

KEERAUN SOCIAL HOUSING GALWAY

Stage 1 Road Safety Audit

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Stage 1 RSA
S4.P01
31st August 2021

STAGE 1 ROAD SAFETY AUDIT

Document status

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Approval for issue

PD

31 August 2021

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1 INTRODUCTION

This report was prepared in response to a commission from Padraic Mac Goilla Bhride of RPS to undertake a Stage 1 Road Safety Audit (RSA) of the Keeraun Social Housing Development in Keeraun, County Galway.

The independent RSA Audit Team comprised:

Team Leader: **Peter Dickson** BEng (Hon) MIEI Cert Comp RSA
RPS Consulting Engineers Ltd.
TII Auditor Approval Ref: PD1324187

Team Member: **Ross Furey** BEng MIEI
RPS Consulting Engineers Ltd.
TII Auditor Approval Ref: RF1336391

This Stage 1 Road Safety Audit has been carried out generally in accordance with the requirements of Transport Infrastructure Ireland's (TII) standard for Road Safety Audits GE-STY-01024, December 2017 (formerly NRA HD19).

The audit comprised an examination of the site by the Audit Team in daylight on 24th June 2021. The weather on the day of the site visit was wet, and the road surface was wet. The traffic conditions on site were considered moderate. No pedestrians or cyclists were observed during the site visit.

This scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety. It has not been examined or verified for compliance with any other standards or criteria. The problems identified in this report are considered by the Audit Team to require action in order to improve the safety of the development and minimise collision occurrence. A map of the problem locations is included in Appendix C.

Items not provided to the Audit Team were not examined as part of this Audit. Where the absence of these items constitutes a road safety problem, these have been included as problems in these reports. Information not provided to the Audit Team for this Stage 1 RSA includes: signage, road markings, pedestrian crossing locations, cross sections or vertical alignments.

A Road Safety Audit Feedback Form is attached in Appendix B to this report which lists the problems identified and this form requires completion by the Design Team Leader. If any of the recommendations within this safety audit report are not accepted, a written response is required, stating reasons for non-acceptance. Comments (if any) made within the report under the heading of Observation are intended to be for information only. Written responses to Observations are not required.

No previous RSAs were carried out on the development.

- 63no. housing units (mix of 1 – 4 bed units);
- 8no. culturally appropriate, Traveller specific units;
- Associated internal road and footpath network;
- Vehicle connectivity to neighbouring proposed developments at the southern and northern boundaries of the site;
- Pedestrian and cyclist connectivity to neighbouring proposed developments and the future Keeraun Boreen / Greenway at the north-eastern corner of the site;
- Landscaped public amenity space to the rear of the site;
- Secure bicycle parking within the common areas of apartment blocks; and
- 116No. parking bays including 6No. mobility impaired parking bays.

The existing land use in the immediate vicinity of the site is rural with a number of one-off houses. Approximately 400m to the south of the site are a number of large residential developments and further connection to local amenities, schools and the outskirts of Galway City. At this location the Ballymoneen Road has been improved into an urban two-way carriageway with pedestrian facilities on both sides of the road.

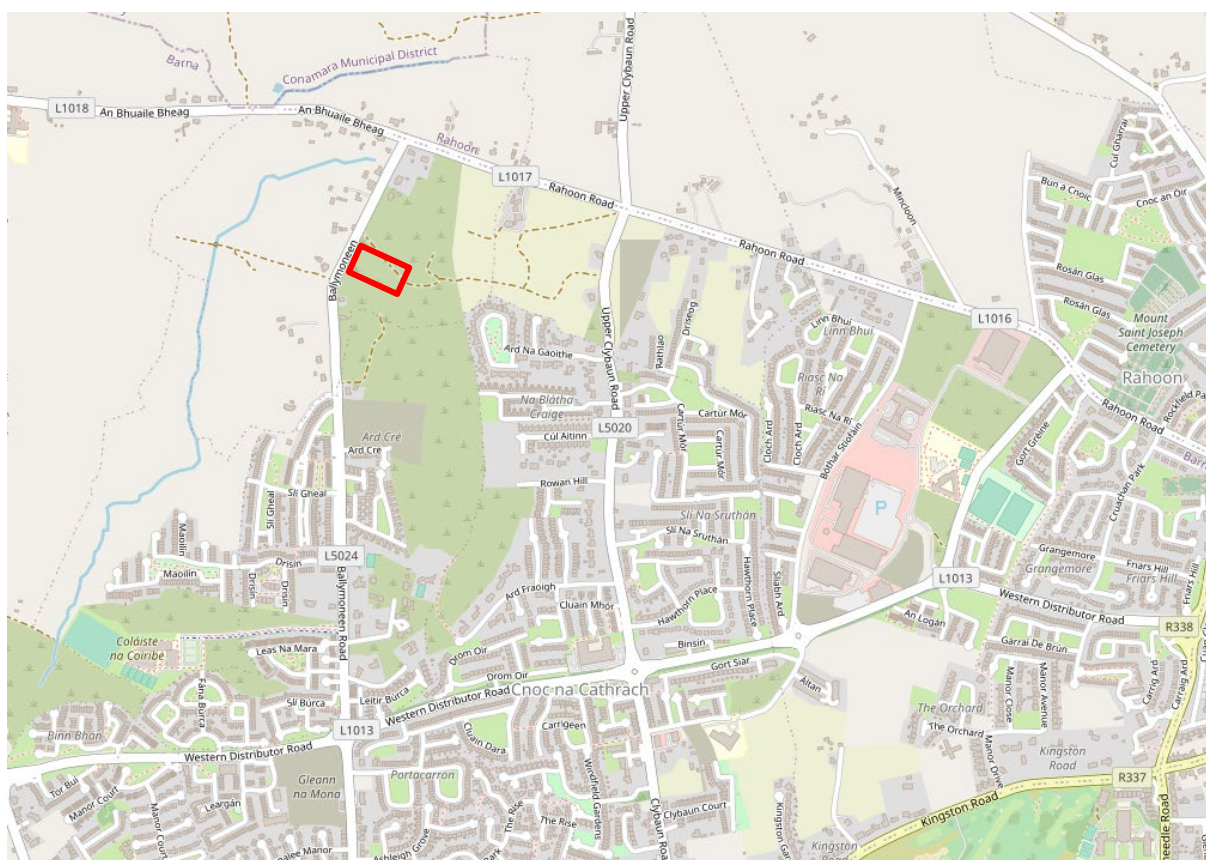


Figure 2-1: Site Location

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No pedestrian or cyclist facilities are proposed on Ballymoneen Road as part of this development. However, the audit team have been informed that pedestrian and cyclist connectivity to local amenities and Galway City will be provided via interconnection with adjacent proposed housing developments which are currently in the planning phase. The proposed layout of the Keeraun development and interconnected adjacent developments are shown in Figure 2-2. Additionally, the development will have a connection with the Keeraun Boreen / Greenway at the north-eastern corner of the site.

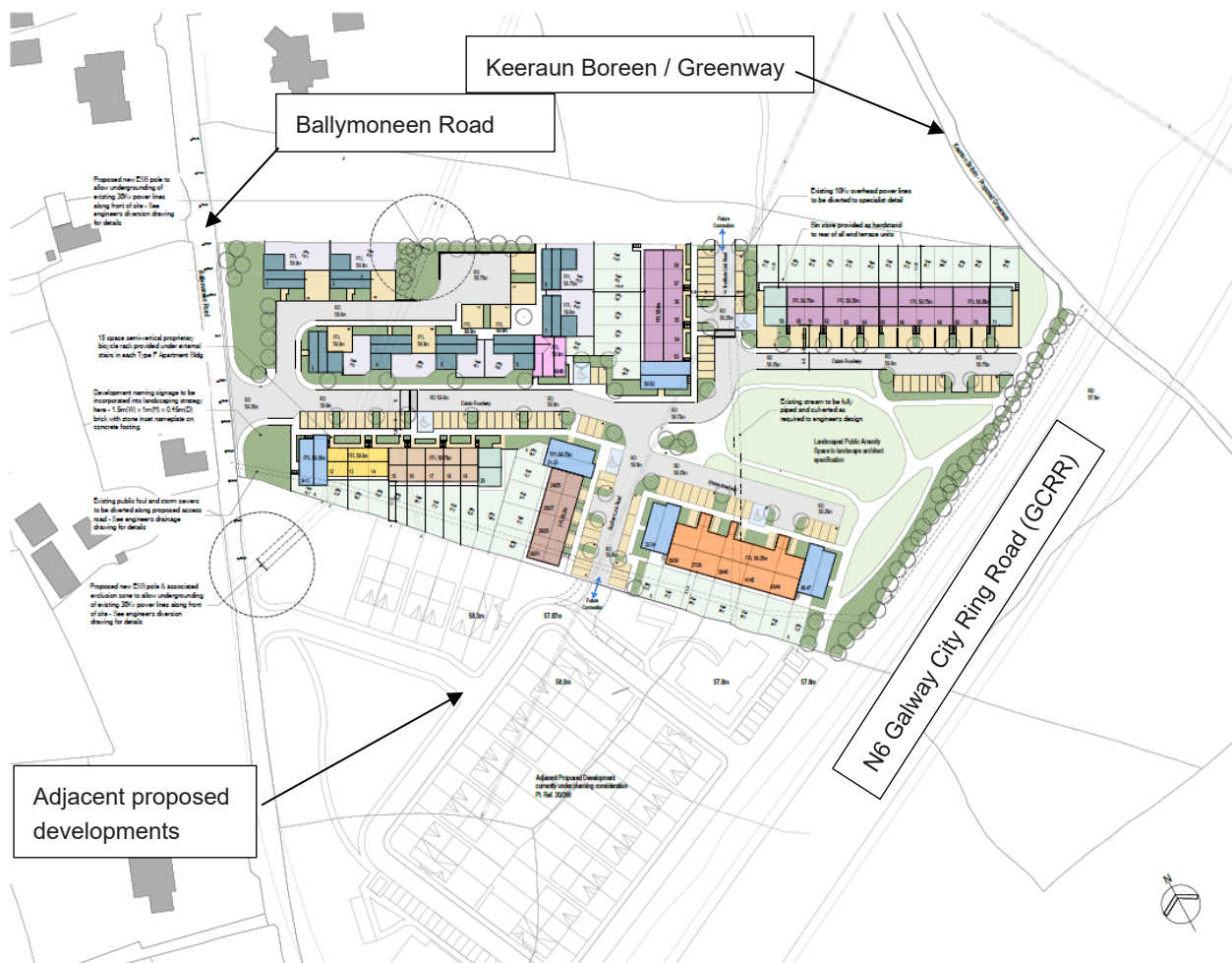


Figure 2-2: Site Layout and Adjacent Developments

The proposed site is located adjacent to the proposed N6 Galway City Ring Road (GCRR). The GCRR will link the western side of Galway City to the eastern side from Bearna in the west, to the N6 in the east. The GCRR forms part of the Galway Transport Strategy (GTS) which is the current adopted strategy for transport within Galway City. The GCRR is currently at planning stage and is being reviewed by An Bord Pleanála (APB). As part of this, it is proposed to revise the Ballymoneen Road alignment and cross section, including footpaths which tie into existing facilities along Ballymoneen Road as stated in the N6 Galway City Ring Road Environmental Impact Assessment Report – Issue 1 September 2018.

3 COLLISION DATA

No collision data was provided to the Audit Team.

Collision data was examined on the RSA website (rsa.ie) between 2005 and 2016.

One minor injury, single vehicle collision involving a car was noted approximately 50m to the north of the proposed access on Ballymoneen Road in 2009.

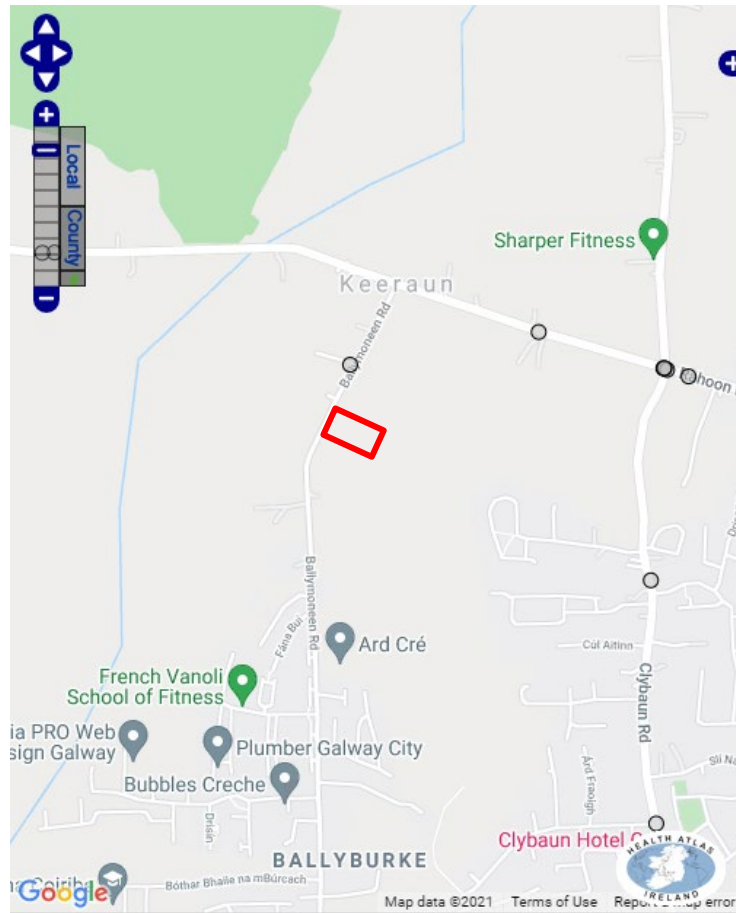


Figure 3-1: Collision data (Source: rsa.ie)

4 STAGE 1 RSA FINDINGS

4.1 Problem

Drawing No: KEE-COA-00-ZZ-DR-A-0503

Summary: Risk of driver confusion and erratic manoeuvres due to a lack of junction control

At this stage in the design process, the road markings and signage for the internal road layout of the development have not been developed. It is unclear as to the type of junction control proposed at the internal road junctions and the junction with Ballymoneen Road.

Insufficient or inappropriate junction control could lead to possible driver confusion and erratic manoeuvres in the carriageway, resulting in collisions.



Recommendation:

The appropriate junction control should be provided throughout the development.

4.2 Problem

Drawing No: KEE-COA-00-ZZ-DR-A-0503

Summary: Risk of vehicle-pedestrian collisions due to a lack of pedestrian crossings

It is unclear as to the exact location of some of the pedestrian crossings at the junction with Ballymoneen Road and within the internal road network. Pedestrian crossings located at inappropriate locations could lead to pedestrians crossing in unsafe locations, resulting in possible vehicle-pedestrian collisions.

Additionally at one internal road junction, it appears a pedestrian crossing may be proposed which does not connect to a footpath on the opposite side of the carriageway. This could lead to a pedestrian walking in the carriageway where they are at an increased risk of being struck by a vehicle.



Recommendation:

Appropriate pedestrian crossings should be provided throughout the development.

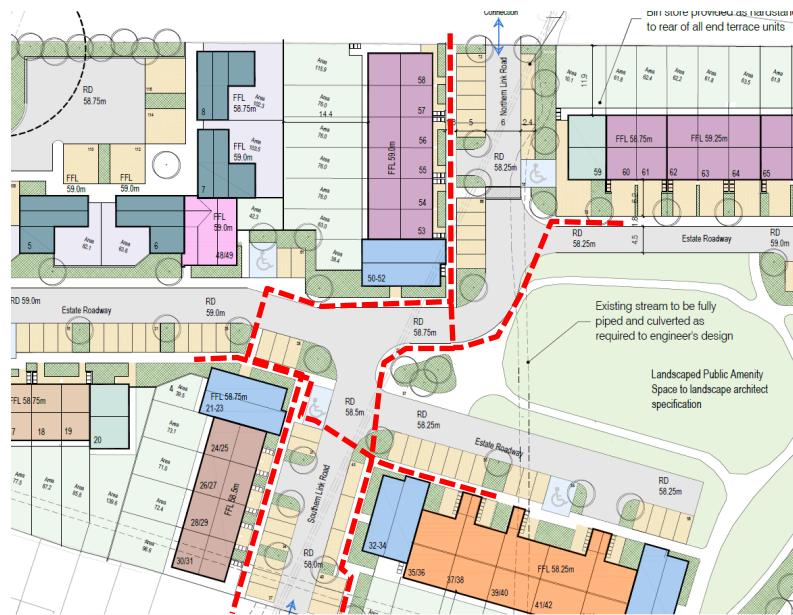
4.3 Problem

Drawing No: KEE-COA-00-ZZ-DR-A-0503

Summary: Risk of vehicle-pedestrian collisions due to lack of pedestrian crossing points

A number of footpaths are proposed within the development, however it is considered some of the pedestrian desire lines may not be catered for adequately. At some of these pedestrian desire lines there is no footpath or crossing point provided.

If pedestrian desire lines are not catered for appropriately, it could lead to pedestrians walking within the carriageway where they are an increased risk of being struck by a vehicle.



Recommendation:

Pedestrian desire lines within the development should be catered for.

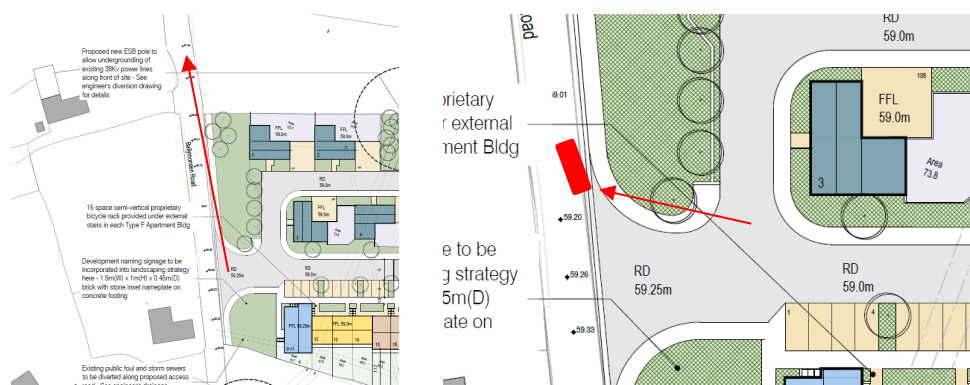
4.4 Problem

Drawing No: KEE-COA-00-ZZ-DR-A-0503

Summary: Risk of side impact collisions due to obscured visibility at junctions

A new junction is proposed onto Ballymore Road. At the northwest corner of the site trees are proposed which may be within the visibility splays of the proposed junction. Drivers exiting the development may have their visibility obscured to the north which could lead to them pulling out into the carriageway in front of an oncoming vehicle, resulting in possible side impact collisions.

Additionally, at the internal junction to housing units 1 – 8, a tree is proposed within the visibility splay of the junction to vehicles turning left into the development from Ballymore Road.



Recommendation:

Visibility at junctions should be unobscured by trees, landscaping or existing hedgerows.

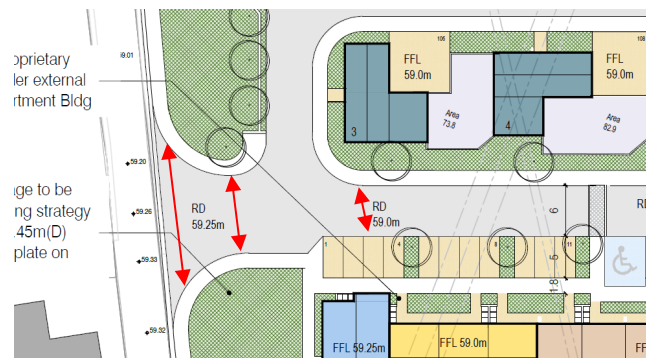
4.5 Problem

Drawing No: KEE-COA-00-ZZ-DR-A-0503

Summary: Risk of vehicle-pedestrian collisions due to a wide carriageway and large junction radius

The carriageway in close proximity to Ballymoneen Road is proposed to be significantly wider than the standard carriageway width throughout the development. This wide carriageway, combined with the large junction radius at may lead to high vehicle speeds entering and exiting the development. In addition, this will create a wider than normal crossing length for pedestrians at the junction.

It is considered mobility impaired pedestrians, the young or elderly may have difficulty completing the crossing when the carriageway is clear. Pedestrians in the carriageway for an extended duration are at an increased risk of being struck by a vehicle.



Recommendation:

An appropriate pedestrian crossing should be provided near Ballymoneen Road.

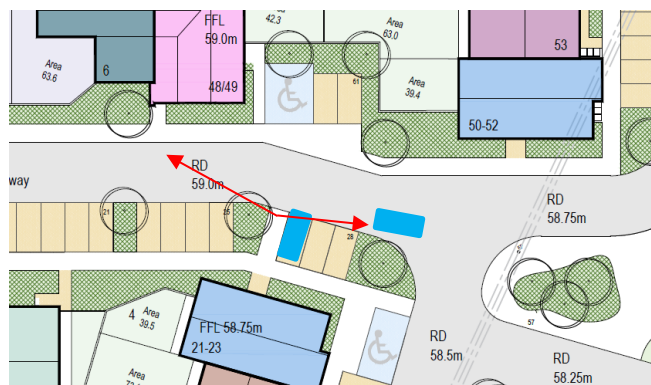
4.6 Problem

Drawing No: KEE-COA-00-ZZ-DR-A-0503

Summary: Risk of vehicle-pedestrian collisions due a pedestrian crossing located adjacent to a tree and parking bays

Two raised pedestrian crossing points are proposed within the internal development layout. It appears an additional at grade pedestrian crossing is proposed between a tree and a parking bay on the main development throughfare.

If a vehicle is parked in the adjacent parking bay it is considered an approaching driver may fail to notice a pedestrian waiting to cross, especially a small child. This could lead to a reduced reaction time for a driver if the pedestrian were to step into the carriageway, resulting in possible vehicle-pedestrian collisions.



Recommendation:

Pedestrian crossings positioned adjacent to parking bays should be raised to provide advance warning to a driver of the potential for crossing pedestrians.

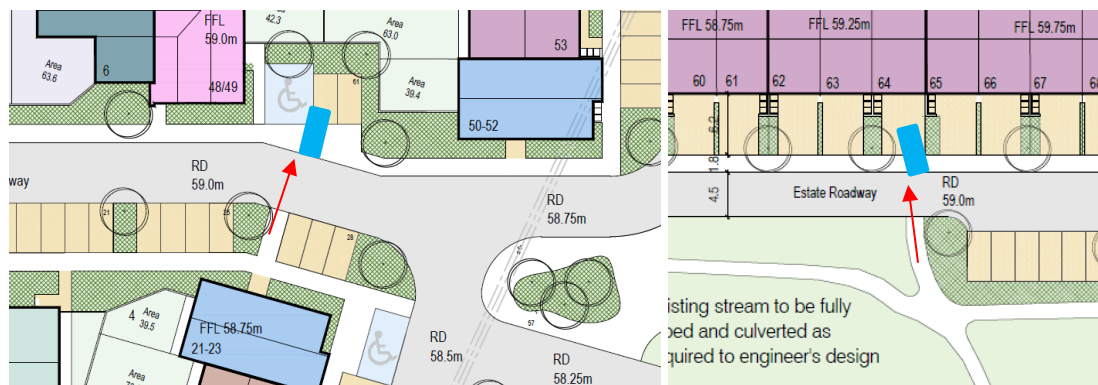
4.7 Problem

Drawing No: KEE-COA-00-ZZ-DR-A-0503

Summary: Risk of vehicle-pedestrian collisions due to pedestrian crossings located in front of parking bays

The drawings indicate that two pedestrian crossing points are proposed opposite residential parking bays where the footpath extends in front of the parking area. In these locations, drivers reversing into and out of these parking bays will have to manoeuvre over the pedestrian crossing points.

It is considered that drivers reversing into or out of the residential parking bays may not easily observe a pedestrian crossing from the opposite side of the carriageway, resulting in possible vehicle-pedestrian collisions.



Recommendation:

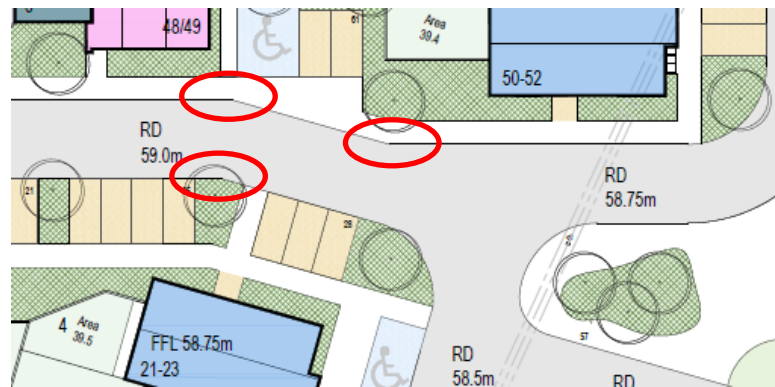
Pedestrian crossings should not be positioned in front of residential parking bays.

4.8 Problem

Drawing No: KEE-COA-00-ZZ-DR-A-0503

Summary: Risk of material damage collisions due angular kerb line

In the internal road layout, a number of angular kerb lines are proposed, rather than a curved kerb line. When drivers are meeting oncoming vehicles, there is a risk they could clip the angular kerb, resulting in minor material damage collisions.



Recommendation:

Appropriate curved kerb lines should be provided throughout the development.

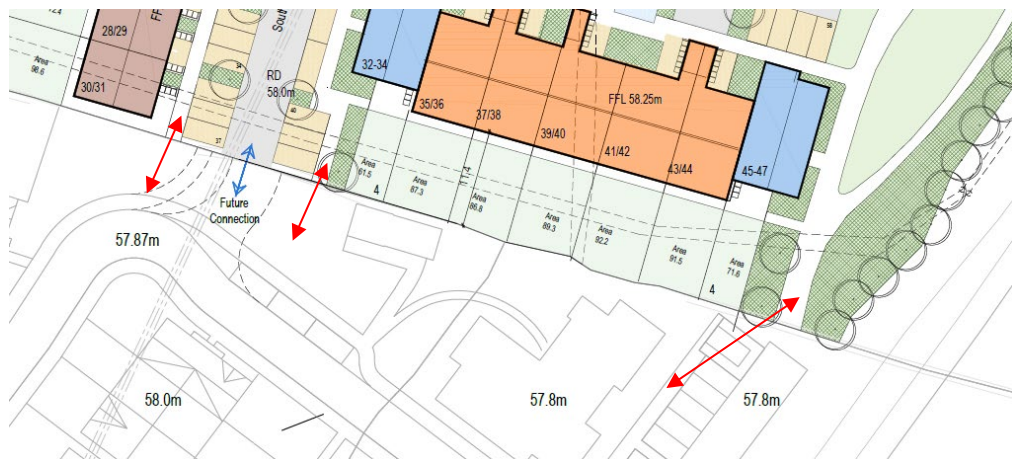
4.9 Problem

Drawing No: KEE-COA-00-ZZ-DR-A-0503

Summary: Risk of vehicle-pedestrian collisions due to lack of pedestrian or cyclist connectivity

The audit team have been informed that pedestrian and cyclist connectivity to Galway city, local amenities and neighbouring residential areas will be facilitated within the proposed adjacent developments rather than along Ballymoneen Road. It is noted Ballymoneen Road will not likely be upgraded until the commencement of the N6 Galway City Ring Road.

The drawing provided does not clearly show how these connections will be made. There is a risk that pedestrians walking between the Keeraun social housing development to Galway City or local amenities will be required to walk within the carriageway where they are at risk of being struck by a vehicle or within grassed areas where there is a risk of slip or trip incidents.



Recommendation:

Appropriate pedestrian and cyclist connectivity for the Keeraun social housing development to local amenities and Galway City should be provided upon opening of the development.

5 AUDIT STATEMENT

We certify that we have examined the drawings and other information listed in Appendix A and visited the site during the day of the 24th June 2021. The examination has been carried out with the sole purpose of identifying any features of the scheme that could be removed or modified in order to improve road safety.

The problems identified have been noted in this report together with suggestions for road safety improvement, which we recommend should be studied for improvement. The road safety audit has been conducted by the persons named below who have no involvement in the design of the scheme.

Peter Dickson

Signed:



(Audit Team Leader)

Date:

31/08/2021

Ross Furey

Signed:



(Audit Team Member)

Date:

31/08/2021

Appendix A
Information Provided

Drawing/Document No.	Title	Status	Rev
KEE-COA-00-ZZ-DR-A-0503	Proposed Site Plan	S2	P03

Appendix B

Audit Feedback Form

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Appendix B - Road Safety Audit Feedback Form

Route / Scheme: Keeraun Social Housing Development

Audit Stage: Stage 1 Road Safety Audit

Date Audit Completed: 25th June 2021

Paragraph No. in Audit Report	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 or reasons accepted by Auditors (Yes/No)
4.1	Y	Y		
4.2	Y	Y		
4.3	Y	Y		
4.4	Y	Y		
4.5	Y	Y		
4.6	Y	Y		
4.7	Y	Y		
4.8	Y	Y		
4.9	Y	Y		

Signed  Designer

Date 31/08/2021

Signed  Audit Team Leader

Date 31/08/2021

Signed  Employer
HSE Galway City Council

Date 01/09/2021

Appendix C

Problem Locations

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