



Stage 1 Road Safety Audit

**Neighbourhood Centre & Social Housing Scheme,
Ballyburke, Knocknacarra, Galway**

On behalf of Galway City Council

Prepared By:

CST GROUP

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October 2023

**Civil
Structural
Traffic**

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DOCUMENT CONTROL

Revision	R0	R0										
Purpose of Issue: P=Preliminary C=Comment F=Final	C	F										
Date:	25 09 23	04 10 23										
Originator:	SS	SS										
Checked By:	PJG	PJG										
Approved By:	SS	SS										

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1. INTRODUCTION

1.1. This report describes a Stage 1 Road Safety Audit carried out on behalf of Galway City Council on a proposed Neighbourhood Centre and Social Housing Scheme at Ballyburke, Knocknacarra, Galway.

1.2. The audit was carried out between 21st – 23rd September 2023.

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 21st September 2023 between the hours of 11:45 – 12:30. Weather conditions during the inspection were overcast and the road surface was damp. Traffic conditions were considered light with occasional cars, light goods and HGVs. 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 Long and Straight Roads.

Problem: The development includes and creates long and straight sections of carriageway. Long and straight carriageways have a poor historic record of inappropriate high vehicle speeds.

Hazard: Errant vehicle impact with pedestrians may result in serious injury.

Recommendation: The design team should provide horizontal shift in the carriageway alignment in compliance with the DMURS recommendations.

3.2.2 Junction Radii

Problem: The road junction radii appear to be large. The use of large radii permits turning vehicles to do so at higher than desirable speeds. The large junction radii also necessitates locating the uncontrolled pedestrian off the pedestrian desire line.

Hazard: High-speed turning vehicles may impact with pedestrians, resulting in injury. Additionally, some pedestrians may decide to cross at the mouth of the junction and trip/fall due to the high kerb.

Recommendation: The design team should reduce the junction radii and relocate the pedestrian crossing closer to the desire line.

3.2.3 Disable Users Access to Footpaths

Problem: It is not clear from the drawings if the disabled user parking spaces have direct access to a suitable width, segregated footpath.

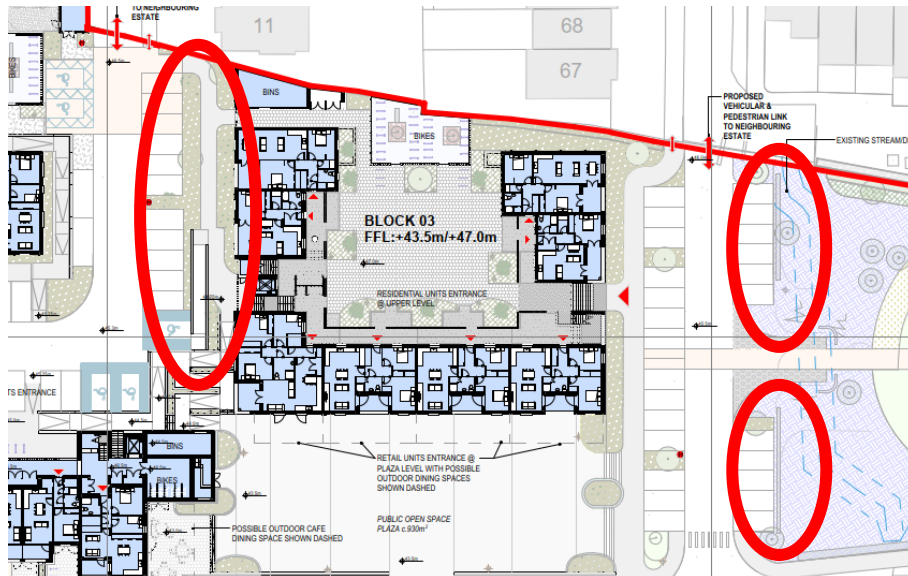


Hazard: The disabled user may be required to travel within the carriageway, to the rear of other parked vehicles in order to access a suitable footpath. Impact from vehicles egressing parking spaces or other carriageway users may result.

Recommendation: Ensure all disabled user parking spaces have a direct and suitable access to a suitable width segregated footpath.

3.2.4 Access to Footpaths

Problem: There are a number of car parking spaces that do not have access to adjacent footpaths.

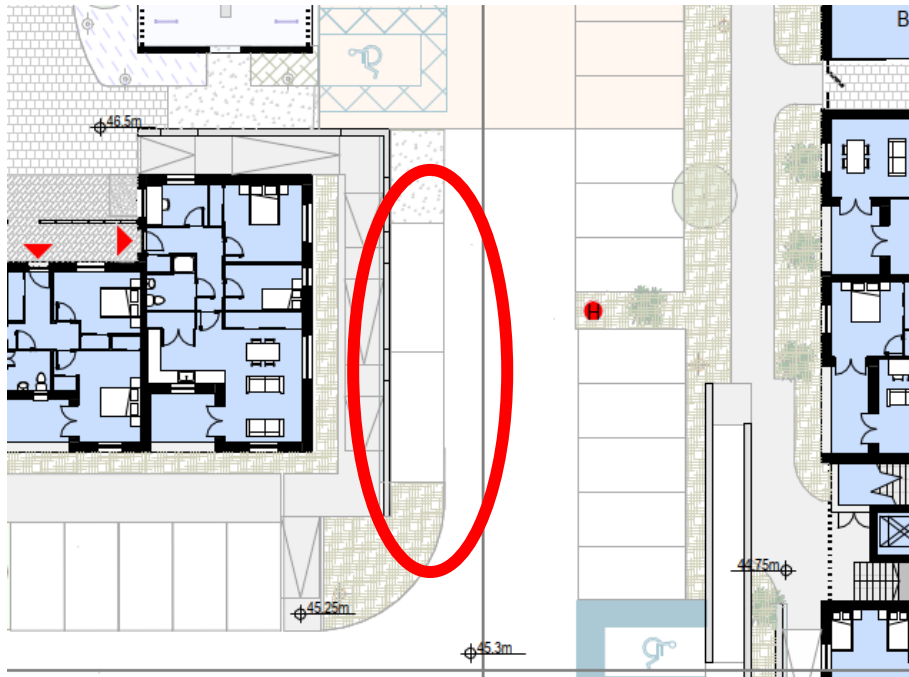


Hazard: Car users are likely to walk within the carriageway in order to access the closest footpath. These users are at risk of impact from reversing or passing vehicles.

Recommendation: Provide a footpath adjacent to the car parking bays.

3.2.5 Accessible Car Parking Bays

Problem: There are parallel car parking bays indicated adjacent to walls. Vehicular access to the bays is likely to be difficult. Furthermore, egress from the vehicle will be restricted due to the wall. It is likely the driver will not park within the bays but leave room between the wall and the vehicle for passenger entry/exit. The vehicle will protrude into the carriageway.

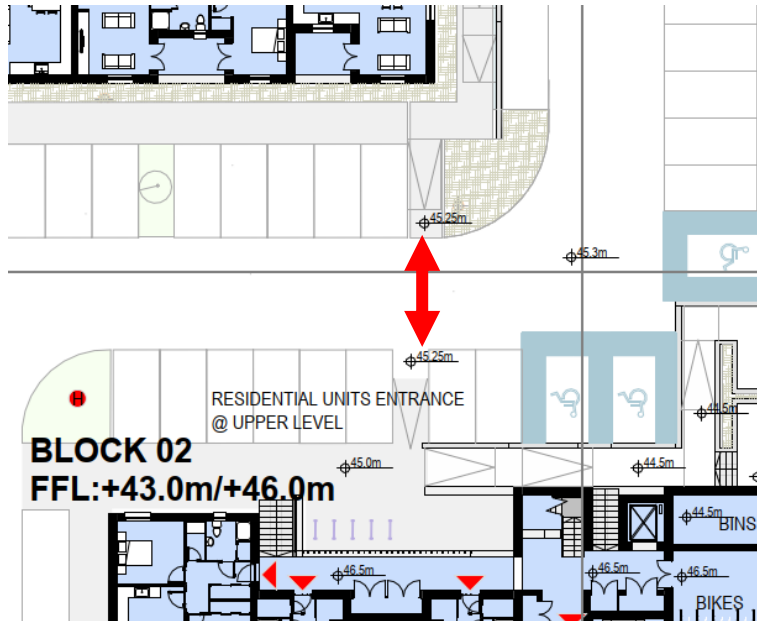


Hazard: Passing traffic may swerve to avoid the protruding vehicle and impact with opposing users.

Recommendation: Amend the design to provide adequate room for the vehicle and passenger.

3.2.6 Pedestrian Crossings in areas of Vehicle Parking.

Problem: The proposed pedestrian crossing from Block 2 to Block 1 (and other locations) is shown within the car parking bays. There is concern that high sided vehicles parked within the bays may restrict inter-visibility to/from crossing pedestrians.

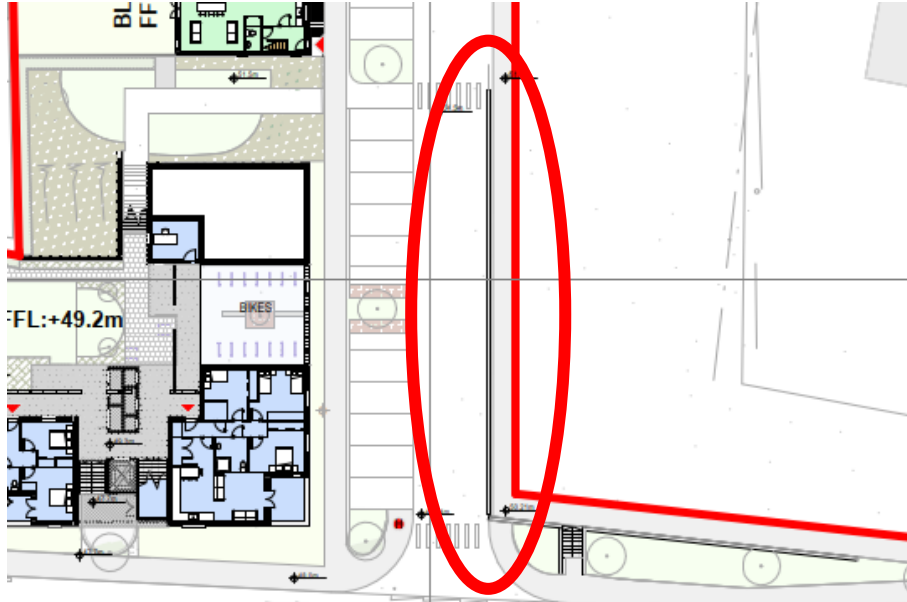


Hazard: Crossing pedestrians may be subject to vehicle strikes.

Recommendation: The design team should ensure suitable inter-visibility is achieved at all pedestrian crossing locations.

3.2.7 Walls Adjacent to Carriageway.

Problem: What appears to be boundary walls are shown located directly adjacent to proposed carriageways. The wall is also shown adjacent to a pedestrian crossing.

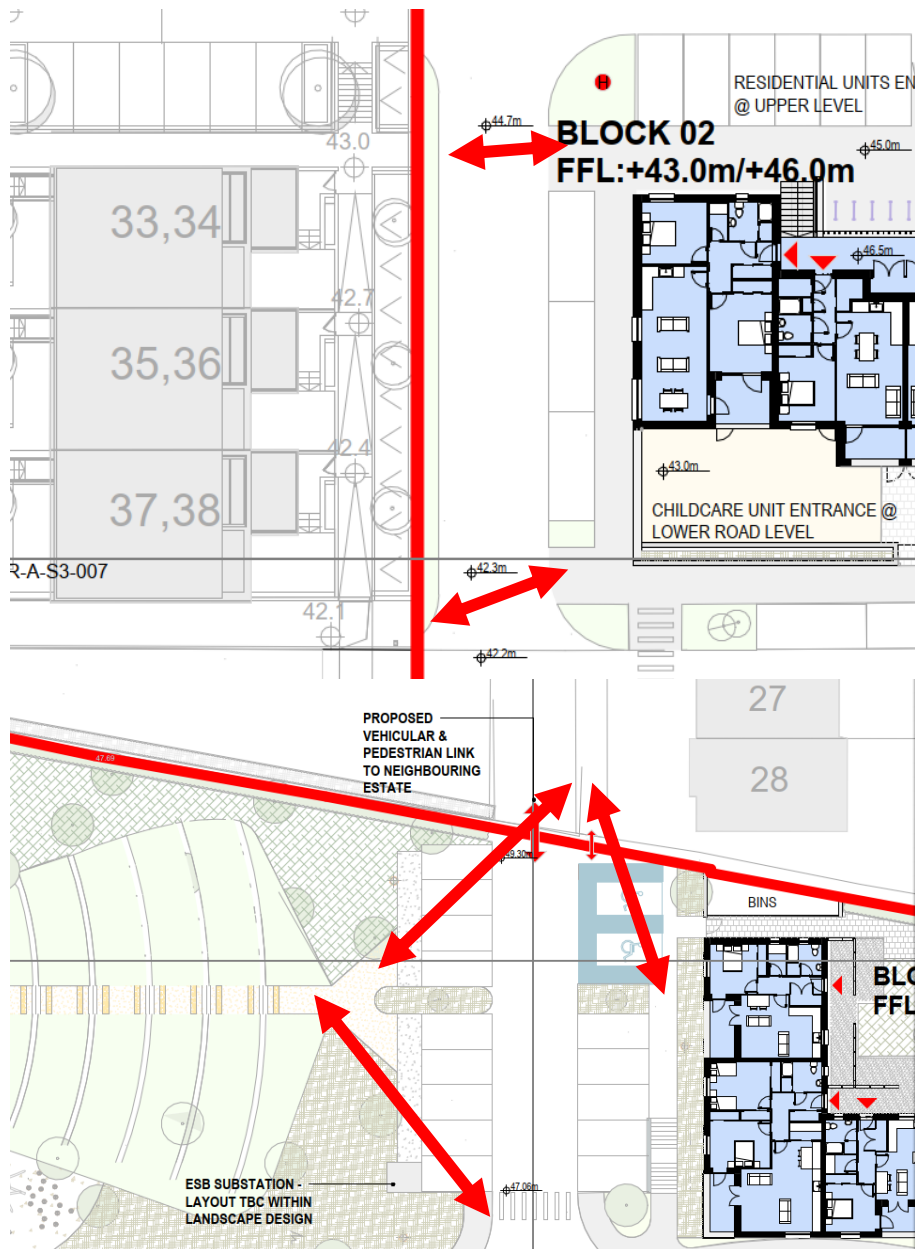


Hazard: Errant vehicles, possibly cyclists, may impact with the wall and sustain personal injury. Additionally, the wall may restrict inter-visibility to/from pedestrians waiting at the crossing.

Recommendation: Set the wall back to provide suitable clear zone and also adequate visibility for the pedestrian crossing.

3.2.8 Footpath Connectivity

Problem: There are a number of locations where footpath links to existing infrastructure is shown or indicated by text, however the link is not direct or requires the pedestrian to temporarily enter the carriageway.



Hazard: The pedestrian may be struck by passing traffic.

Recommendation: The design team should review all locations where connectivity to the existing footpath infrastructure is proposed. These connections should be direct and incorporate an adequate width footpath with suitable gradients.

3.2.9 Connection to/from Ballyburke Cycle Track

Problem: There is an existing cycle track to the south of Ballyburke Road that is segregated from both the footpath and carriageway. The proposed development does not make allowance for cyclists to access / egress this track.

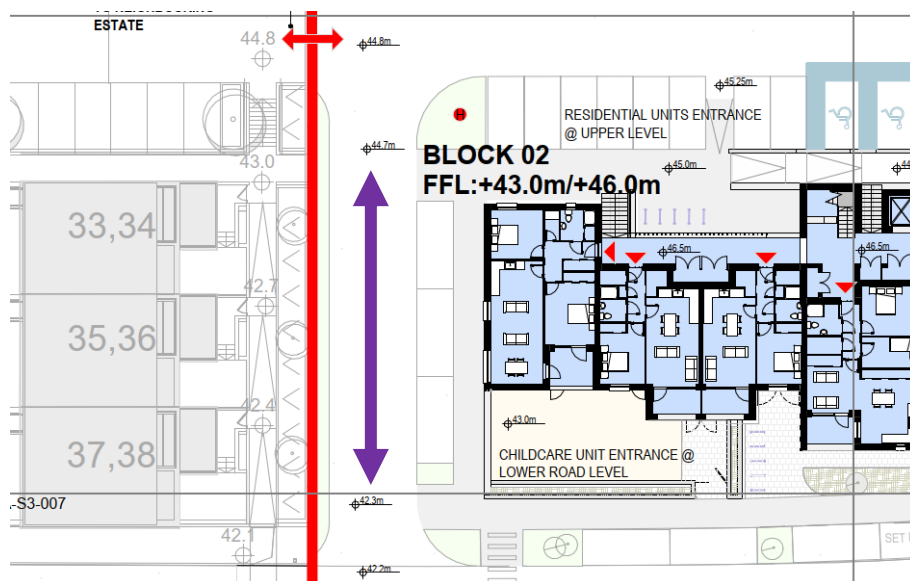


Hazard: Cyclists may decide to cycle on the footpath. Impact with pedestrians may result.

Recommendation: The design team should adjust the levels of the exiting cycleway and provide suitable carriageway crossings to permit development cyclists to access the existing facility.

3.2.10 Road / Footpath Gradients

Problem: Some of the roads and footpaths appear to be very steep.



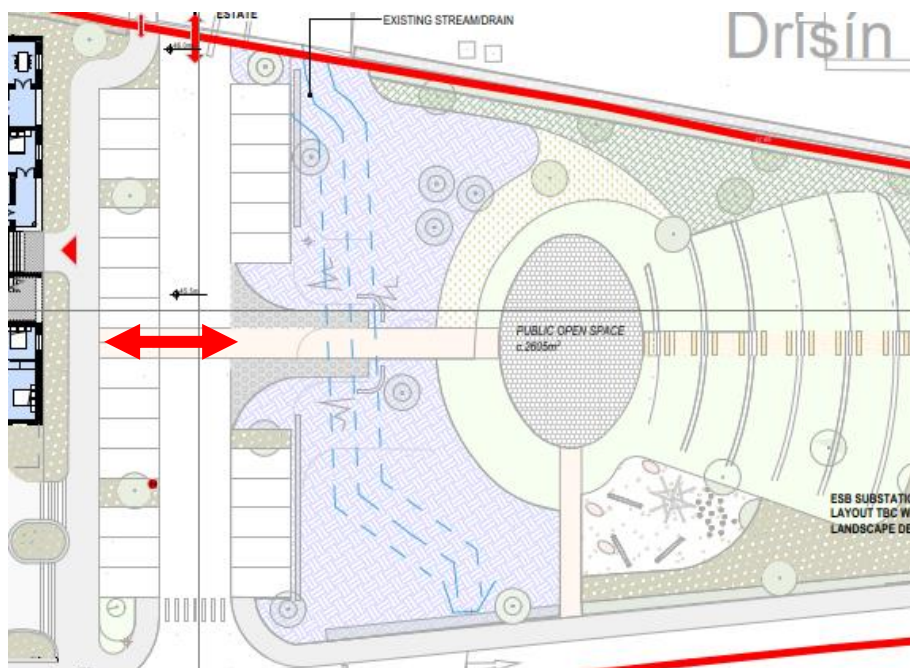
Hazard: There are a number of hazards associated with steep roads, including overshoot of junction, excessive cycle wobble into the path of motor vehicles, loss of wheelchair control, trips, slips and falls.

Recommendation: The carriageway and footpath should be amended to acceptable gradients and incorporate suitable dwell areas at the junctions.

3.3 Problems at Specific Locations

3.3.1 Pedestrian Linkage to Public Open Space.

Problem: The pedestrian access from the west to the public open space forms a straight alignment from the footpath to the far side of the carriageway / car parking bays. There is concern that children may run from the public open space across the road to the footpath to the far side. There is no requirement for vehicle speeds to reduce in this area.

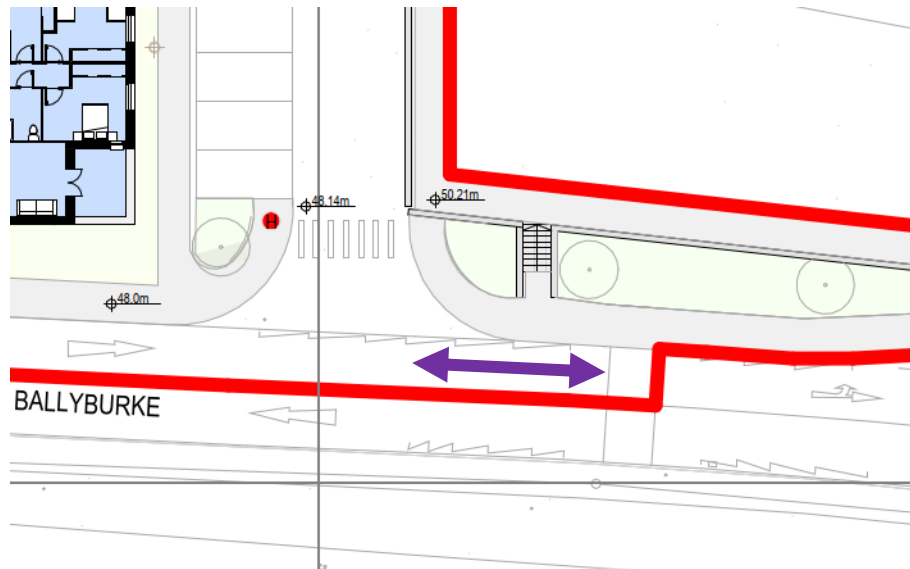


Hazard: Impact from passing vehicles may result.

Recommendation: Realign the route to the public open space such that a change in pedestrian direction is required and also incorporate traffic calming measures in this area.

3.3.2 Junction proximity to Existing Zebra Crossing.

Problem: There is a road junction proposed in close proximity to the existing zebra crossing on Ballyburke Road. Motorists exiting the development junction left are likely to be concentrating to their right in order to observe safe gaps in traffic.

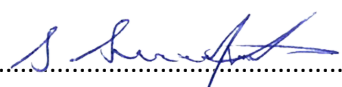


Hazard: The development motorists may proceed to turn left and impact with pedestrians who are commencing their crossing.

Recommendation: Increase the separation between the zebra crossing and the development junction.

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 23 September 2023

Signed 
PJ Gallagher
Audit Team Member

Date 23 September 2023

APPENDIX A LIST OF DOCUMENTS EXAMINED

DOCUMENT REF / NAME:	RECEIVED FROM:	DATE:
A1901-GCC-DR-A-S3-001 Site Location	Galway City Council	27/07/23
A1901-GCC-DR-A-S3-005 Proposed Site Layout – Ground Level	Galway City Council	27/07/23

APPENDIX B RSA FEEDBACK FORM

ROAD SAFETY AUDIT FEEDBACK FORM

CST Group Chartered Consulting Engineers
1, O'Connell Street, Sligo, F91 W7YV, Ireland

Scheme: Neighbourhood Centre & Social Housing Scheme, Ballyburke, Knocknacarra, Galway

Audit Stage: 1 **Date Audit Completed:** 23/09/23 **Route No.** **Our Ref :** 123280|R0

TO BE COMPLETED BY DESIGNER				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	No	No	Two no. straight sections of roadway created linking into the Drisin estate which create the long sections of carriageway referenced will most likely not be opened to vehicular traffic in the short to medium term post completion of the project and therefore will not create long straight sections but short cull de sac areas for local use only. If vehicular connections are provided in the future, further road safety measures to be considered at that time such as the introduction of suitable traffic calming measures (tabletops, etc.).	Yes
3.2.2	No	No	Road junction radii has been standardised at circa 5m to facilitate the access / manoeuvring of fire tender access and refuse collection vehicles to serve the development as advised by engineers autotracking assessment.	Yes
3.2.3	Yes	Yes		
3.2.4	Yes	Yes		
3.2.5	Yes	Yes		
3.2.6	Yes	Yes		
3.2.7	Yes	Yes		
3.2.8	Yes	Yes		
3.2.9	No	No	Cyclists to use existing/proposed carriageways/footpaths to cycle/walk to next available existing connection point to existing cycleway. Connections to existing cycleway paths to be raised with GCC roads/transportation department to be considered in any future cycleway upgraded proposed in this area.	Yes
3.2.10	No	No	Gradients of certain roadways required to deal with site constraints. Alternative part	

ROAD SAFETY AUDIT FEEDBACK FORM

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TO BE COMPLETED BY DESIGNER				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)
			m accessible routes for traversing the site provided elsewhere.	Yes, however gradients are to be limited to the recommendations of DMURS
3.3.1	Yes	Yes		
3.3.2	Yes	Yes		

Signed:


Emmet Humphreys
Galway City Council

Design Team Leader

Date: 2/10/23

Signed:


Stuart Summerfield
CST Group Chartered Consulting Engineers

Audit Team Leader

Date: 04/10/2023

Signed:


Emmet Humphreys
Galway City Council

Employer

Date: 2/10/23