

Stage 1/2 Road Safety Audit Proposed Residential Development at Cullairbaun, Athenry, Co. Galway

Document Control Sheet

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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 a proposed residential development at Cullairbaun, Athenry, Co. Galway.

The audit team conducted the site visit on the Thursday the 13th of March 2025. The audit was carried out in the offices of ORS on the 24th of March 2025.

The audit team comprised of the following people:

Audit Team Leader:

Mark Gallagher AEng, MIEI

Audit Team Member

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

Audit Team Observer

John Igoe BEng (Hons), MEng

During the site visit the weather was clear and sunny. The road surface was dry, and the traffic levels were noted to be low across the audit period.

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

- (1) 24181-3000 Site Location Map T2
- (2) 24181-B-3020 Site Layout PL.2
- (3) 2428-SK-90-B Site Layout Plan

Documents/Information not supplied:

- Previous Road Safety Audits
- Collision Data
- Speed & Traffic Surveys
- Departures from Standards
- Visibility Splay Analysis.
- Drainage Layout
- Public Lighting Layout

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 development put forward by Galway County Council will consist of a new Social Housing development at Cullairbaun, Athenry, Co. Galway.

The site is currently in use as a green area and is located to the west of Athenry Village with access off Cullairbaun Estate Road. The speed limit in the vicinity of the access point is 30km/h.

Associated site development works including access road, footpaths, parking, landscaped public open space and street lighting.

Please refer to the Site Layout Plan in Figure 2.1 below.

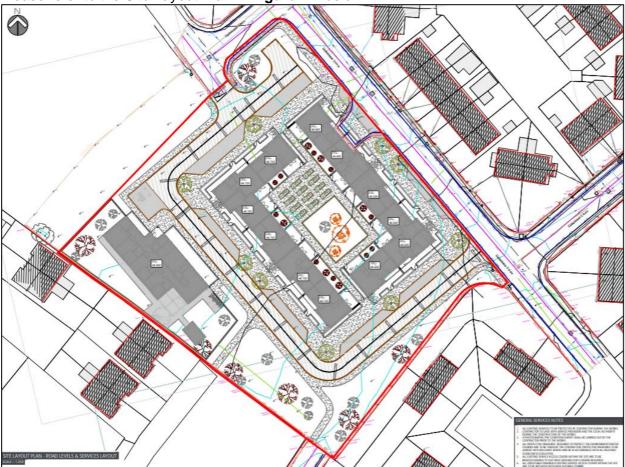


Figure 2.1: Site Layout Plan (Source: Galway County Council)



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 Collision History

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.

3.2 Potential Problems Identified

Problem No.01: Sightline Availability

Location: Proposed Development Entrances

The audit team note that there are no sightlines in the drawings provided to demonstrate that appropriate sightlines can be achieved when vehicles are exiting the development. The audit team is concerned that the appropriate sightlines cannot be achieved as boundary treatments and parked cars along the carriageway may obstruct visibility at the junctions. This could result in vehicles encroaching onto the main carriageway into the line of oncoming vehicles which could lead to sideswipe or side impact type collisions.



Recommendation:

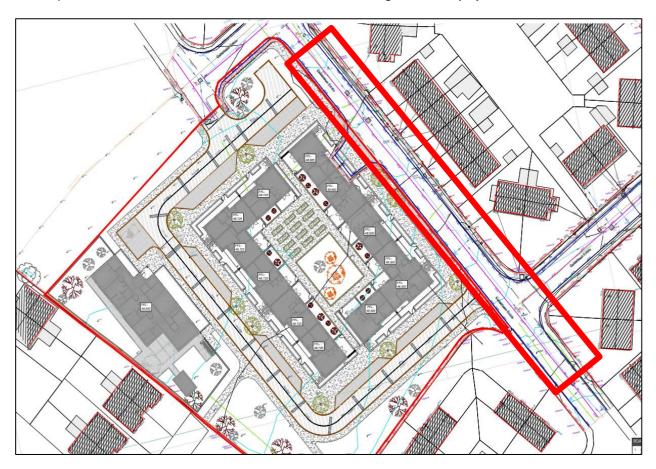
The design team should ensure that clear visibility is provided in both directions and that visibility envelopes are clear of any obstacles such as street furniture and boundary walls.



Problem No.02: Speed Control Measures

Location: Throughout the Scheme

The audit team note from the drawings provided, that there is a lack of speed control measures proposed within the scheme. The audit team are concerned that the layout as its currently presented 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.



Recommendations:

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

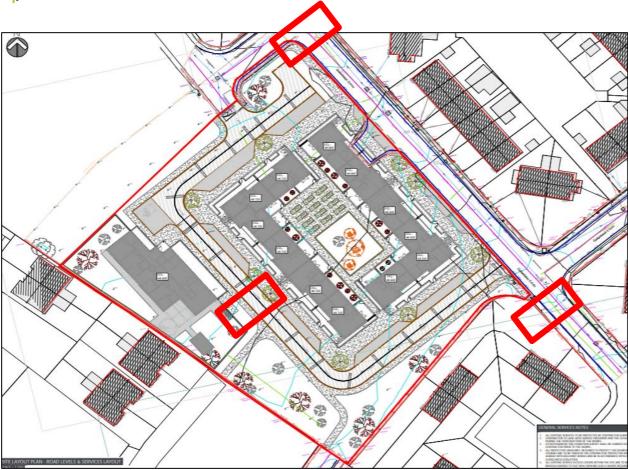


Problem No.03: Pedestrian Crossing and Desire Lines Location: Internal Site Layout

The audit team have concerns regarding the location of the proposed pedestrian crossings within the development. Pedestrians are likely to cross the main road at the locations identified, as it aligns with their immediate crossing desire line. Also, the absence of a dedicated pedestrian crossings at these locations may present challenges for mobility-impaired individuals, potentially impeding their movement within the site. Furthermore, there's a risk of pedestrians making unsafe crossings, which could result in conflicts with vehicles or cyclists using the main road.







Recommendation:

The design team should ensure that crossing points are provided along desire lines.



Problem No.04 Location of Uncontrolled Crossing Location: Location Identified

The audit team note from the drawings provided that the proposed uncontrolled crossing appears to be on the sloped section of the raised table. This position of the crossing leads to an uneven surface particularly for mobility impaired pedestrians which could result in slips, trips and falls at the crossing location which could lead to injury.



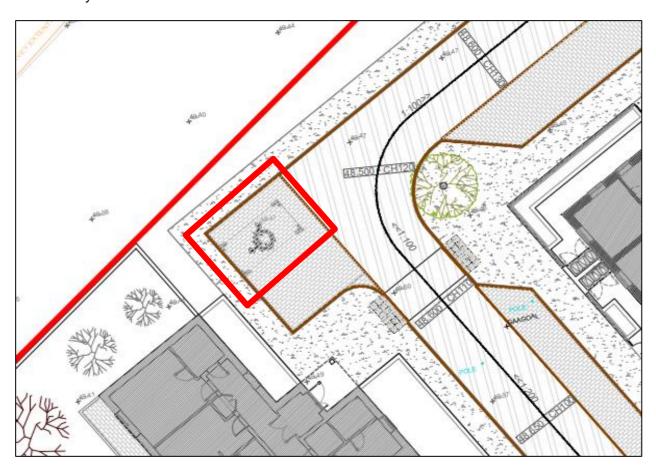
Recommendation:

The design team should provide the uncontrolled crossing at an appropriate location.



Problem No.05: Accessibility of Wheelchair Parking Space Location: Disabled Parking Space Identified

The audit team note from the drawings provided, that there is a wheelchair accessible parking space provided within development. It is not clear from the drawings provided as to how users of this space will access the footpath and may have to use the roadway to access the nearest dropped kerb. Dropped kerbs should be provided at disabled parking spaces to allow accessibility for users.



Recommendation:

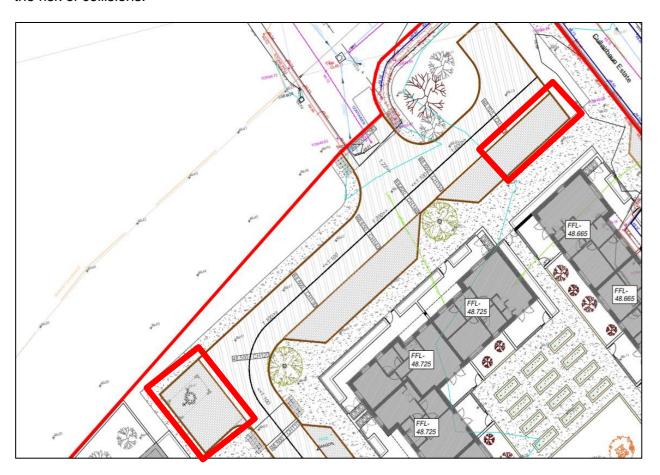
The design team should provide details on the proposed access from the wheelchair accessible parking space to the footpath allowing for adequate level landings behind the dropped kerbing.



Problem No.06: Restricted Car Parking Spaces

Location: Location Identified

The audit team observes from the provided drawings that the parking spaces have limited manoeuvring space behind the bays, which may restrict vehicles from executing reverse manoeuvres effectively and turning onto the road. This constraint could increase the risk of conflicts between vehicles and vulnerable road users and vehicles entering the development, as drivers may need to reverse over extended distances to exit the spaces, thereby elevating the risk of collisions.



Recommendation:

The design team should reassess the geometry of these parking spaces to address the identified safety risks and ensure that vehicles can safely manoeuvre in and out of the spaces.



Problem No.07: Corner Radii within the Scheme

Location: Locations Identified

The audit team note from the drawings provided that the corner radii appear to be excessive which could increase the potential for higher vehicle speeds within the development. The audit team has concerns, that vehicles would not be encouraged to slow down and could result in collisions with vulnerable road users at the uncontrolled crossings.



Recommendation:

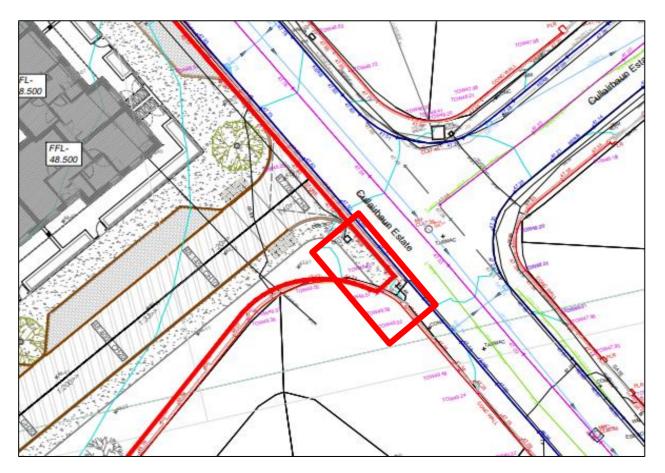
The design team should ensure that the corner radii is appropriate for the design speed to slow vehicles down.



Problem No.08: Tie-in to Existing Footpath

Location: Site Entrance and Exit

The audit team note from the drawings provided that the existing footpath is narrower than the proposed. It is not clear how the existing and proposed footpaths are to tie in with each other. Lack of an appropriate tie-in to the existing footpath could lead to pedestrian confusion or trip and falls.



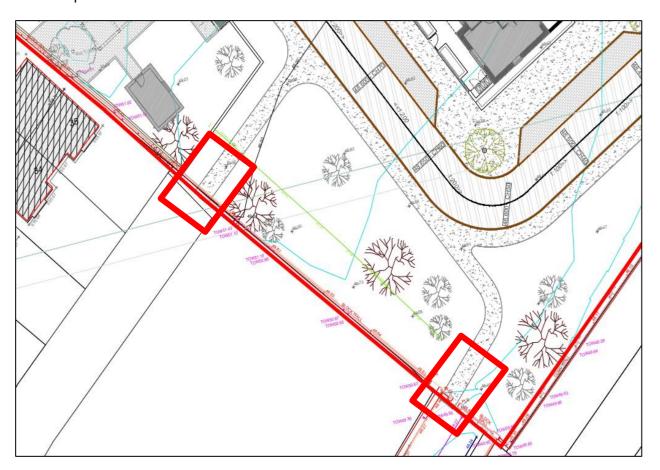
Recommendation:

The design team should provide provision for appropriate tie-in to the existing footpaths.



Problem No.09: Tie-in for New Footpath Location: South of the Proposed Development

The audit team note from the drawings that the proposed footpaths terminate at the southern end of the site, however there is no existing footpath at these locations to tie into. Lack of tie-in to an existing footpath could lead to pedestrian confusion, who may enter the roadway to cross at a location without suitable pedestrian facilities. This has the potential to cause collisions between pedestrians and vehicles.



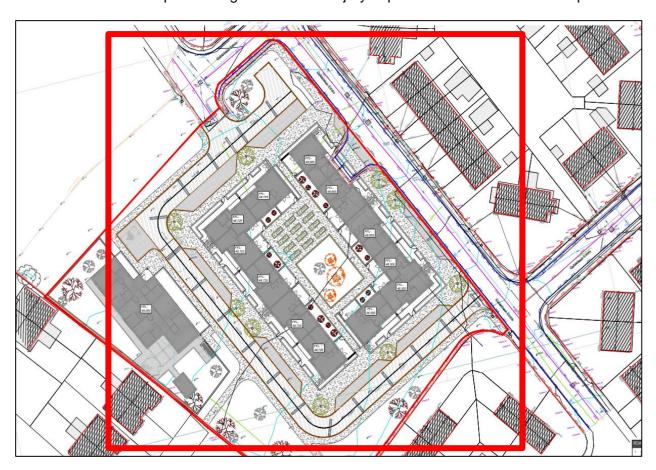
Recommendation:

The design team should ensure that the proposed footpaths tie in with existing pedestrian infrastructure at these locations.



Problem No.10: Landscaping and Boundary Treatment Location: Boundary of Scheme

The audit team note from the drawings provided, that there are parking spaces along the sides of the proposed development. If a vehicle must reverse out of these spaces and boundary treatments and landscaping if positioned incorrectly could hinder visibility. There could potentially be an increase in the number of collisions with pedestrians and/or side impact type vehicle collisions. This poses a significant risk of injury to pedestrians and vehicle occupants.



Recommendation:

The design team should ensure that boundary treatments and landscaping do not hinder visibility for vehicles exiting these parking spaces. The design team should also ensure that landscaping does not restrict sightline availability at crossing points, junctions, and forward visibility for vehicles.



3.3 General Problems Identified

Problem No.11: Signage and Road Markings

Location: Throughout Scheme

The audit team noted that there is limited home zone signage. Signage and road markings aid in, informing road users of the direction of travel and the presence of vulnerable road users and ramps. The lack of adequate signage and road markings in this case may result in conflicts of vehicles with vulnerable users and vehicles with other vehicles.

Recommendation:

The design team should ensure that the appropriate signage and road markings are provided.

Problem No.12: Vehicle Swept Path Analysis

Location: Throughout 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.13: Public Lighting Location: Throughout Scheme

The audit team note from the drawings provided that no public lighting was detailed for the development. Areas in low light conditions may result in slips, trips and falls on pedestrian paths. Drivers may not be able to see pedestrians in the internal road network and at pedestrian crossings which has the potential to lead to pedestrian – vehicle collisions resulting in, injuries to pedestrians.

Recommendation:

The design team should ensure that details and locations of all public lighting columns are provided for in the development and that the positioning does not cause any obstruction or hazard to vulnerable road users and that lighting is distributed uniformly throughout the development.



Problem No.14: Lack of Dimensions

Location: Proposed Scheme

The audit team note from the drawings provided, that there is a lack of dimensions on the drawings. Roadway widths, corner radii, footpath widths are not detailed on the drawings. Inadequate infrastructure geometry may create an increased risk of potential conflicts for both vulnerable road users and motorists.

Recommendation:

The design team should ensure that adequate roadway widths, corner radii, footpath widths are detailed on the drawings.

Problem No.15: 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 at any proposed pedestrian crossing points of 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: Mark Gallagher, AEng MIEI

ORS

Signed: Hart Callagher

Date: 28th March 2025

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

ORS

Signed:

Date: 28th March 2025

Audit Team Observer: John Igoe BEng (Hons), MEng

ORS

Date: 28th March 2025



Appendix A – Inspected Documents

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

- (1) 24181-3000 Site Location Map T2
- (2) 24181-B-3020 Site Layout PL.2
- (3) 2428-SK-90-B Site Layout Plan



Appendix B – Designer Response Form

Job: 242462 - Proposed Residential Development Cullairbaun, Athenry, Co. Galway

Stage of Audit: Stage 1/2

Date Audit Completed: 24th March 2025

Problem Reference in Safety Audit Report	To Be Comp	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		
P3	Yes	Yes		
P4	Yes	Yes		
P5	No	No	Flush kerb throughout site	
P6	Yes	No, Partially	Space to Northeast eliminated. Auto track completed on disability space to Southwest.	
P7	Yes	Yes		
P8	Yes	Yes		
P9	Yes	Yes		
P10	Yes	Yes		
P11	Yes	Yes		
P12	Yes	Yes		
P13	Yes	Yes		
P14	Yes	Yes		
P15	Yes	Yes		

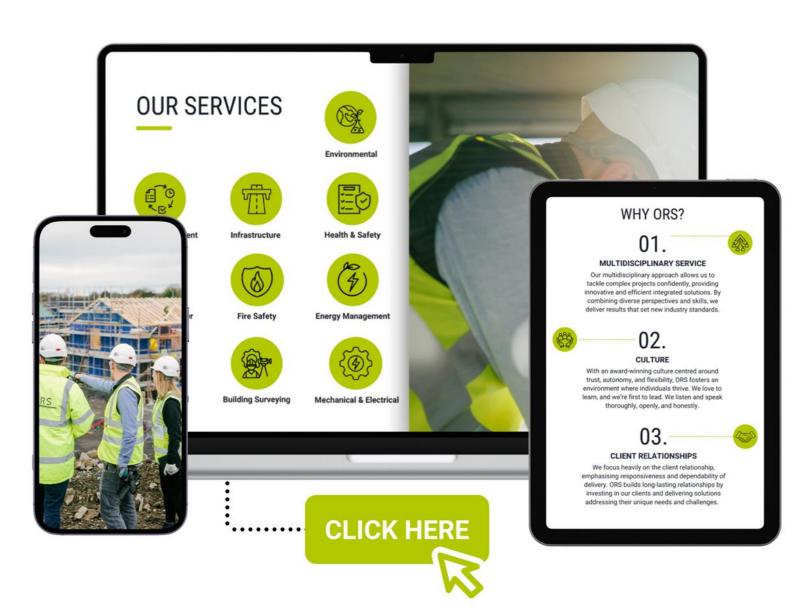
Signed: Connor Daly	.Designer	Date: 01.04.2025
Signed: Hach Callagher	.Audit Team Leader	Date: 08th April 2025
Signed:	Employer	Date:



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