Stage 1 Road Safety Audit

Castleconnell Flood Relief Scheme

On behalf of **OPW / Limerick City & County Council**

Prepared By:
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Civil
Structural
Traffic

Table of Contents

DOCUMENT CONTROL

Revision	R0										
Purpose of Issue: P=Preliminary C=Comment F=Final	C										
Date:	24 07 24										
Originator:	SS										
Checked By:	PE										
Approved By:	SS										

1. INTRODUCTION

1.1. This report describes a Stage 1 Road Safety Audit carried out on behalf of OPW / Limerick City & County Council on proposed works to Mall Road, Castleconnell to provide a new flood defence wall and road alterations. .

1.2. The audit was carried out between 20th – 24th July 2024.

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:
Philip Edwards, BSc Hons GMICE
TII Auditor Ref. PE192503

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 20th July 2024 between the hours of 14:15 – 15:00. Weather conditions during the inspection were overcast and the road surface was dry. Traffic conditions were considered light with cars, light goods and pedestrians. 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.

Appendix B contains the Audit Feed Back Form. The Designer shall consider the Audit Report and prepare a Designer Response to each of the recommendations, using the Feedback Form. The response shall state clearly whether each recommendation is accepted, rejected, or whether an alternative recommendation is proposed. Copies of the Designer Response shall be sent to the Employer and the Audit Team. The Audit Team shall then consider the Designer Response and indicate on the Feedback Form whether the Designer's response to each recommendation is accepted. The completed Report contains the completed Feedback Form with signatures of all three parties involved - Designer, Audit Team Leader and Employer.

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 collision occurrence.

2. ITEMS RESULTING FROM PREVIOUS STAGE 1 AUDIT

No previous 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 is not currently available on the Road Safety Authority Database, therefore no collision trends in the immediate vicinity of the proposed site can be analysed.

3.2 General Problems / Problems at Multiple Locations

3.2.1 Road Gullies

Problem: The top of the proposed flood defence wall will be higher that the public road and gullies within this road. There is concern that these gullies discharge under the wall into the adjacent river. In times of flood the river water may come up through the road gullies, or valves installed on the drainage outfall to the river may prevent road surface water from discharging.

Hazard: Surface water on the carriageway may result in aquaplaning type collisions.

Recommendation: The Design Team should ensure a suitable method of surface water discharge is provided.

3.2.2 Road Markings.

Problem: The drawings indicate the existing carriageway is to be resurfaced. There are no replacement road markings shown on the drawings.

Hazard: Motorists may overshoot side road junctions or errantly cross the centre of the road and impact with opposing users.

Recommendation: The Design Team should reinstate the existing road markings.

3.2.3 Horizontal Road Alignment

Problem: The revised road horizontal alignment appears to introduce sharp changes in direction to the western carriageway edge.

Hazard: Motorists who follow the kerb line may strike the kerb at the sharp change in direction.

Recommendation: The Design Team should redesign the alignment to provide a smooth western kerb line.

3.2.4 Junction Visibility

Problem: Visibility at the existing road junctions is already restricted by roadside boundary features. The proposed works result in a reduced carriageway width. This is likely to result in Mall Road traffic travelling closer to the eastern kerb and junctions off the road to the east than present.

Hazard: Users attempting to exit the side roads may protrude into the main line and be struck by passing traffic.

Recommendation: The Design Team should improve side road junction visibility as part of the works.

3.2.5 Footpath Gradients

Problem: The design includes for raising of the carriageway near the junction with Scanlon Park. It is assumed by the audit team the footpath will rise at the same gradient at the locations indicated by a ramp on the carriageway, however this gradient is not stated.

Hazard: Excessive gradient on the footpath may result in trip/fall incidents.

Recommendation: The Design Team should ensure footpath gradients comply with approved standards.

3.2.6 Street Lighting

Problem: The design indicates existing Street Lighting to be reinstated. The adequacy of the existing Street Lighting is unknown. It is noted that there are numerous mature trees along the western side of Mall Road which may also impact on the effectiveness of the Street Lighting.

Hazard: Inadequate Street Lighting.

Recommendation: The Design Team should ensure that Street Lighting is assessed as part of the detailed design and if necessary, upgraded to achieve compliance with Design Standards appropriate for the location.

3.2.7 Footpath Width

Problem: The It is proposal is for 5.5m carriageway and 1.8m footpath. Whilst a 1.8m path may be adequate, 2.0m is normally now considered the default minimum footpath width. It appears that could easily be achieved.

Hazard: A narrow path in conjunction with a 5.5m carriageway increases the risk of a pedestrian being struck by a passing vehicle. This will be exacerbated if lighting columns and electricity poles, etc. are placed in the footpath

Recommendation: The Design Team should provide a minimum width footpath of 2.0m throughout.

3.2.8 Demountable Flood Barrier – Advanced Warning

Problem: It is proposed to provide a demountable flood gate across Chapel Hill, south-west of the junction with Coolbane Wood. It is assumed that the gate will be erected when flooding is anticipated.

Hazard: Approaching drivers may not be aware of the flood gate placed across the road, especially given the restricted visibility for drivers approaching from Coolbawn Meadows. Vehicles may collide with the flood gate.

Recommendation: The Design Team should ensure that the flood gate is conspicuous, in terms of colour and reflectivity. Advanced signage/traffic management should be provided when the gate is closed. This could be achieved by using folding signs which are opened at the same time as the flood gate is erected.

3.2.9 Carriageway Flooding

Problem: Further to 3.3.5 above, drivers may inadvertently drive into flood water when approaching from the low side of the flood gate.

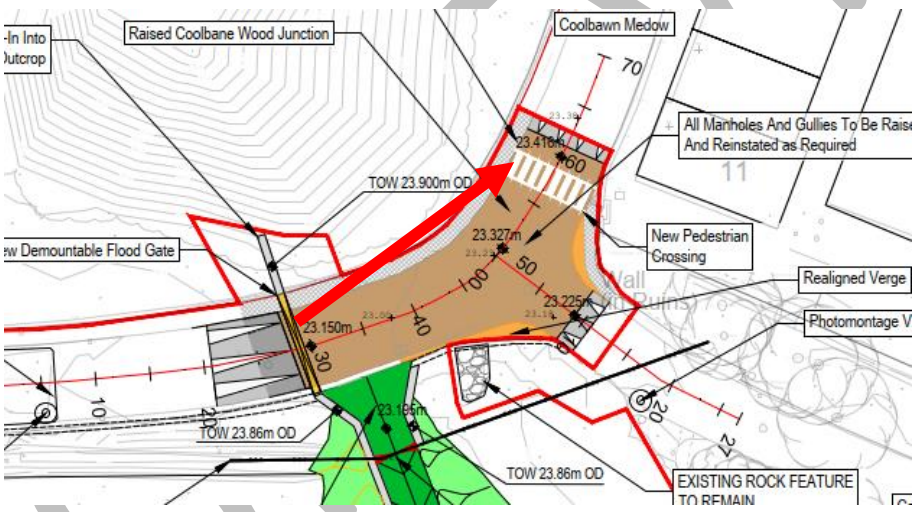
Hazard: The vehicle may become stranded on the flooded road. Occupants may be at risk from flood water.

Recommendation: The Design Team should ensure that any signage/traffic management provided when the flood gate is erected, is sufficiently in advance to prevent drivers proceeding into the area liable to flooding.

3.3 Problems at Specific Locations

3.3.1 Zebra Crossing at Coolbane Woods Junction.

Problem: The proposed zebra crossing is located where driver visibility to the crossing may be restricted by the roadside boundary wall.



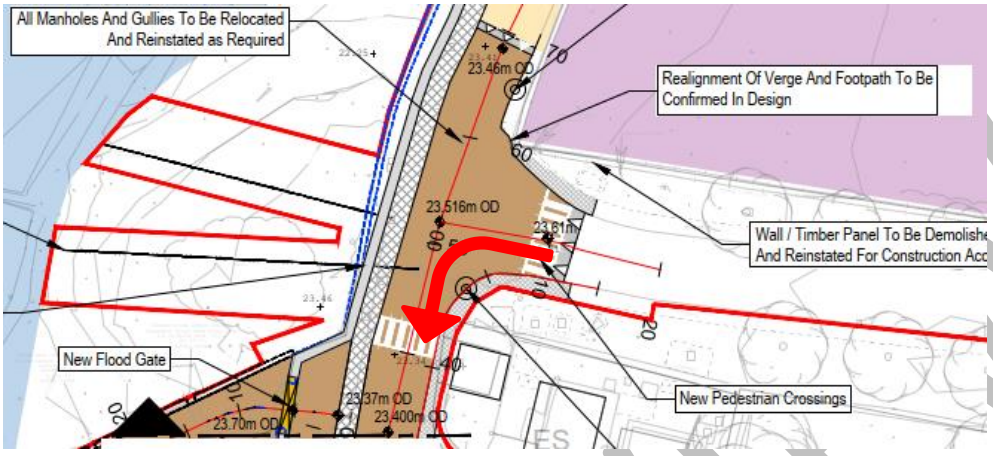
Hazard: Motorists may impact with crossing pedestrians.

Recommendation: The Design Team should locate the crossing where suitable inter-visibility is achieved.

Note: This may require the provision of additional footpath to the eastern side of Coolbawn Meadows.

3.3.2 Zebra Crossing South of Scanlon Park

Problem: The proposed zebra crossing is in very close proximity to Scanlon Park. Motorists exiting Scanlon Park and turning left are likely to be concentrating on traffic approaching from their right.



Hazard: On observing no approaching traffic they may proceed out of the side road and impact with pedestrians on the crossing.

Recommendation: The Design Team should relocate the zebra crossing further to the south.

3.3.3 Zebra Crossing of Scanlon Park Road

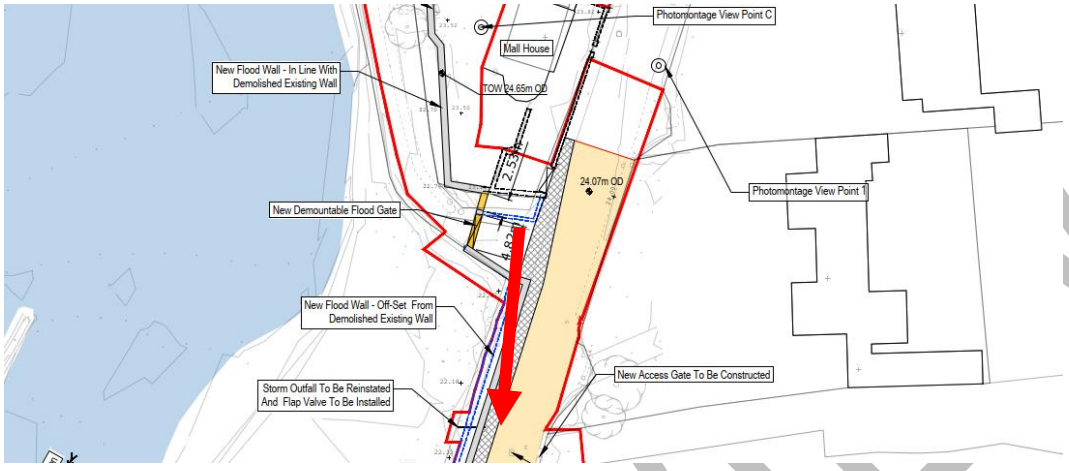
Problem: There is a proposed zebra crossing within Scanlon Park and close to the road junction with Mall Road. There is no footpath further north on Mall Road, therefore all pedestrian demand for this crossing is believed to generate from the houses within Scanlon Park. Pedestrians using this crossing are likely to be unsighted by drivers who turn off Mall Road into Scanlon Park. There is no footpath further north on Mall Road, therefore all pedestrian demand for this crossing is believed to generate from the houses within Scanlon Park.

Hazard: Vehicles may collide with pedestrians on the crossing.

Recommendation: The Design Team should relocate the zebra crossing further distant from the junction with Mall.

3.3.4 Dunkineeley Driveway Visibility

Problem: The proposed flood defence wall is generally higher than the standard vehicle driver's eye height. The new wall proposed to the south of the Dunkineely driveway may restrict visibility for the exiting motorist.



Hazard: Driveway traffic may pull into Mall Road into the path of oncoming pedestrians or motorists.

Recommendation: The Design Team should ensure suitable driveway visibility is provided for users exiting Dunkineely House.

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 .....

Signed .....
Philip Edwards
Audit Team Member

Date .....

APPENDIX A LIST OF DOCUMENTS EXAMINED

The following drawings received from JBA Consulting on 16/07/2024:

19104-JBB-XX-XX-DR-C-02112_Layout_Plan_Sheet_2_of_7_P02

19104-JBB-XX-XX-DR-C-02113_Layout_Plan_Sheet_3_of_7_P02

19104-JBB-XX-XX-DR-C-02115_Layout_Plan_Sheet_5_of_7_P02

19104-JBB-XX-XX-DR-C-02126_Elevations_&_Longsections_Sheet_7_of_9_P02

19104-JBB-XX-XX-DR-C-02129_Elevations_&_Longsections_Sheet_10_of_10_P01

19104-JBB-XX-XX-DR-C-02131_Sections_Sheet_2_of_3_P01

APPENDIX B RSA FEEDBACK FORM