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**2024**

# **Stage 1/2 Road Safety Audit Caltragh LRD, Caltragh, Co. Sligo**

ENGINEERING A SUSTAINABLE FUTURE

**Stage 1/2 Road Safety Audit**  
**Caltragh LRD, Caltragh, Co. Sligo**

**Document Control Sheet**

<b>Client:</b>	John Walter Burke
<b>Document No:</b>	231304-ORS-XX-XX-RP-TR-13g-001

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# 1 Introduction

This report documents the findings of a Stage 1/2 Road Safety Audit (RSA) carried out with respect to Caltragh LRD in Caltragh, Co. Sligo.

The audit team conducted the site visit on Tuesday the 26<sup>th</sup> of September 2023. The audit was carried out in the offices of ORS on Wednesday the 27<sup>th</sup> of September 2023. Due to additional design changes a revised audit was carried out by ORS on Monday the 15<sup>th</sup> of April 2024.

The audit team comprised of the following people:

Audit Team Leader:

Adam Price                                      BEng (Hons), CEng, MIEI

Audit Team Member:

David McCormack:                              BEng (Hons), Dip Eng., CEng, MIEI

Audit Team Member:

Mark Gallagher                                      AEng, MIEI

During the site visit the weather was wet. The road surface was wet, 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 the Design Team.

- (1) 22110-XXXX-XXX-DR-RHA-AR-02002\_Proposed Site Layout Plan – Rev 07
- (2) 6736-JOD-XX-ZZ-DR-C-200-008 (Road Layout) – P04
- (3) 6736-JOD-XX-ZZ-DR-C-200-009- Road Sections & Details
- (4) 2210-XXXX-XXX-DR-RHA -LA-02701\_Landscape Masterplan\_Rev02.

Documents/Information not supplied:

- Speed Survey
- Traffic Count Data
- 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 the Design Team.

## 2 Description of the Proposed Development

The proposed scheme put forward by Rhatigan Architects on behalf of John Walter Burke will consist of a new residential development in Caltragh, Co. Sligo.

The scheme will involve the construction of a combination of semi-detached houses and apartments and associated site works including roadways, parking, and amenity areas.

The site is located south of Sligo town along Caltragh Road and access to the property will be made along Caltragh Road via a priority junction. The speed limit along this section of Caltragh Road is 50km/h. Please refer to the proposed layout at **Figure 2.1** below.



**Figure 2.1:** Site Layout (Source: Rhatigan Architects)



### 3 Problems Raised from the Road Safety Audit

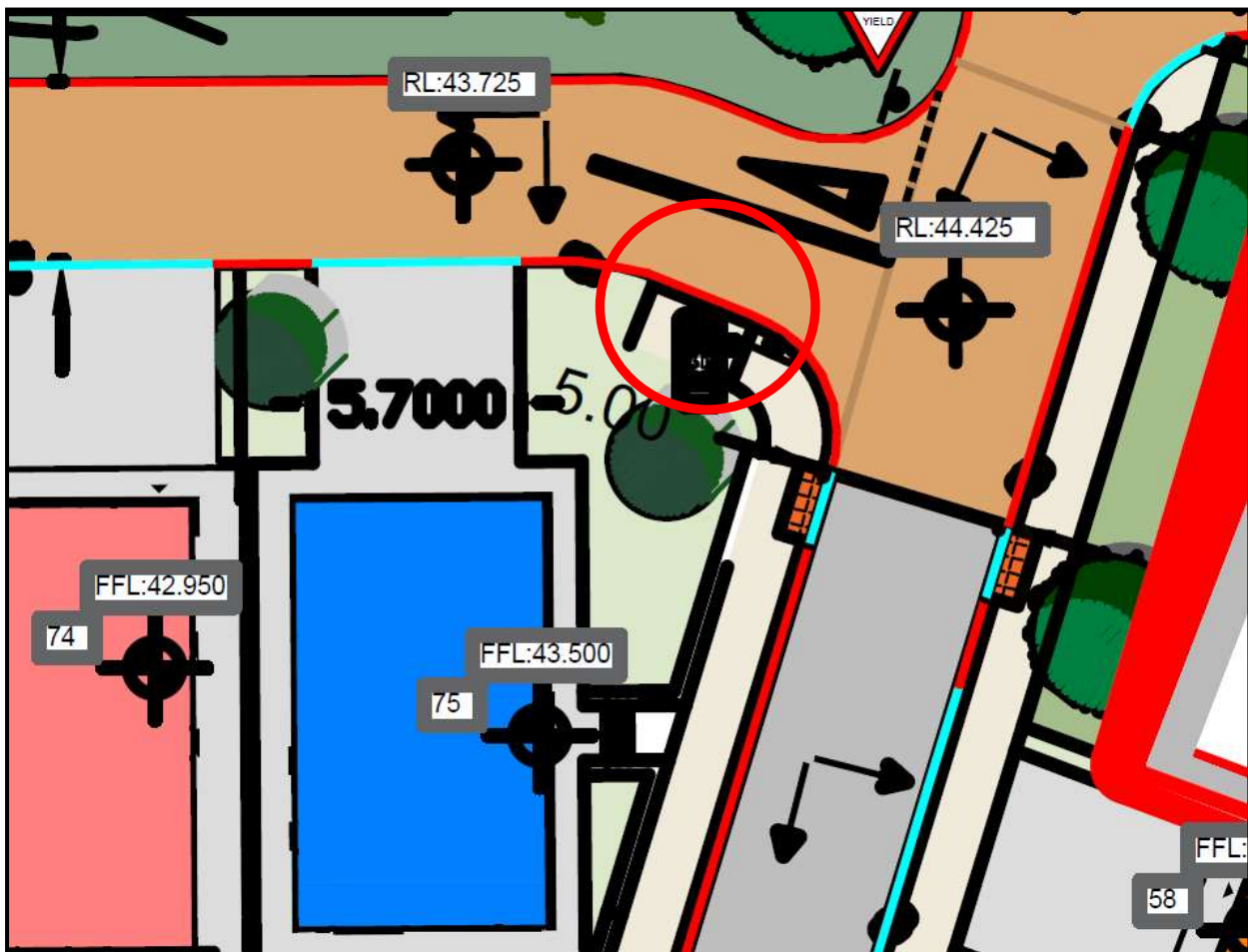
The following are problems and recommendations to address the safety issues associated with the proposal. The recommendations are proposed to the designer of the scheme to reduce any safety risks associated with it.

#### 3.1 Potential Problems Identified

##### Problem No.1: Footpath Termination at Homezone at Unit 75

##### Location: Tie in of Footpaths with Homezone Area

The audit team note that there is no dropped kerb or tactile at the identified location that will also users to safely negotiate between the footpath area and the homezone area. This could create a safety risk for visually impaired users and mobility impaired users in particular who may be unaware that they are entering into an area that is shared with vehicles.



##### Recommendation:

The design team should ensure that advanced warning such as tactile paving and dropped provided where footpaths tie into homezone areas.

## Problem No.2: Two Number Main Accesses in Close Proximity

### Location: Entrance to Development

The audit team note that it is intended to provide two main access into the development which is located in close proximity to one another. The audit team are concerned that an additional access point creates additional conflict points for all users and increases the likelihood of potential conflicts among all users.



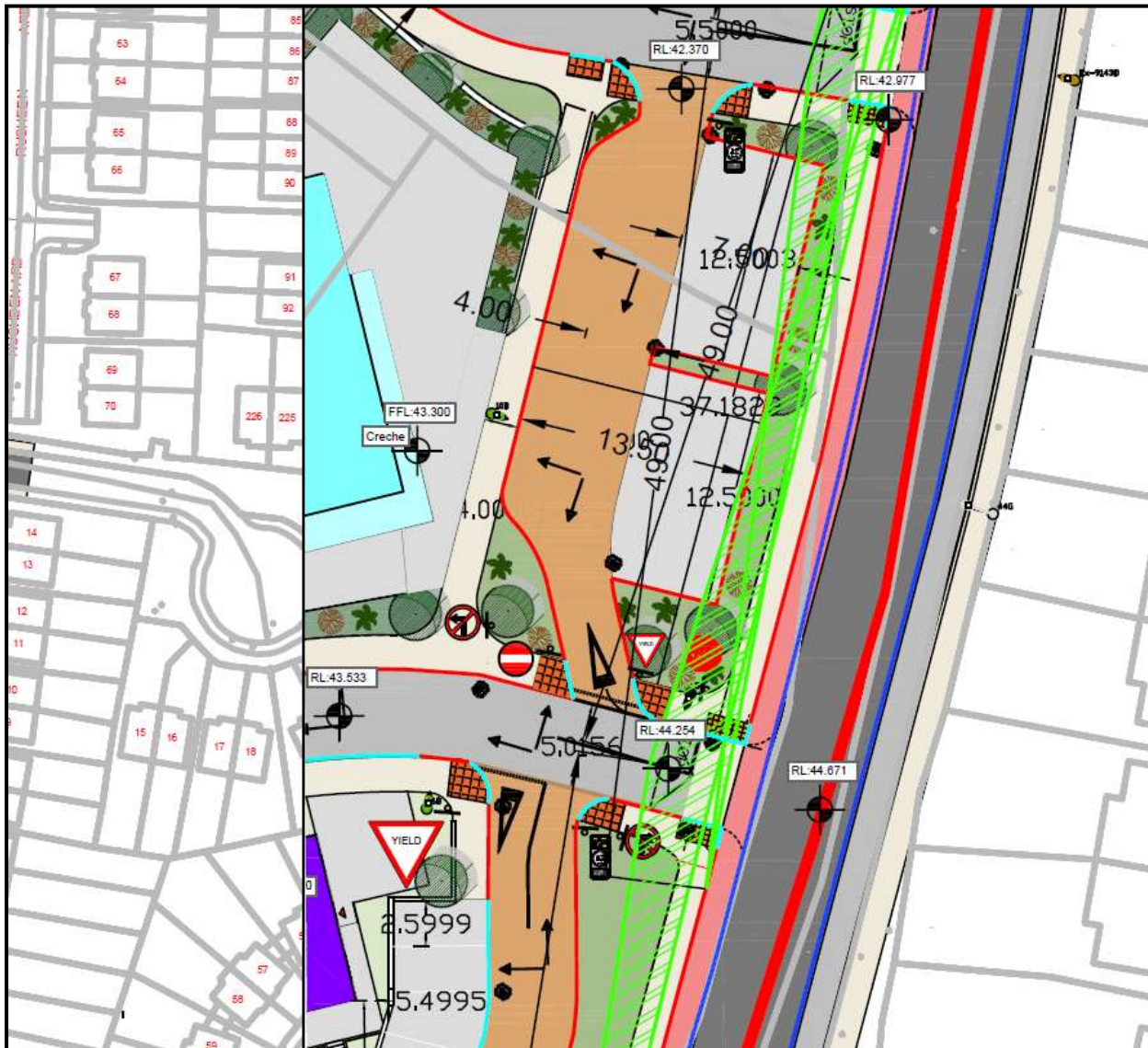
### Recommendation:

The design team should remove one of the access points to reduce the safety risk identified.

## Problem No.3: Sightlines

### Location: Main Access Junctions

The audit team note that visibility splays at the main access points are shown through landscaped areas which will restrict sightlines considerably. Inadequate sightlines and stopping sight distances could lead to sideswipe, side impact or rear end shunt type collisions resulting in injury to vehicle occupants.



### Recommendation:

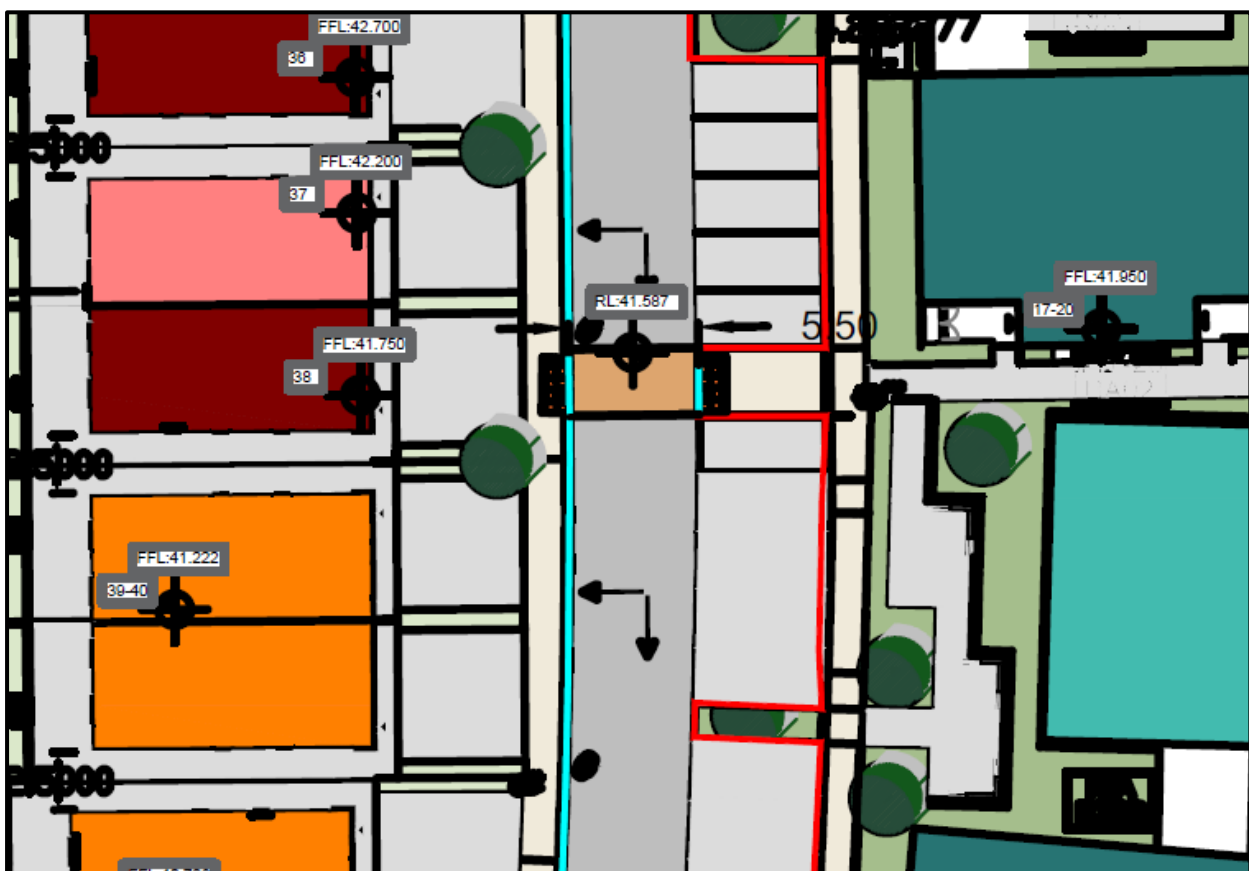
The design team should ensure that sightlines are not restricted by existing or proposed landscaping or street furniture to ensure full unrestricted visibility at the junctions in accordance with appropriate design standards.



## Problem No.4: Speed Control Measures

### Location: Throughout Scheme

The audit team note from the drawings provided, that there does not appear to be speed control measures proposed within the scheme, particularly along straight stretches of roadway. The audit team are concerned that the long section of straight roads within the scheme could encourage higher speeds which could put vulnerable users within the development at risk. Should a collision occur there is a high risk of injury to the vulnerable user. The audit team note that there is a pedestrian crossing within these long stretches which are at grade with the proposed carriageways which increases the risk further.



### Recommendations:

The design team should ensure that appropriate speed control measures are incorporated within the development to reduced vehicular speeds.

## Problem No.5: Pedestrian Permeability

### Location: Internal Site Layout

The audit team note from the drawings provided, that there are no details relating to the proposed footpath and kerb levels at entrances throughout the development. Inadequate use of footpath and kerb specifications may lead to undulating or uneven surfaces along the pedestrian paths, resulting in slips, trips and falls and injury for pedestrian with limited mobility.



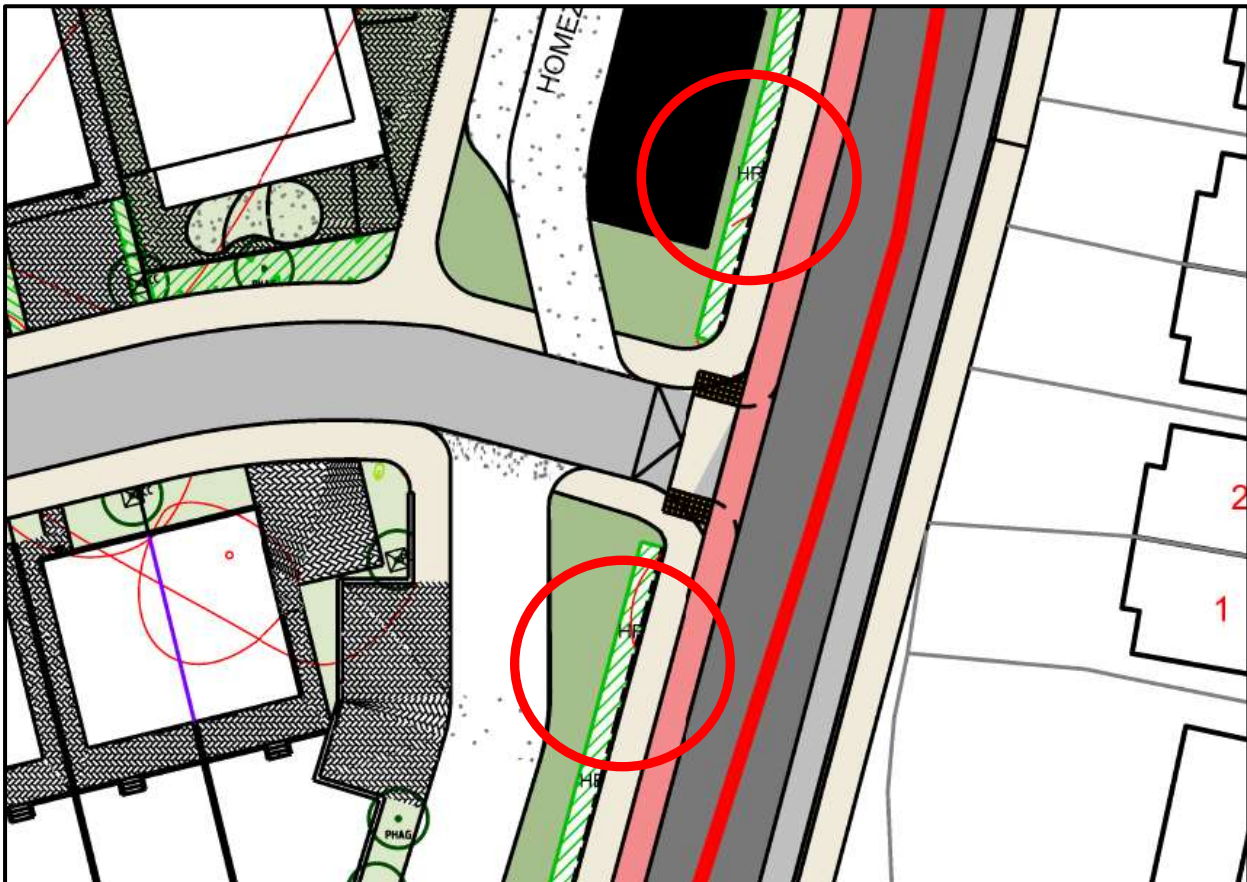
### Recommendation:

The design team should consider including the use of bevelled edge kerbs at vehicle accesses along the footpath to allow for level pedestrian paths throughout the site.

### Problem No.6: Landscape Details at Main Entrance and Internal Junctions

#### Location: Proposed Scheme

The audit team note that there is landscaping proposed either side of the main entrances and internal junctions which could restrict sightline visibility at junctions. Trees, high bushes, and shrubbery should be avoided in areas where visibility is to be maintained to ensure that drivers are clearly able to see approaching vehicles and pedestrians at junctions and designated pedestrian crossing locations. This could potentially lead to instances of vehicle-vehicle or pedestrian-vehicle collisions resulting in injury.



#### Recommendation:

The design team should ensure that any proposed landscaping does not impact on visibility of the internal roads and junctions or forward visibility at the proposed pedestrian crossings.



## **Problem No.7: Tie in with Caltragh Road Geometry**

### **Location: Site Access Points**

The audit team note that Caltragh Road currently does not have cycle lanes as detailed on the proposed plans and as such the audit team is unsure if the proposed development will tie into the existing arrangement on site or whether upgrades will be carried out to Caltragh Road in advance of opening the development up to traffic. The audit team would have concerns with the limited pedestrian connectivity should the proposed scheme tie into the existing arrangements on Caltragh Road.



### **Recommendation:**

The design team should ensure that the proposed development ties in with the proposed arrangements as detailed on the plans. If this is not possible the team should ensure that appropriate measures are provided to ensure appropriate pedestrian connectivity is provided to the existing arrangements on the opposite side of Caltragh Road.

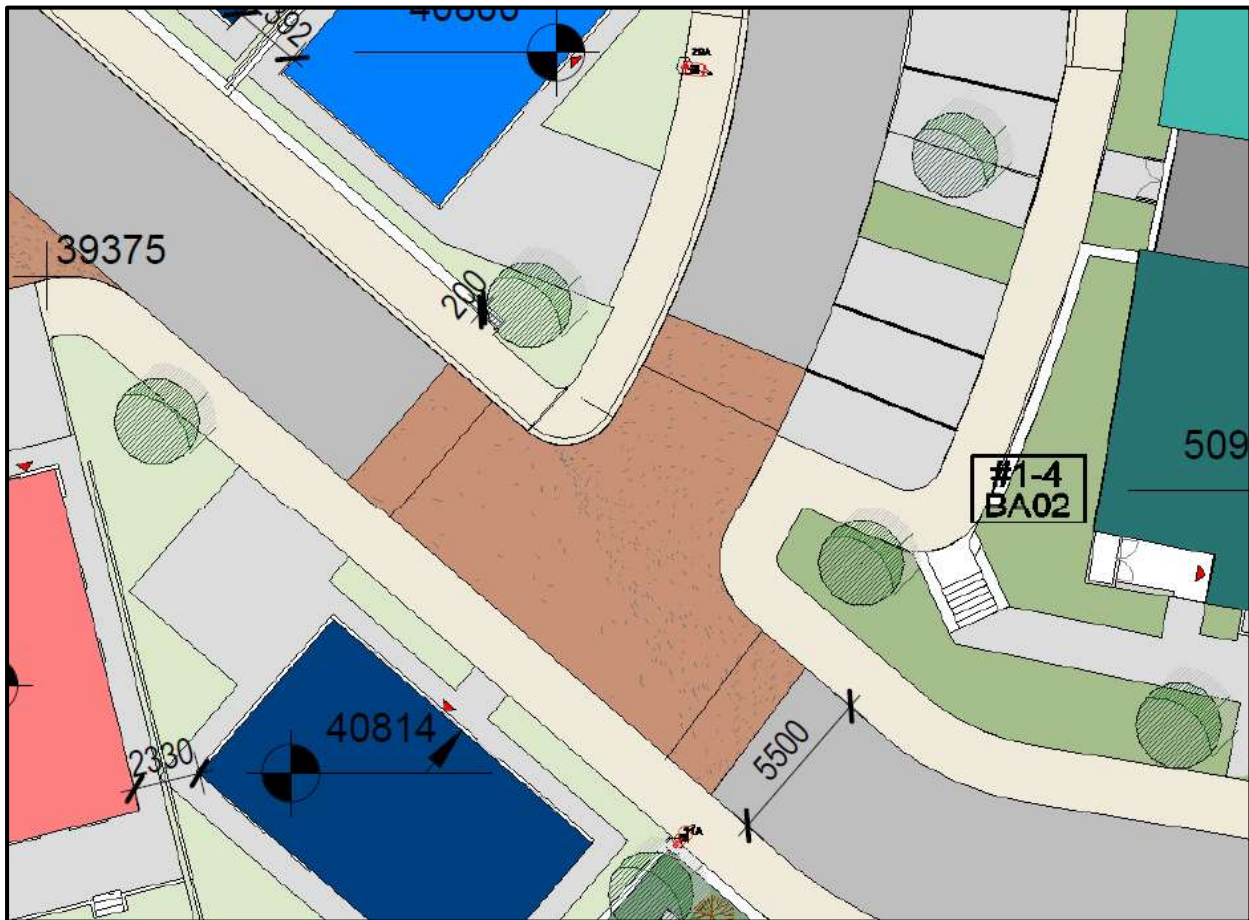


### 3.2 General Problems Identified

### Problem No.8: Raised Table Ramps Positioned Over Parking Spaces

**Location:** Throughout Development at Raise Table Locations

The audit team note that the ramps for the raised tables appear to straddle or cross over the entrances to parking bays throughout the scheme. This could result in potential trips and falls for users when walking to the rear of their vehicles. There is a particular risk at night when the ramps may be harder to notice.



**Recommendation:**

The design team should ensure that the proposed ramps for the raised tables do not interact with the proposed parling bays throughout the scheme.

## **Problem No.9: Homezone Signage**

### **Location: Throughout Scheme**

The audit team is concerned that there are no warning signs in place to indicate the presence of the homezone areas within the scheme. It is important to note that signage plays a crucial role in informing drivers of the presence of vulnerable road users, such as pedestrians and children. The lack of adequate signage in this case may result in conflicts of vehicles with vulnerable users.

### **Recommendation:**

The design team should ensure that appropriate signage is included in the plans to warn drivers of the presence of the homezone areas in accordance with relevant guidelines. The signage must be clearly indicated in the drawings and provide adequate details to avoid confusion or misinterpretation.

## **Problem No.10: Vehicle Swept Path Analysis**

### **Location: Proposed Scheme**

The audit team has observed that no vehicle swept path analysis has been conducted based on the provided drawings. To ensure the road layout is optimally designed for emergency and service vehicles, it is crucial to undertake a thorough swept path analysis using appropriate design vehicles. This analysis will confirm that the road configuration allows for safe turning movements without encroaching on pedestrian areas or mounting kerbs, thereby minimising potential conflicts between vehicles and pedestrians. Additionally, the swept path analysis should encompass all relevant vehicle turning movements, ensuring that vehicles can manoeuvre smoothly within the property.

### **Recommendation:**

The design team should analyse vehicle swept paths on the scheme with industry standard software to assess vehicle wheel paths during turning movements to confirm the suitability of the road and internal driveway layout for intended vehicle purposes.

## **Problem No.11: Drainage**

### **Location: Throughout Scheme**

The audit team note from the drawings provided, that there is no provision for drainage channels/gully positions for the scheme. Inadequate gully positioning may lead to issues of ponding in areas of the development which poses a risk of slips, trips or falls to vulnerable road users.

### **Recommendation:**

The design team should ensure that details and locations of all drainage gullies etc are provided for across the site and positioned strategically to avoid the risk of ponding across the site and in particular, at any proposed pedestrian crossing points or at any proposed ramps within the scheme.

## 4 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 safety of the scheme. The issues that we have identified have been noted in the report, together with suggestions for improvement, which we recommend should be studied for implementation.

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

ORS

Signed: 

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

**Audit Team Member:** David McCormack: BEng (Hons), Dip Eng., CEng, MIEI


ORS

Signed: 

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

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

ORS

Signed: 

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

## Appendix A – Inspected Documents

The audit team reviewed the following drawings and documents provided by the Design Team:

- (1) 22110-XXXX-XXX-DR-RHA-AR-02002\_Proposed Site Layout Plan – Rev 07
- (2) 6736-JOD-XX-ZZ-DR-C-200-008 (Road Layout) – P04
- (3) 6736-JOD-XX-ZZ-DR-C-200-009- Road Sections & Details
- (4) 2210-XXXX-XXX-DR-RHA -LA-02701\_Landscape Masterplan\_Rev02.



## Appendix B – Designer Response Form

### Road Safety Audit Feedback Form

Job: 231304 – Caltragh LRD, Caltragh, Co. Sligo

Stage of Audit: Stage 1/2

Date Audit Completed: 15/04/2024.

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	No	The two entrance proposal allows for a drop off area at the creche. The entrances have been relocated so that the distance from kerb to kerb is approx. 37.5m and lane to lane is approx. 40m.	Yes
P3	Yes	Yes		
P4	Yes	Yes		
P5	Yes	Yes		
P6	Yes	Yes		
P7	Yes	Yes		
P8	Yes	Yes		
P9	Yes	Yes		
P10	Yes	Yes		
P11	Yes	Yes		

Signed:  Designer

Date: 26/04/2024

Signed:  Audit Team Leader

Date: 29/04/2024

Signed: ..... Employer

Date: .....

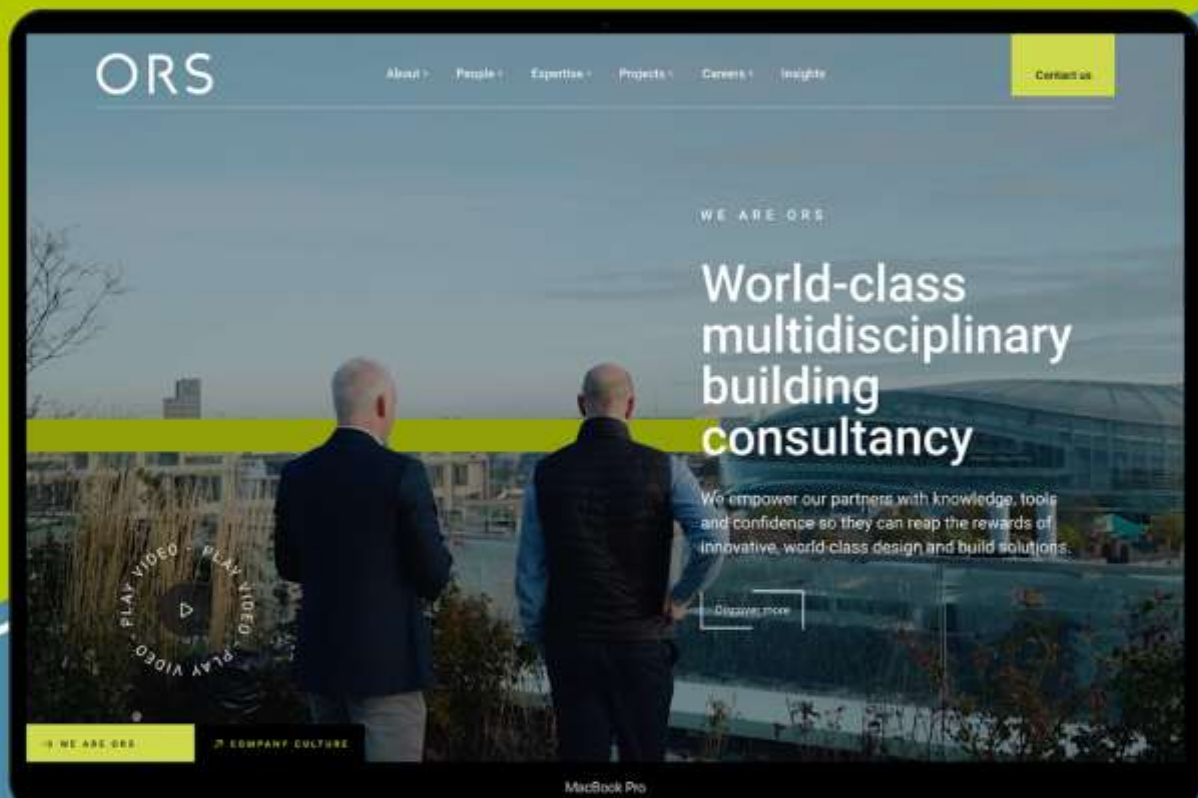
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