

# Stage 1 Road Safety Audit

Proposed Housing Development at Robbers Lane, Maugheraboy, Sligo

On behalf of Sligo County Council

Prepared By:

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August 2021

Civil Structural Traffic



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## **Document History**

Revision		RO	RO	R1			
Purpose of Issue:	P=Preliminary PG=Progress C=Comment I=Information PL=Planning T=Tender CN=Construction	Р	PL	PL			
Date:		14	23	24			
		08	08	08			
		21	21	21			
Originator:		SS	SS	SS			
Checked By:		PJG	PJG	PJG			
Approved By:		SS	SS	SS			
CST Group 2021							

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## 1. Introduction

- 1.1. This report describes a Stage 1 Road Safety Audit carried out on behalf of Sligo County Council on a proposed housing development, access road and existing road junction upgrade at Robbers Lane (L-94032-0)/Church Hill (L-9403-0) /Treacy Avenue (L-94034-0) at the Post Office, Maugheraboy, Sligo.
- 1.2. The audit was carried out between 12<sup>th</sup> and 24<sup>th</sup> August 2021.
- 1.3. The audit team were as follows:

#### Team Leader:

Stuart Summerfield, HNC (Civil) FCIHT FSoRSA Certificate of Competency in Road Safety Audits (SoRSA, 2015) TII Auditor Ref. SS73290

#### Team Member:

PJ Gallagher. BEng M.Inst.A.E.A. MITAI TII Auditor Ref. PG3425716

- 1.4. The audit comprised an examination of the drawings relating to the scheme supplied by the design office. A site visit was carried out by both Audit Team members together on 13<sup>th</sup> August 2021 between the hours of 10:00-11:00. Weather conditions during the inspection were raining and the road surface was wet. Photographs were taken during the inspection.
- 1.5. This Stage 1 audit has been carried out in accordance with the relevant sections of the Transport Infrastructure Ireland (TII) Publication (Standard) GE-STY-01024 (Dec 2017) 'Road Safety Audit'. The audit team has 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 design to any other criteria.
- 1.6. Appendix A describes the documents examined by the Audit Team.
- 1.7. All of the problems described in this report are considered by the audit team to require action in order to improve the safety of the scheme and minimise accident occurrence.



## 2. Items Resulting from Previous Stage 1 Audit

No previous road safety audit has been offered for reference.

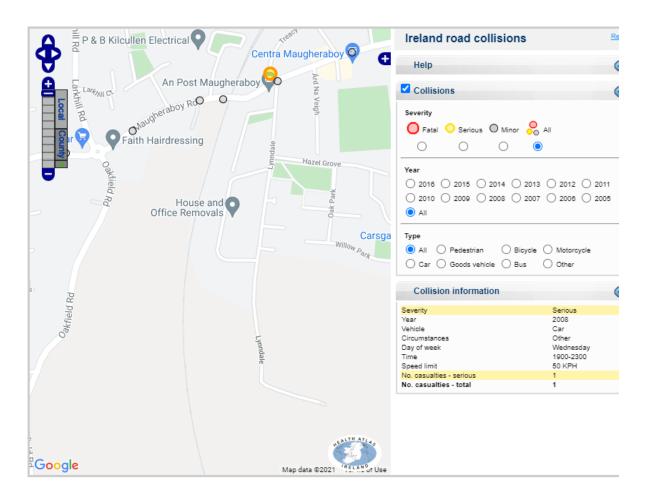


## 3. Items Resulting from This Stage 1 Audit

### 3.1 Collision Data

Collision data has not been supplied with this scheme.

Road Collision Data available on the Road Safety Authority Database, within the period 2005 to 2016, recorded two collisions in the immediate vicinity of the proposed site. Both collisions occurred at the junction of Robbers Lane and Church Hill. One collision is listed as resulting in a serious injury.





### **3.2 General Problems / Problems at Multiple Locations**

#### 3.2.1 Development Road Alignment

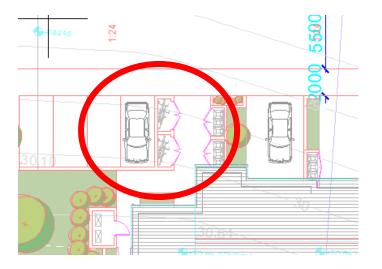
**Problem:** The development consists of 2 straight streets. The North Cul-de-sac is 120m long and 5.5m wide, the South Cul-de-sac is 120m long and is also 5.5m wide. Roads of this character have poor history of high vehicle speeds.

**Hazard:** Children playing in the road or pedestrians crossing the road are at risk of impact from high-speed vehicles.

**Recommendation:** Amend the layout, ideally by changes to the horizonal alignment to encourage slow vehicle speeds.

#### 3.2.2 Bin Stores

**Problem:** The bin/bicycle stores are directly adjacent to the car parking bays. This occurs in 4 locations on the south cul de sac. Drivers' visibility of approaching pedestrians on the footpath is likely to be restricted by the walls of the bin store.



Hazard: Vehicle/pedestrian impacts may result.

**Recommendation:** Ensure drivers have adequate visibility of pedestrians on the footpath.

#### 3.2.3 Pedestrian Railing at Post Office

**Problem:** The proposals include for replacement of the existing pedestrian railing at the post office with "Visirail" railing.

**Hazard:** The "Visirail" system consists of series of angled vertical bars that generally permit drivers who are travelling parallel to a footpath to see pedestrians on the footpath. The problem at this



junction is Lyndale exiting drivers' inability to see vehicles approaching from their left on Maugheraboy Road/Church Hill. There is risk that the change of railing at this location may make no improvement or possibly worsen the visibility issue at this location.

**Recommendation:** Ensure the chosen railing permits see through to the Maugheraboy Road/Church Hill traffic.

### 3.3 **Problems at Specific Locations**

#### 3.3.1 Pedestrians Desire Lines – South Cul-de-sac

**Problem:** There is no footpath linkage for pedestrians to travel from the north to the south of the southern cul-de-sac other than the far eastern end.

**Hazard:** Pedestrians wishing to cross this road are likely to walk in between the parked vehicles and cross the road. Risk of vehicular impact results.

**Recommendation:** Provide a footpath to the perimeter of the turning head.





#### 3.3.2 Parallel Car Parking Spaces – South-eastern corner

**Problem:** Two parallel car parking spaces are indicated in the south-east corner of the side. It is not clear how entry/exit to these spaces is intended to be achieved as there is no space provided for the driver to turn the vehicle.

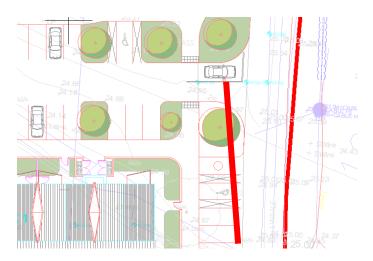


**Hazard:** There is risk that the driver will reverse up to the southern cul-de-sac in order to undertake a turn in the moth of this junction. Impact with vehicles exiting the cul-de-sac may occur.

Recommendation: Amend these spaces to be perpendicular.

#### 3.3.3 North Cul-de-sac : Junction Visibility

**Problem:** There are a number of car parking bays to the south of the northern cul-de-sac junction. High sided vehicles parked in these bays may restrict visibility for drivers attempting to exit the cul-de-sac.



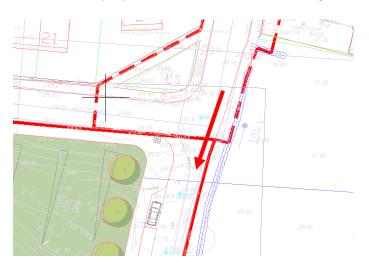
Hazard: Drivers may errantly exit the cul-de-sac into the path of oncoming vehicles.

Recommendation: Ensure adequate junction visibility is provided.



#### 3.3.4 Connection with Existing Estate Road – Entering Traffic

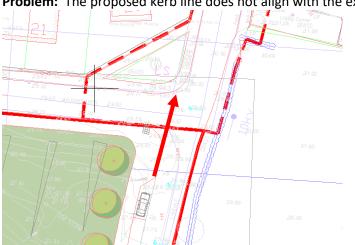
**Problem:** The proposed kerb line deviates to the right on entering the development.



**Hazard:** Users entering the development may cross into the opposing traffic lane and impact with exiting vehicles.

**Recommendation:** Amend the road layout to ensure a smooth driving line without any sharp changes in alignment.

#### 3.3.5 Connection with Existing Estate Road – Exiting Traffic



**Problem:** The proposed kerb line does not align with the existing estate road kerb line.

Hazard: Users exiting the new development may strike the kerb at the far side of the junction.

**Recommendation:** Amend the road layout to ensure a smooth driving line.



#### 3.3.6 North cul-de-sac - Pedestrian Visibility

**Problem:** There is proposed tree planting in the area of the informal pedestrian crossing at the junction of the northern cul-de-sac. The tree may restrict visibility between the car driver and pedestrian.



Hazard: The pedestrian may commence crossing the road and be struck by a right turning vehicle.

Recommendation: Omit all tall planting in the visibility zone.

#### 3.3.7 Northern cul-de-sac - Road Hump

**Problem:** There is a ramp/ road hump located on the northern cul-de-sac. The length of the flat element of the hump appears to be circa 2m. There is risk that low vehicles may ground on the ramp.



**Hazard:** Mechanical damage sustained here may result in mechanical failure / loss of vehicle control elsewhere on the high-speed network.

Recommendation: Widen the ramp to ensure the ramp does not result in vehicle grounding.



#### 3.3.8 Table-Top Junction – Tracey Avenue Arm and Robber Lane

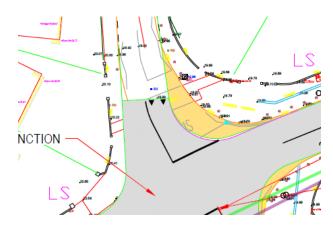
**Problem:** The proposed ramp up to the table-top is located at the same location as the zebra crossing.

**Hazard:** Drivers' attention may be drawn to the ramp and diverted from pedestrians commencing a crossing here.

**Recommendation:** Relocate the ramp, ideally outside the zone of zig-zag markings.

#### 3.3.9 Table-Top Junction – Church Hill - Eastern Arm

**Problem:** The proposed ramp up to the table-top is located immediately adjacent to the signalised crossing.

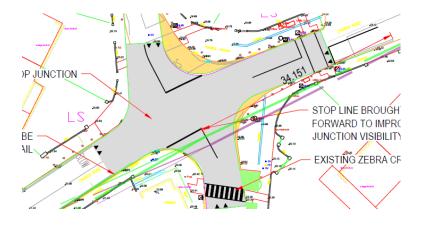


**Hazard:** Drivers' attention may be drawn to the ramp and diverted from pedestrians commencing a crossing here. Additionally sight impaired pedestrians may wander onto the ramp and stumble/fall.

**Recommendation:** Relocate the ramp further in advance of the crossing. It is recommended this is a minimum of 1 car length.

#### 3.3.10 Church Hill Road Centreline

Problem: The proposals include for removal of the Church Hill centreline.



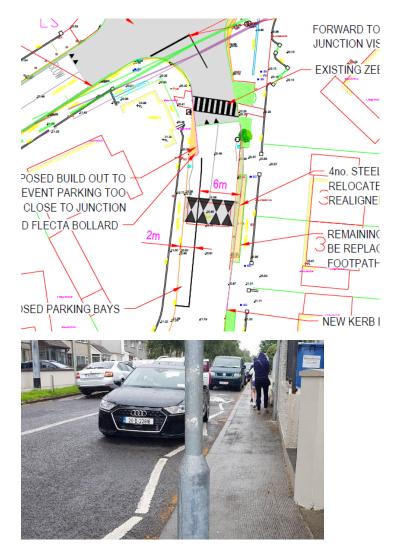


**Hazard:** Drivers intending to turn right into Robbers Lane may position their vehicle too far to the right for opposing traffic to pass. The opposing user may suddenly slow/stop and be subject to rear end shunts.

**Recommendation:** Provide a road centreline.

#### 3.3.11 Robber's Lane Car Parking Bay

**Problem:** The proposals introduce a formal car parking bay to the western side of Robbers Lane. This bay is in close proximity to the zebra crossing.



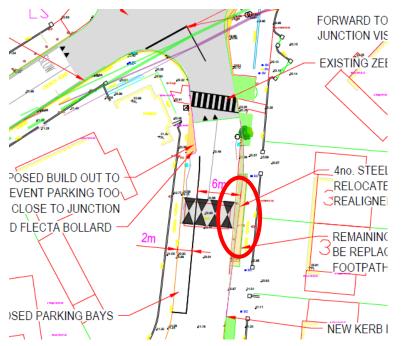
**Hazard:** High sided vehicles parked in this bay are likely to restrict visibility to/from pedestrians on the western side of the zebra crossing. Additionally, the car parking bays overlap with the zone for zig-zag road markings.

**Recommendation:** Omit car parking that may interfere with intervisibility to/from pedestrians. This can be assumed to be the zone of zig-zag markings.



#### 3.3.12 Robbers Lane Road Hump

**Problem:** The road in the area of the existing road hump is proposed to be widened. There are no proposals to extend the road hump to abut the revised kerb.

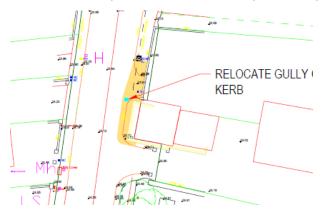


**Hazard:** Two-wheeled vehicles may attempt to avoid the road hump by travelling in the area of widened road. These users may errantly strike either the edge of the road hump or the kerb and lose vehicle control.

**Recommendation:** Extend the road hump to meet with the revised kerb.

### 3.3.13 Robbers Lane – Footpath Build Out – Taper

**Problem:** The taper to the widened footpath is very short.



Hazard: Users may impact with the kerb and lose vehicular control.

**Recommendation:** Extend the "taper" to the build out to provide a smooth driving line.



#### 3.3.14 Robbers Lane – Footpath Build Out – Driveway Crossing

**Problem:** The provision of a footpath at this location is likely to encourage greater use of the footpath on this side of the road. The existing footpath is terminated for the cottage driveway. No dropped kerb is provided on the footpath to assist mobility impaired users to cross this driveway.



Hazard: Pedestrians may trip/stumble due to the high kerb.

**Recommendation:** Continue the new footpath across the unused driveway complete with dropped kerbs to allow access to unoccupied dwelling.



## 4. Audit Team Statement

We certify that we have examined the drawings and other information listed in Appendix A. 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 problems that we have identified have been noted in the report, together with suggestions for improvement which we recommend should be studied for implementation. No one in the audit team has been involved with the scheme design as shown in Appendix A.

Signed ..... Stuart Summerfield

Audit Team Leader

Date

24<sup>th</sup> August 2021

Signed .

PJ Gallagher Audit Team Member

Date .24th August 2021



# Appendix A List of Documents Examined

DOCUMENT REF.	DOCUMENT NAME:	RECEIVED FROM:	DATE:
ST2 - 004	Site Layout Plan	Sligo County Council	06/08/2021



Appendix B RSA Feedback Form

		nent of 62 no. residential units	(A. 15. A. 174	
Audit Stage:Stage 1	Re	oute No: N/A Date of	f Audit: August 21	
To be Completed b	y Designe			To be Completed by Audit Team Leader
Paragraph No. in Safety Audit Report	Problem accepted (yes/no)	Recommended measure 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)
3.2.1 Development Road Alignment	YES	YES Tabletops have been added to the north and south cul-de-sac junctions with Robbers Lane and a traffic calming ramp will be added halfway along the southern cul-de-sac at a pedestrian crossing point.		
3.2.2 Bin Stores	YES	YES Design to be adjusted at detail design and provided at Construction Stage to ensure adequate visibility as recommended		
3.2.3 Pedestrian Railing at Post Office	YES	YES: to be included in tender drgs and provided: Construction Stage		
3.3.1 Pedestrian Desire line Southern cul de sac	YES	NO	NB A new road crossing has been included the part 8 Planning proposals	YES
3.3.2 Parallel Parking at South Eastern Corner	YES	NO	NB These spaces have been omitted from the part 8 Planning proposals	YES
3.3.3. Junction Visibility Northern Cul-De-Sac	YES	YES Parking layout has been adjusted to allow sight lines		
3.3.4 Connection existing estate road	YES	YES Footpath to be amended recommended		
3.3.5 Connection existing estate road	YES	YES Footpath to be amended recommended		
3.3.6 North Cul de sac Pedestrian Visibility	YES	YES Planting has been omitted as recommended		

Audit Stage:Stage 1		ment of 62 no. reside oute No: N/A		Audit: August 21	
num stugenstuge 1		ate no. npr	Dute of	Addit: Adjust 21	
3.3.7 Northern Cul De Sac Road Hump	YES	NO		The maximum height of the ramp will be 100mm with sufficient gradients on the approaches to prevent grounding.	YES
To be Completed b	y Designe				To be Completed by Audit Team Leader
Paragraph No. in Safety Audit Report	Problem accepted (yes/no)	Recommended meas (yes/no)	ure accepted	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)
3.3.8 Table Top Junction Robbers Lane and Church Hill	YES	YES Ramp has been rele recommended, out zig zag markings			
3.3.9 Table Top junction Church Road, Maugherboy	YES	YES Ramp has been rele recommended	ocated as		
3.3.10 Maugherboy Rd Centreline	YES	YES Road Centre line ha included as recomr			
3.3.11 Robbers Lane Parking bay	YES	YES Parking bays have I as recommended	been omitted		
3.3.12 Robbers lane Hump	YES	YES Road hump has bee and table top exter			
3.3.13 Robbers Lane: Footpath build out taper	YES	YES Footpath build out been included as re			
3.3.14 Footpath Buildout Driveway Crossing	YES	YES Footpath build out included as recomr			

Designers overall Stage 1 comment: all the items above will be incorporated into the detail design and tender package drawings.

Stage 2 Review In line with TII guidelines (2017) Pre-Tender drawings will be submitted for a Stage 2 review and comment/sign off prior to issue of tender documents

A stage 3 Road Safety Audit review will be provided on completion of construction, prior to opening of the scheme Signed:

Designer: TERENCE Coscharce Date: 23/8/21 Sumprised Date: 24/08/21 Signed:

<b>Road Safety Audit Fee</b>			
Scheme: Maugherboy: Devel			
Audit Stage:Stage 1	Route No: N/A	Date of Audit: August 21	
Signed:	<u>S</u> Employer: <u>Sja C</u>	Co Date: 23 4/3	121