4.1 Issue

It is proposed to provide unbound “loose bark chip” paths within the development. The proposed loose bark chip path surfacing would present difficulties for wheelchair users. In addition, along these paths steps are proposed due to the existing topography, which would also create difficulties for the mobility-impaired and wheelchair users, who would be unable to travel along these paths.

However, paved & shared paths/roads are proposed which would provide alternate routes for the mobility-impaired & visually-impaired road users.

**Recommendation**

A bound surface footpath between existing entrance avenue, along the northern portion of the site connecting with Purbeck

### 4.4.2 Issue

Given the likely pedestrian volumes expected to use public transport links in the vicinity of the proposed development, pedestrians may want to cross Monkstown Road when accessing the amenities/bus stops on the northern side of the road. This would result in mobility impaired and visually impaired being unable to access the bus stops on the northern side of Monkstown Road closest to the proposed development, resulting in them having to take lengthier routes to access alternative bus stop locations.

**Recommendation**

An assessment of the need for a crossing of Monkstown Road in the vicinity of the proposed development accesses should be undertaken and, where necessary, an appropriate crossing should be provided.

## 4.5 Junctions

Accessibility issues relating to Junctions have been discussed in Section 3.5.4, 3.5.6

## 4.6 Signage

No accessibility issues have been identified relating to Signage .

## 4.7 Public Transport

Accessibility issues relating to Public Transport have been discussed in Section 3.5.12.

## 4.8 Lighting

No accessibility issues have been identified relating to Lighting.

## 4.9 Visibility

Accessibility issues relating to Visibility have been discussed in Section 0.

## 4.10 Waste Facilities within the Development

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

## 4.11 Parking

Accessibility issues relating to Parking have been discussed in Section 3.5.2.

# 5 Non-motorised User and Cycle Audit

There are existing dedicated cyclist facilities on Monkstown Road and the development includes shared carriageway internally. Access to the development from Monkstown Road is via the exiting avenue and Purbeck.

## 5.1 External Cycle Provision

No accessibility issues have been identified relating to External Cycle Provision.

## 5.2 Internal Cycle Provision

No accessibility issues have been identified relating to Internal Cycle Provision.

## 5.3 Quality Audit Action Plan

| Issue | Situation | Action/Adjustment | Priority | Cost |
|---|---|---|---|---|
| **3.5.1** | Lengthy pedestrian routes through busy area of shared carriageway, where the existing footpath on Purbeck will tie-in with the internal development footpaths.<br>In addition, proposed loose bark surfaced paths connect with this shared carriageway in the vicinity of the proposed crèche, and in order to continue along the path of pedestrians will be required to travel within the shared carriageway over a longer than necessary distance. | The existing footpath provision along Purbeck should be extended into the proposed development, with appropriate crossings on likely crossing desire lines. The layout of the loose bark surfaced paths should be amended in order to provide a crossing which is as short as practicable. | 1 | B |
| **3.5.2** | At the offset parking spaces at the North West Houses, drivers exiting these parking spaces may be required to reverse over a relatively long distance when entering the access road, with limited visibility towards approaching traffic, including pedestrians or cyclists. | The parking spaces should be relocated closer to the access road carriageway | 1 | A |
| **3.5.3** | The existing avenue consists of a single lane without footpaths, with a narrow gateway onto Monkstown Road. The avenue is not wide enough to accommodate vehicles passing in opposite directions as well as pedestrian and cyclists. | The avenue should be amended so that it can safely accommodate two-way traffic (e.g. a widened carriageway or the provision of appropriately located passing bays)<br>A footpath and public lighting should be provided along the avenue, and the existing trees/vegetation cut back to ensure adequate visibility and so as not to impede the public lighting.<br>The existing gateway either should be widened to safely accommodate vehicles, pedestrians & cyclists, or a layby should be provided immediately inside the gate with a pedestrian gate to facilitate pedestrian and cyclist entry/exit without the need to interface with vehicles entering/exiting the narrow gateway. | 1 | C |
| **3.5.4** | Narrow Dalguise House Access Avenue may result in delays for Emergency Vehicles. | Safe access for emergency vehicles should be available without unnecessary delays. | 1 | A |
| **3.5.5** | Cycle parking blocking building entrances may constitute a hazard | The bicycle parking should be relocated away from the immediate entry/exit & steps into the buildings. | 1 | A |
| **3.5.7** | Loose bark surfaced paths interface with the paved roads may result in visually impaired pedestrians inadvertently entering sections of path which are not safe for them to traverse, or to vehicles attempting to enter a path. Similarly, mobility-impaired individuals may attempt traverse these paths, which are inaccessible due to the steps. | Visually-impaired pedestrians and the mobility-impaired should be a advised of the change of path type were loose surfaced paths interface with paved paths/shared roads. Measures should be put in place to prevent vehicles continuing from the shared paved road onto the paved paths. | 1 | A |
| **0** | Lack of edge protection may result in falls from height | Edge protection should be provided at all locations where there is a risk of falls from height. | 1 | A |

| Issue | Situation | Action/Adjustment | Priority | Cost |
|---|---|---|---|---|
| **3.5.11** | Lateral clearance to Brick Gate Lodge | Adequate lateral clearance should be provided between the edge of the carriageway and the Brick Gate Lodge building. | 1 | A |
| **0** | The proposed rills may represent a height hazard for visually-impaired or inattentive pedestrians. | Provide warning paving to advise visually-impaired or inattentive pedestrians of the hazard. | 1 | A |
| **3.5.14** | Should the proposed rills become blocked or overflow, this could result in ponding within the adjacent paths. This could give rise to slips and falls, in particular during wet or icy weather. | Ensure the rills are designed so that any overflow will be directed away from paths. | 1 | A |
| **0** | Absence of a “Safe Zone” for visually-impaired pedestrians within the proposed shared roads. | Safe Zones should be provided within shared areas/carriageways in accordance with the guidance provided by the National Disability Authority | 1 | A |
| **3.5.17** | The ‘Ha-ha’ feature may present a height hazard for visually impaired or inattentive pedestrians on upper level, leading to possible falls from height. | Edge protection should be provided at the Ha-ha | 1 | A |
| **4.3.1** | The existing footpath along Purbeck terminates, with vulnerable road users expected to travel within the shared carriageway. The proposed loose bark surfaced paths connect with this shared carriageway in the vicinity of the proposed crèche, and in order to continue along the path of pedestrians will be required to travel within the shared carriageway over a longer than necessary distance.<br>The proposed arrangements at this location are likely to create difficulties for pedestrians, and in particular visually-impaired & mobility-paired non-motorised road users, travelling along and through this area | Segregated footpaths with defined crossings of the carriageway should be provided at this location. | 1 | A |

| Issue | Situation | Action/Adjustment | Priority | Cost |
|---|---|---|---|---|
| **4.4.2** | Given the likely pedestrian volumes expected to use public transport links in the vicinity of the proposed development, pedestrians may want to cross Monkstown Road when accessing the amenities/bus stops on the northern side of the road. This would result in mobility impaired and visually impaired being unable to access the bus stops on the northern side of Monkstown Road closest to the proposed development, resulting in them having to take lengthier routes to access alternative bus stop locations. | An assessment of the need for a crossing of Monkstown Road in the vicinity of the proposed development accesses should be undertaken and, where necessary, an appropriate crossing should be provided. | 1 | A |

***Priority***

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

***Cost (Indicative cost only)***

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

# 6 Appendix A - Road Safety Audit Problem Locations