Coakley Consulting Engineers

# Whitebox Student Campus, Groody Road, Newcastle, Castletroy, Co. Limerick

## Stage 1 Road Safety Audit

P·M·C·E

**January 2025**

Coakley Consulting Engineers

# Whitebox Student Campus, Groody Road, Newcastle, Castletroy, Co. Limerick

## Stage 1 Road Safety Audit

| Document Ref: | P24170-PMCE-XX-XX-RP-SA-3_0001 |
|---|---|

| Rev | Prepared By | Reviewed By | Approved By | Issue Date | Reason for Revision |
|---|---|---|---|---|---|
| 4.0 | AOR | XY | AOR | 17th Jan 2025 | Final |
| 3.0 | AOR | XY | AOR | 14th Oct 2024 | Final Report |
| 2.0 | AOR | XY | AOR | 11th Oct 2024 | Revised Drawing Received |
| 1.0 | XY | AOR | TAG | 9th Oct 2024 | Draft Report |
| | | | | | |

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# Table of Contents

# 1 Introduction

## 1.1 General

This report results from a Stage 1 Road Safety Audit on the proposed Whitebox Student Campus at Castletroy, Co. Limerick carried out at the request of Mr Brian Coakley of Coakley Consulting Engineers on behalf of Groody Developments Limited.

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

**Mr. Alan O'Reilly**
(BA, BAI, MSc, PGDip(PM), RSACert, CEng, MIEI)
Road Safety Audit Team Leader

**Ms. Xue Yan**
(BEng, MSc, MIEI)
Road Safety Audit Team Member

The Road Safety Audit took place during October 2024 and comprised an examination of the documents provided by the designers (see Appendix A). In addition to examining the documents supplied the Road Safety Audit Team visited the site of the proposed measures on the 3rd of October 2024. Weather conditions during the site visit were dry and the road surface was dry. Traffic volumes during the site visit were high, pedestrian and cyclist volumes were moderate 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 and their locations are shown in Appendix B. Where problems are general to the proposals sample drawing extracts are within the main body of the report, where considered necessary.

This Stage 1 Road Safety Audit has been carried out in accordance with the requirements of GE-STY-01024 - Road Safety Audit (December 2017), contained on the Transport Infrastructure Ireland (TII) Publications website.

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.

# 2 Project Description

It is proposed to construct a new student accommodation development on the outskirts of Limerick City (see Figure 2.1), to the southwest of the University of Limerick. The proposed student accommodation development would be bound to the north by the R445 (Dublin Road), to the east by the L5173 (Groody Road) and to the west and the south by an existing greenfield site to be developed in the future.

The proposed student accommodation development would be accessed via a new arm on the western side of the existing roundabout at the intersection of Groody Road and the access road to Groody Student Park, approximately 180m to the south of the Groody Roundabout, where Groody Road intersects the Dublin Road.

Groody Road is a two-way single carriageway, approximately 7.0m wide, and includes a protected northbound cycle lane on its western side. A segregated footpath and cycle track is provided on the eastern side of the road. Public lighting is also provided on both sides of the road. The posted speed limit on Groody Road is 50kph

The proposed development would include the following:

- 1,400-bed accommodation spread over five apartment blocks.
- 40 parking spaces, including two accessible parking spaces, and three set down areas.
- Open green space, and courtyards, within, and between, the apartment blocks.
- Internal road and footpath network.
- Fire and emergency access route.
- Development of Groody Valley to provide walking routes, recreational areas and landscaped areas.

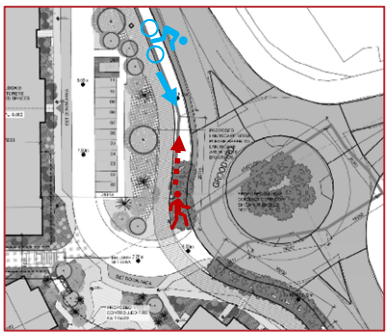

**FIGURE 2.1: LOCATION PLAN (SOURCE:** WWW.OPENSTREETMAP.ORG**)**

# 3 Items Arising from the Audit

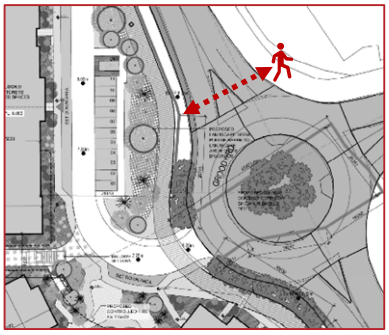
## 3.1 Absence of Pedestrian Connectivity to Footpath on Groody Road

*Location:* *Drawing no. PP-1.01*

*Summary:* *No pedestrian crossings have been indicated to/from the proposed development on Groody Road.*



It is proposed to construct the student accommodation development on the western side of Groody Road with two pedestrian accesses indicated onto this side of the road, however, there is currently no footpath along the western side of Groody Road with an existing public footpath provided along the opposite side only. A pedestrian crossing has not been indicated on Groody Road with the nearest crossing being the Zebra crossing at the Groody Roundabout approximately 200m to the north.



There is likely to be a pedestrian desire line between the proposed development and the shops/residential developments on the eastern side of Groody Road, and it is unlikely that residents of the proposed development would travel north to this crossing. This may lead to pedestrians, who wish to travel between these developments, crossing Groody Road at locations where a driver may be less attentive to them, and insufficiently prepared to react, resulting in an increased risk of vehicle-pedestrian collisions.

There are also currently no pedestrian crossings at the roundabout at the proposed development access, which was noted as extremely busy at the time of the site visit, further exacerbating the problem.

In addition, the lack of a footpath on the western side of Groody Road will likely lead to pedestrians travelling in the verge or protected northbound cycle lane along the proposed development boundary, resulting in a risk of slips and falls, or pedestrian/cyclist collisions.

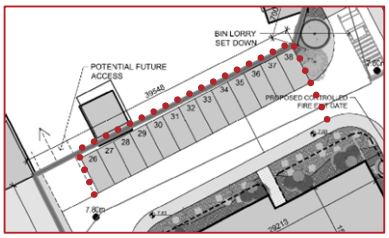
### Recommendation

Measures should be provided to support the safe movement of pedestrians between the proposed development and developments on the eastern side of Groody Road.

## 3.2 Absence of Footpath at Parking Spaces

*Location:* *Drawing no. PP-1.01*

*Summary:* *No footpath has been indicated around the parking spaces at the proposed development's northern boundary adjacent to Blocks A and B.*




Parking spaces 26 – 38 have been indicated at the development's northern boundary adjacent to Blocks A and B. No footpath has been indicated adjacent to these parking spaces. The lack of a footpath at this location may lead to vehicle occupants travelling in the verge, which may rut over time, resulting in unstable ground and ponding, and an increased risk of slips, trips and falls.

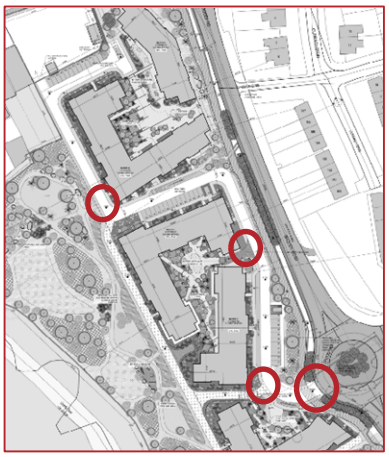
### Recommendation

Provide a paved footpath bounding these parking spaces and a pedestrian crossing to access the footpath on the opposite side of the road.

## 3.3 Provision of Crossings

*Location:* *Drawing no. PP-1.01*

*Summary:* *Details of pedestrian crossings within the development have not been indicated.*



Pedestrian crossings have not been indicated within the development particularly at the development access and internal junctions where it is likely that these will be required to cater for pedestrians crossing the internal road network.

A failure to provide formal pedestrian crossings, with dropped kerbs and tactile paving, could lead to pedestrians crossing the carriageway at locations where drivers may be less attentive to them and insufficiently prepared to react safely resulting in an increased risk of vehicle-pedestrian collisions.

In addition, the lack of dropped kerbs and tactile paving at locations where pedestrians are likely to cross the carriageway would lead to pedestrians having to mount/dismount full height kerbs where there is a risk of trips and falls, and further accessibility issues for the visually and mobility impaired.

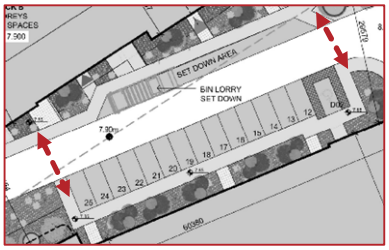
### Recommendation

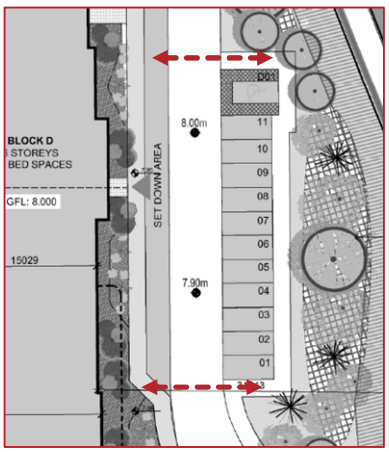
Pedestrian crossings, including dropped kerbs and tactile paving, should be provided at the development access and across side road junctions within the development.

## 3.4 Absence of Pedestrian Connectivity at Parking Spaces

*Location:* *Drawing no. PP-1.01*

*Summary:* *No pedestrian crossings have been indicated to cater for vehicle occupants travelling between their vehicle and the apartment blocks within the proposed development.*




Parking spaces have been indicated within the proposed development on the opposite side of the development access road to the main entrance to Blocks B and D. Formal pedestrian crossings have not been indicated adjacent to these parking spaces to accommodate vehicle occupants crossing between their vehicle and the apartment blocks. A failure to provide a formal pedestrian crossing, with dropped kerbs and tactile paving, at these locations could lead to pedestrians, particularly mobility impaired pedestrians, being unable to safely and independently enter the carriageway to cross to the opposite footpath.

This could result in slips, trips and falls as these pedestrians attempt to descend the kerb, or an increased risk in visually impaired pedestrians unintentionally entering the carriageway where they could be struck by vehicles.

### Recommendation

Formal pedestrian crossings, including dropped kerbs and tactile paving, should be provided at pedestrian desire lines between the proposed parking spaces and the opposite footpath adjacent the main apartment block entrances.

## 3.5 Swept Path Analysis

*Location:* *Drawing no. PP-1.01*

*Summary:* *It is unclear if the swept path of large vehicles, for example fire tenders and refuse trucks, will be safely accommodated within the development.*

A designated fire tender emergency route and multiple refuse truck set down areas have been indicated within the proposed development. It is unclear if large vehicles, including fire tenders and refuse trucks, will be able to safely travel along these routes and turn at the proposed turning heads. If sufficient space is not available, this could lead to large vehicles mounting the footpath when turning or undertaking multi-point turning manoeuvres where there is an increased risk of striking parked vehicles, items of roadside furniture or collisions with other road users.

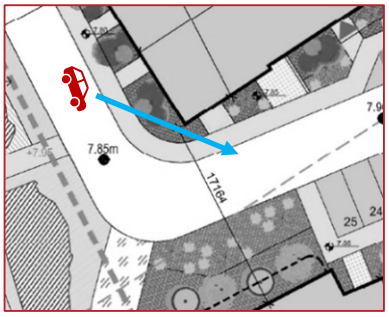
### Recommendation

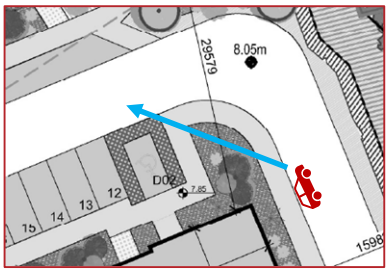
A swept path analysis should be undertaken to confirm that all vehicles, particularly fire tenders and refuse trucks, can safely navigate the necessary routes within the development's road network and complete safe turning manoeuvres at the turning heads indicated.

## 3.6 Restricted Forward Visibility at Bends

*Location:* *Drawing no. PP-1.01*

*Summary:* *Forward visibility of drivers within the proposed development may be restricted by proposed planting and building boundaries on the inside of horizontal curves.*




Horizontal curves have been indicated within the alignment of the development's internal access road between Blocks B and C. It is unclear if sufficient forward visibility will be available for drivers on the inside of these horizontal curves due to the trees and building boundaries located on the inside of the bend. This may lead to drivers being insufficiently aware of oncoming opposing traffic resulting in a risk of low-speed head on collisions.

### Recommendation

Sufficient forward visibility should be provided for drivers on approach to, and throughout, the horizontal curves.

## 3.7 Set-down Area Arrangement

*Location:* *Drawing no. PP-1.01*

*Summary:* *The set-down area at Block B is indicated on the offside relative to drivers entering the development which may lead to unsafe U-turn manoeuvres when exiting the set-down area.*

A set-down area has been indicated adjacent to Block B located on the offside relative to vehicles entering the development. A turning head has been indicated at the end of the access road at Block A however it is unlikely that drivers will continue to the turning head at Block A, turn around, and then enter the set-down area so that they are facing the correct direction to exit the development when leaving, and instead cross the carriageway to enter the set-down area.


This may lead to drivers performing U-turn manoeuvres on the access road at the set-down area when exiting the development which may result in an increased risk of collisions with other vehicles.

This problem would be exacerbated by the horizontal curves at either side of the set-down area which may restrict visibility for drivers on the access road towards U-turning vehicles.

### Recommendation

The set-down area should be relocated to the nearside of the access road.

## 3.8 Location of Bicycle Parking/Storage Area

*Location:* *Drawing no. PP-1.01*

*Summary:* *It is unclear where the bicycle parking/storage area(s) will be located within the proposed development, and if sufficient measures would be provided for cyclists to access these locations from the development's access road carriageway.*

The footpath within the proposed development does not appear to be wide enough to cater for both pedestrians and cyclists so it is assumed that cyclists will share the carriageway with vehicles when travelling within the development. The location of bicycle stores, or bicycle parking stands, has not been indicated on the drawing provided to the Audit Team, however, and it is unclear where cyclists would be travelling to/from in the development. It is, therefore, unclear if cyclists would be required to mount/dismount a full height kerb when accessing bicycle parking stands/storage areas from the carriageway. If so, this may result in a risk of loss of control and falls from their bicycle.

In addition, no information has been indicated regarding the width of the proposed footpaths within the development and whether or not cyclists would need to use any sections of the footpath to access bicycle parking stands/storage areas. A failure to provide sufficiently wide shared surfaces may result in an increased risk of pedestrian/cyclist collisions.

### Recommendation

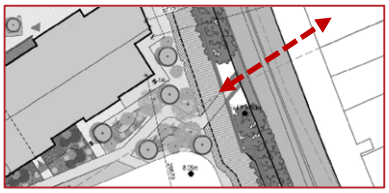
Routes to/from bicycle parking, both long-stay and short-stay, should be catered for with sufficiently wide shared surfaces, and dropped kerbs for cyclists to enter/exit the carriageway.

## 3.9 Pedestrian Desire Line to Curragh Birin

*Location:* *Drawing no. PP-1.01*

*Summary:* *The pedestrian desire line on Groody Road between the pedestrian access to the proposed development and the existing Curragh Birin residential development is not adequately catered for.*

A pedestrian access onto the western side of Groody Road from the proposed development has been indicated in close proximity to the pedestrian/cyclist route from the Curragh Birin residential development on the opposite side of Groody Road. There is likely to be a pedestrian desire line between this pedestrian/cyclist access to Curragh Birin and the proposed development.



The Audit Team acknowledge the existing Zebra crossing further north at Groody Roundabout, however this would be a 130m trip and unlikely to be undertaken. This may lead to unsafe crossing manoeuvres on Groody Road at this location, which was noted as extremely busy at the time of the site visit, resulting in an increased risk of vehicle-pedestrian collisions.

### Recommendation

A suitable pedestrian crossing of Groody Road should be provided at this location.

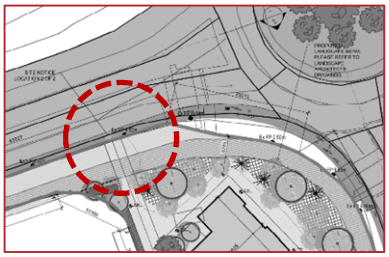
## 3.10 Level Difference

*Location:* *Drawing no. PP-1.01*

*Summary:* *The existing level difference between the site and the adjacent public footpath on the southern side of the R445 may result in a steep gradient on the proposed pedestrian path between the R445 and the development.*

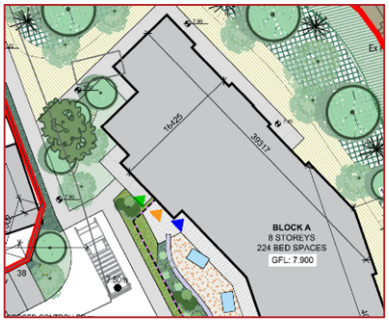
A pedestrian route from the proposed development to the footpath on the southern side of the R445 has been indicated at the development's northern boundary. At the time of the site visit, the Audit Team noted a level difference between the development site and the footpath on the R445. It is, therefore, unclear if the gradient of this access path would be suitable for all pedestrians, particularly the mobility impaired. If not, this may increase the risk of slips, trips and falls and personal injuries.

### Recommendation



The access path should have a smooth, non-slip surface and should provide a gentle gradient that can be safely traversed by all road users.

# 4 Observations




4.1 The Main Lobby Entrances have not been indicated at Blocks A and C. It is, therefore, unclear how pedestrians will access these blocks, i.e. from the development's internal footpath network or from routes between other apartment blocks. The Main Lobby Entrances should be clearly marked on the drawings and sufficient routes provided to these locations.

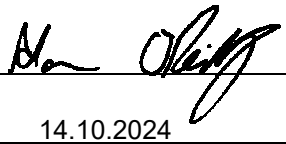
# 5 Audit Team Statement

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.

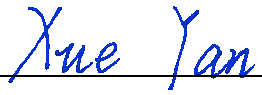
No one on the Road Safety Audit Team has been involved with the design of the scheme.

**ROAD SAFETY AUDIT TEAM LEADER**

Alan O'Reilly Signed: 

Dated: 14.10.2024

**ROAD SAFETY AUDIT TEAM MEMBER**

Xue Yan Signed: 

Dated: 14.10.2024

# 6 Road Safety Audit Feedback Form

## Road Safety Audit Feedback Form

**Scheme:** Student Development, Castletroy, Limerick

**Route No.:** R445 (Dublin Road) & L5173 (Groody Road)

**Audit Stage:** Stage 1 **Date Audit Completed:** 17th January 2025

| | 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. Only complete if recommended measure is not accepted** | **Alternative Measures or Reasons Accepted by Auditors (Yes/No)** |
| **3.1** | Yes | Yes | | |
| **3.2** | Yes | Yes | | |
| **3.3** | Yes | Yes | | |
| **3.4** | Yes | Yes | | |
| **3.5** | Yes | Yes | | |
| **3.6** | Yes | Yes | | |
| **3.7** | Yes | Yes | | |
| **3.8** | Yes | Yes | | |
| **3.9** | Yes | Yes | | |
| **3.10** | Yes | Yes | | |

**Signed:** Darryl O'Neill Designer **Date** 14.10.2024

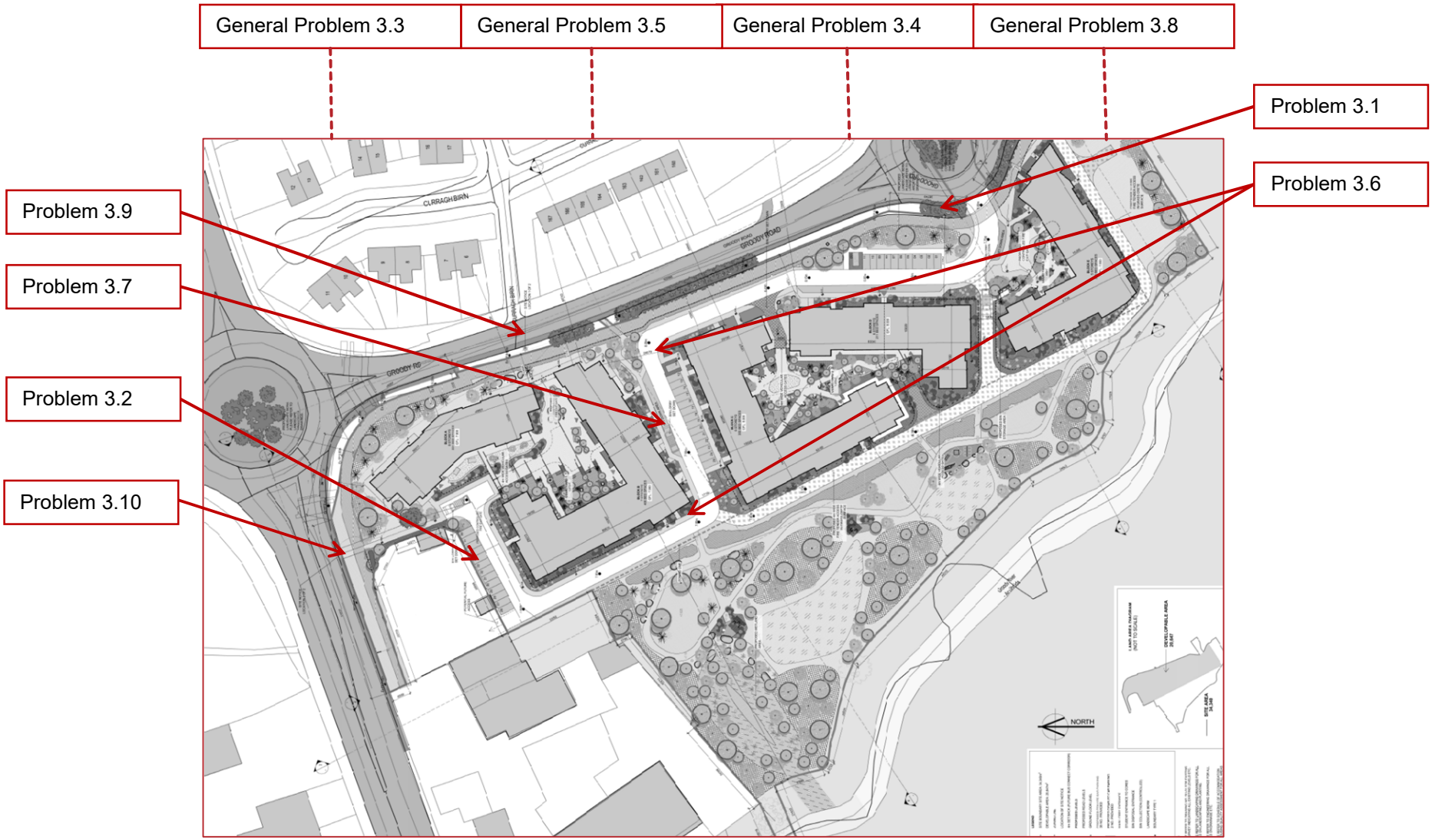
**Signed:** Audit Team Leader **Date** 14.10.2024

**Signed:** Employer **Date** 16.01.2025

# Appendix A - Documents Submitted to the Road Safety Audit Team

| DOCUMENT/DRAWING TITLE | DOCUMENT/DRAWING NO. | REVISION |
|---|---|---|
| Proposed Site Layout | PP-1.01 | N/A |

# Appendix B – Problem Locations


General Problem 3.3
General Problem 3.5
General Problem 3.4
General Problem 3.8
Problem 3.1
Problem 3.6
Problem 3.9
Problem 3.7
Problem 3.2
Problem 3.10
CURRAGHBIRN
GROODY ROAD
GROODY RD
NORTH