

MWP

Galway County Council

February 2022

**PROPOSED HOUSING DEVELOPMENT
AT BALLYMOE, COUNTY GALWAY
Stage 1 Road Safety Audit**

Contents

1. Introduction	3
2. Findings of the Stage 1 Road Safety Audit.....	6
Layout and Visibility	6
2.1 Problem – Incomplete Details of Levels.....	6
Vulnerable Users	6
2.2 Problem – Possible Inappropriate Parking.....	6
2.3 Problem – Planter Box on Possible Pedestrian Desire Line	7
Road Markings and Signage	9
2.4 Comment – Incorrect Hatched Road Markings	9
Drainage	9
2.5 Comment – No Drainage Details Provided for Audit	9
Ironmongery.....	10
2.6 Comment – Existing Utility Manhole Cover	10
3. Audit Team Statement	11

Appendices

Appendix A – List of Documents Provided for Audit

Appendix B – Designer’s Feedback

Project No.	Doc. No.	Rev.	Date	Prepared By	Checked By	Approved By	Status
22664	6001	A	14/02/2022	S Quigley	K Concannon	K Concannon	DRAFT
22664	6001	A	13/04/2022	S Quigley	K Concannon	S Quigley	FINAL

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1. Introduction

This report details the findings of a Stage 1 Road Safety Audit carried out on a proposed housing development at Ballymoe, County Galway. The audit was commissioned by Galway County Council.

Audit Team

MWP's Road Safety Auditors carried out the Audit. The Audit Team members were as follows:

Karen Concannon, BE MSc CEng MIEI	MWP
Seamus Quigley, BE CEng MIEI MCIHT	MWP

MWP inspected the site on the 11th February 2022, between 11.05 a.m. and 11.30 a.m., on foot and in a car, during dry, clear weather conditions. Record photographs were taken.

Location

The site for the proposed housing development is located on the south side of Ballymoe village centre, within its existing 50 km/hour urban speed limit zone.

The existing housing development site is undeveloped and is located on the east side of the R360 Regional Road, immediately north of a cul-de-sac local road T-junction.

Adjacent to the site, the R360 has a typical road carriageway width of 8.3 metres with a variable width hard shoulder area along its east (site) side, and footways on both sides. Street lighting standards are provided along the west side of the R360. The east side footway level is at-grade with the adjacent R360 road carriageway and is discontinued south of the cul-de-sac local road junction.

At the site, the R360 alignment is on a horizontal curve with the site located on the outside of the curve. The vertical alignment is on a slight gradient southbound. A 50 km/hour VMS vehicle speed detection sign is provided northbound on the R360 approach to the village, together with a warning sign of cyclists on the road.

The Fr. Flanagan Memorial Centre property and access is located on the opposite side of the R360 with a dished footway centred, locally, at the access, with splayed boundary walls on both sides.

The R360 Regional Road extends from the N60 National Secondary Road in Ballymoe village centre, to the N83 National Secondary Road at Dunmore, in the south west.

The cul-de-sac local road has no signed designated local road number. The local road is signed as part of the Suck Valley Way walking route. The cul-de-sac local road includes a number of residential properties, including disused properties.

Proposed Scheme

The proposed housing development includes eight housing units, with nine recessed parallel car parking spaces along the north (site) side of the R360 and a footway build out. It is proposed to provide a reduced road carriageway width of 6.0 metres along the R360, in the vicinity of the site, with hatched hard shoulder road markings. An uncontrolled crossing location is proposed to the north (village centre side) of the site on the R360, with footway build outs, dropped kerbs and tactile paving.

Pre-Stage 1 Review

The audit team reviewed a preliminary sketch layout of the emerging preliminary design proposal, in response to a request by the designer, prior to this Stage 1 audit.

The audit team's comments were as follows:

"As requested, based on our initial desk review, the provision of the following would appear to be appropriate in developing the design:

- *A standard/reduced urban road carriageway width for the R360, with reference to DMURS;*
- *An associated junction buildout on the north side of the adjacent local road junction;*
- *A defined crossing location for pedestrians, at the expected desire line, at a location north of the development, with associated treatments, including at existing footways. We understand that the Council's budget may not include for the cost of a formal controlled crossing. An uncontrolled/courtesy crossing, with reference to DMURS, would be desirable. The location of existing and proposed street lighting standards, and associated lux levels at the defined crossing point location, should be considered; together with nearby/adjacent private access locations. Appropriate intervisibility for drivers and pedestrians should be provided. The site inspection for the road safety audit would further inform comment on the recommended appropriate location; and*
- *A defined crossing location for pedestrians, with associated treatments, should be considered at the south end of the proposed new footway on the R360.*

Recessed parallel on-street car parking is proposed at the proposed housing. Consideration should be given to vehicle turning movements generated by the housing development parking on the R360. The site is located south of the urban centre.

It is understood that a future community centre and playground are proposed on the west side of the R360."

Audit Information

There were no Road Safety Authority (RSA) recorded accident collisions on the existing R360 and cul-de-sac local road, in the vicinity of the proposed development site, during the available years 2005 to 2016.

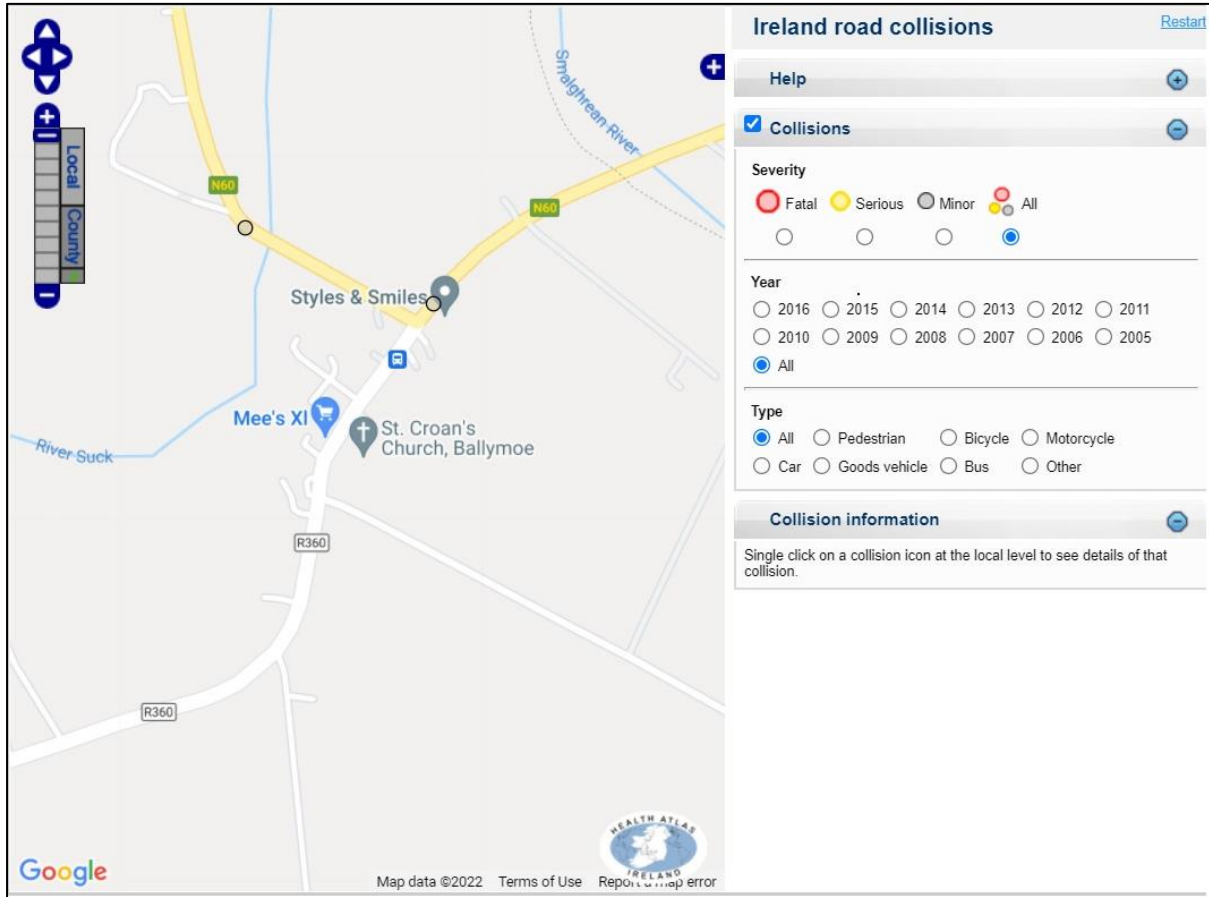


Figure 1.1: RSA Recorded Accident Collisions Data

The drawings and other documents provided to carry out the Audit are listed in Appendix A.

This Audit has been carried out in the context of the relevant sections of the TII Road Safety Audit GE-STY-01024 December 2017 and TII Road Safety Audit Guidelines GE-STY-01027 December 2017, and in accordance with the Government's Design Manual for Urban Roads and Streets (Version 1.1) May 2019 (DMURS). The Auditors have examined and reported only on those features of the design considered to have road safety implications and have not examined or verified the compliance of the scheme to any other criteria.

Section 2 of this report presents the findings of the Stage 1 Road Safety Audit carried out on the proposed housing development at Ballymoe, County Galway. The Designer's Feedback is provided in Appendix B.

2. Findings of the Stage 1 Road Safety Audit

Layout and Visibility

2.1 Problem – Incomplete Details of Levels

Full details of proposed vertical levels, gradients and cross falls have not been provided for audit. The risks are that finished surfaces may not tie-in correctly and that finished levels may not provide appropriate drainage. Inappropriate tie-ins could result in trip hazards for pedestrians, resulting in potential falls and injuries. Inappropriate levels and inadequate drainage could result in ponding, ice during cold weather and skid hazards for vehicles and pedestrians, potential collisions, falls and injuries.

Recommendation:

It is recommended that appropriate vertical levels and tie-ins should be provided, with appropriate drainage.

Vulnerable Users

2.2 Problem – Possible Inappropriate Parking

It is understood that a new footway build-out is proposed along the R360, with a widened footway area at the south end of the scheme, between the proposed houses and recessed parking/planter box. This footway area could be accessed by vehicles for parking, via the recessed parking area and adjacent cul-de-sac local road. The existing east side footway is at-grade with the adjacent road carriageway. Inappropriate parking could result in material damage to footways and kerbs, and conflicts, impact collisions and injuries for pedestrians.

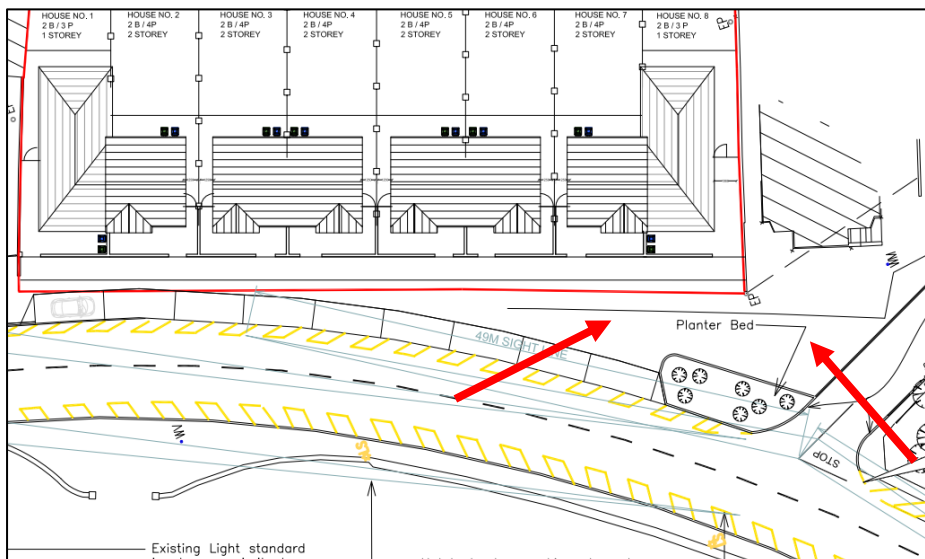


Figure 2.2: Widened Footway Area



Photograph 2.2: View North of Existing East Side Footway

Recommendation:

It is recommended that appropriate levels and measures should be provided to prevent inappropriate parking. Refer also to item 2.1 above.

2.3 Problem – Planter Box on Possible Pedestrian Desire Line

It is proposed to provide a planter box with landscaping, on the north side of the cul-de-sac local road junction, immediately flush with the proposed recessed parking. The existing R360 east side footway is discontinued south of the local road junction. This could restrict pedestrian movements at this location, including pedestrians using the Suck Valley Way walking route and pedestrians generated between the proposed housing and south along the R360, resulting in potential conflicts, collisions, trips, falls and injuries.

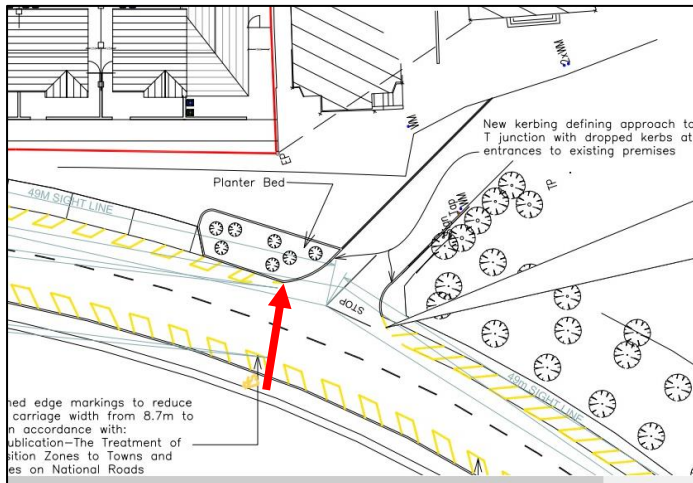


Figure 2.3: Planter Box Flush With Recessed Parking



Photograph 2.3: Suck Valley Way Walking Route Signage

Recommendation:

It is recommended that pedestrian desire lines should be kept clear of restrictions, with appropriate footway treatments.

Road Markings and Signage

2.4 Comment – Incorrect Hatched Road Markings

Although a Stage 2 item, the directional orientation of the proposed hatched road markings along the east side of the R360 are shown incorrect on the drawing provided for audit. It is recommended that the markings should be orientated correctly for the adjacent southbound traffic lane direction.

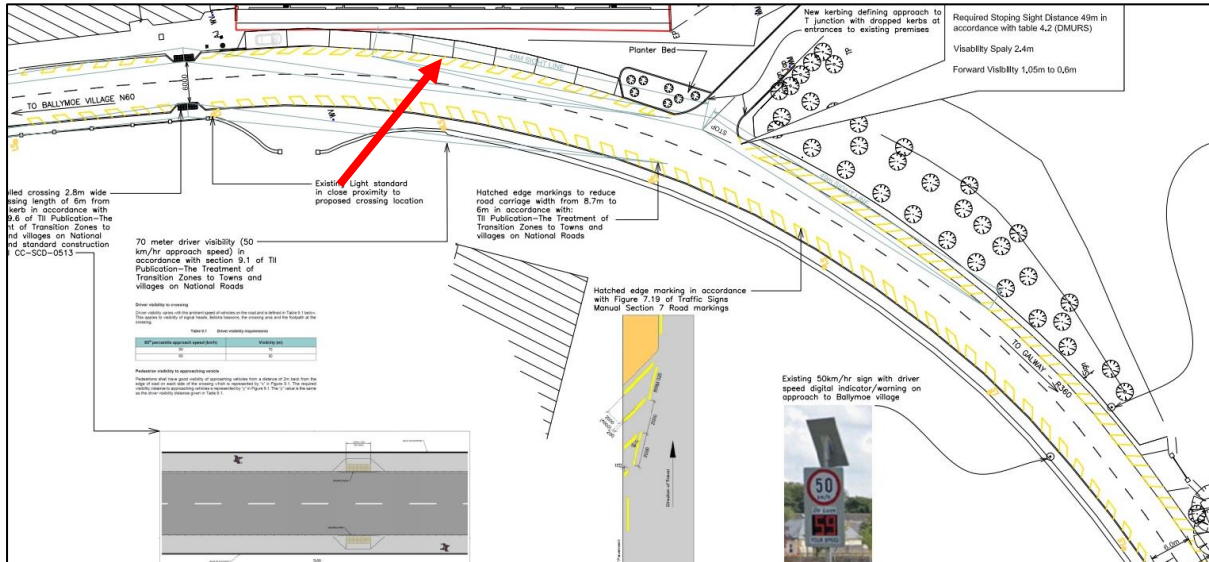


Figure 2.4: Hatched Road Markings

Drainage

2.5 Comment – No Drainage Details Provided for Audit

No drainage details have been provided for audit. It is recommended that appropriate drainage should be provided, with appropriately located gullies, channels, manhole covers and associated details, in developing the design prior to construction. Refer also to item 2.1 above.

Ironmongery

2.6 Comment – Existing Utility Manhole Cover

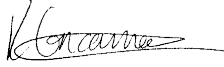
There is an existing utility manhole with a loose cover and exposed frame located on the east side footway, within the extent of the proposed scheme. This is a potential trip hazard for pedestrians. It is recommended that the utility manhole should be reinstated appropriately as part of the proposed scheme works.



Photograph 2.6: Utility Manhole Cover on East Side Footway

3. Audit Team Statement

We certify that we have inspected the site and examined the drawings and other information listed in Appendix A of this report. The inspection and examination have been carried out for 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 we have identified are noted in the report, together with suggestions for improvement, which we recommend should be studied for implementation.

Signed:  _____

Date: 13/04/2022

Karen Concannon BE MSc CEng MIEI
Audit Team Member
For and on behalf of MWP
Engineering and Environmental Consultants
Park House
Mahon Technology Park
Blackrock
Cork

Signed:  _____

Date: 13/04/2022

Seamus Quigley, BE CEng MIEI MCIHT
Audit Team Member
For and on behalf of MWP
Engineering and Environmental Consultants
Park House
Mahon Technology Park
Blackrock
Cork

Appendix A

List of Documents Provided for Audit

Drawings:

Hassett Leyden Associates

Title: Road Treatment

Code: 2632

Number: 20

Status: D2

Revision: A

Date: Jan 2022

Other Documents:

Appendix B

Designer's Feedback

ROAD SAFETY AUDIT FEEDBACK FORM



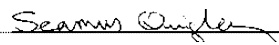
SCHEME: PROPOSED HOUSING DEVELOPMENT AT BALLYMOE, COUNTY GALWAY

ROUTE(S): R360 REGIONAL ROAD AND CUL-DE-SAC LOCAL ROAD

AUDIT STAGE: STAGE 1 **DATE AUDIT COMPLETED:** FEBRUARY 2022

Paragraph No. in Safety Audit	To Be Completed By Designer			To Be Completed by Audit Team Leader
	Problem Accepted (Yes/ No)	Recommended Measure Accepted (Yes/ No)	Describe Alternative Measure(s). Give Reasons for Not Accepting Recommended Measure	Alternative Measures Accepted by Auditors (Yes/ No)
2.1	YES	YES		
2.2	YES	YES		
2.3	YES	YES		
2.4	YES	NO	Improved road design by applying DMURS and providing footpaths & kerbs instead of the line marking hatching only	Yes
2.5	YES	YES		
2.6	YES	YES		

SIGNED:  **DESIGNER** **DATE:** 14.02.2022

SIGNED:  **AUDIT TEAM LEADER** **DATE:** 13/04/2022

SIGNED: Robert Dunlop c/o GALWAY CO.CO **EMPLOYER** **DATE:** 14.04.2022