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2024

**Stage 1 Road Safety Audit
Proposed Social Housing at
Craddockstown, Naas, Co. Kildare**

Stage 1 Road Safety Audit
Proposed Social Housing at Craddockstown, Naas, Co. Kildare

Document Control Sheet

Client:	Hayes Higgins Partnership
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Table of Contents

1	Introduction	2
2	Description of the Proposed Development	4
3	Problems Raised from the Road Safety Audit	6
3.1	Collision History	6
3.2	Potential Problems Identified	6
3.3	General Problems Identified	15
4	Audit Team Statement	16
	Appendix A – Inspected Documents	17
	Appendix B – Designer Response Form	18

1 Introduction

This report documents the findings of a Stage 1 Road Safety Audit (RSA) carried out with respect to a proposed New Residential Housing Development, Craddockstown, Co. Kildare.

The audit team conducted the site visit on the 10th of July 2024. The audit was carried out in the offices of ORS on the 08th of October 2024.

The audit team comprised of the following people:

Audit Team Leader:
Adam Price BEng (Hons), CEng, MIEI

Audit Team Member:
Mark Gallagher: AEng MIEI

Audit Team Observer:
Ankita Kirtane B. Arch, MSc

During the site visit the weather wet and overcast. The road surface was wet, and the traffic levels were noted to be low across the audit period.

Previous Road Safety Audits were not available for review. The audit team reviewed the following documents and drawings provided by the Design Team.

- (1) 24D024_01_Rev B_Proposed Site Layout
- (2) 24D024_02_Rev B_Proposed Sight Line Layout
- (3) 24D024_03_Rev B_Proposed Drainage Layout
- (4) 24D024_07_Rev B_Proposed Swept Path Analysis Layout
- (5) 1873 - Rev C - Craddockstown - KCC - RMDA-1 Landscape Plan
- (6) 1873 - Rev C - Craddockstown - KCC - RMDA-2 Boundary Plan
- (7) 23052-KCC-XX-XX-DR-A-1001-Proposed Site Plan-S1-P02.

Documents/Information not supplied:

- Previous Road Safety Audits
- Collision Data
- Speed & Traffic Surveys
- Departures from Standards
- Visibility Splay Analysis.
- Public Lighting Layout

The terms of reference / procedure for the Audit were as per the relevant sections of the **Transport Infrastructure Ireland Road Safety Audit Standard GE-STY-01024**. The audit 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 designs to any other criteria. The Road Safety Audit should not be treated as a design check.

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The problems identified and described in this report are considered by the Audit Team to require action to improve the safety of the development and minimise accident occurrence. All comments, references and recommendations in this safety audit are in respect of the review of information supplied by the Design Team.

2 Description of the Proposed Development

The proposal put forward by Hayes Higgins Partnership is to construct a social housing in Craddockstown, Naas, Co. Kildare

The proposed development includes:

- i. 28 no. residential units including 21 no. houses and 7 no. apartments comprising 7 no. one bed units; 14 no. two bed units; 6 no. three bed units; and 1 no. four bed unit including sensory room; with renewable energy design measures (which may be provided externally) for each housing unit.
- ii. Landscaping works include provision of (a) open space and kick about areas; (b) natural play features.
- iii. Pedestrian and cycle connection to the adjacent Eustace Demesne estate
- iv. Associated site and infrastructural works including provision for (a) 1 no. ESB substation and switchroom; (b) car and bicycle parking; (c) public lighting; (d) bin storage; (e) temporary construction signage; (f) estate signage; and (g) varied site boundary treatment comprising walls and fencing; and
- v. all associated site development works, including removal of some existing vegetation from the site in advance of construction works.

The proposed development will involve the construction of 28 dwelling units comprising of:

- Type A 3 x 1B2P Apartments 3 storeys (GF UD)
- Type B 14 x 2B4P (2 Storeys)
- Type B1 2x 3B6P (2 Storeys) GF Bedroom (UD)
- Type C 4 x 1B2P Apartments (GF UD)
- Type D 4 x 3B4P (2 Storeys)
- Type E 1 x 4B7P (2 Storeys) GF Bedroom and Sensory Room (UD)

The speed limit in the vicinity of the access point is 50km/h. Please refer to the proposed layout at **Figure 2.1** below.

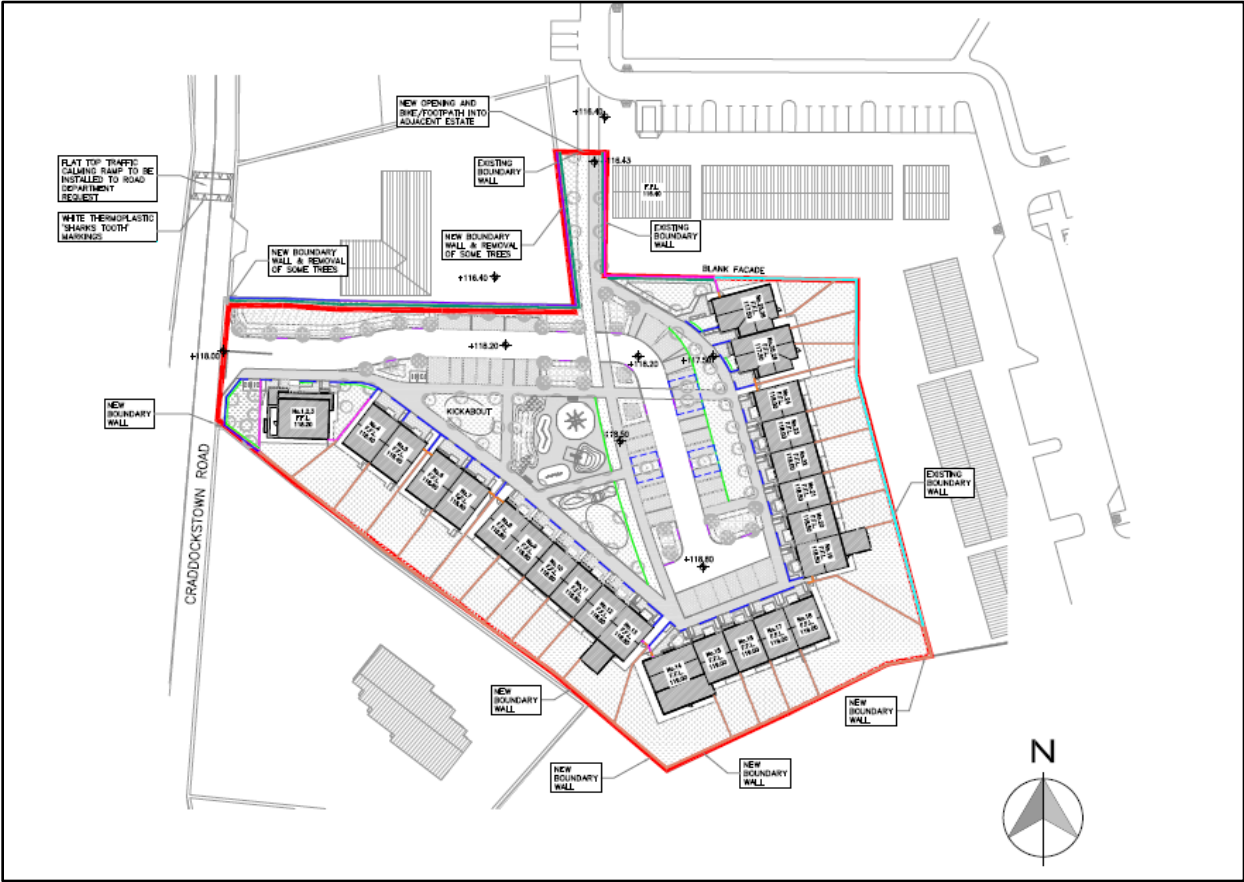


Figure 2.1: Site Layout (Source: Hayes Higgins Partnership)

3 Problems Raised from the Road Safety Audit

The following are problems and recommendations to address the safety issues associated with the proposal. The recommendations are proposed to the designer of the scheme to reduce any safety risks associated with it.

3.1 Collision History

Due to ongoing review of road traffic collision data by the Road Safety Authority website, no traffic collision data could be obtained for the vicinity of the proposed development site.

3.2 Potential Problems Identified

Problem No.01: Overgrown Vegetation

Location: Site Access/Egress Junction

The audit team observed during the site visit that overgrown vegetation along Craddockstown Road, where the proposed site access road is located, compromises visibility at the access junction. If the vegetation is not trimmed back, the line of sight for drivers and pedestrians exiting the proposed development may be obstructed, increasing the risk of accidents due to their inability to see approaching vehicles or pedestrians.



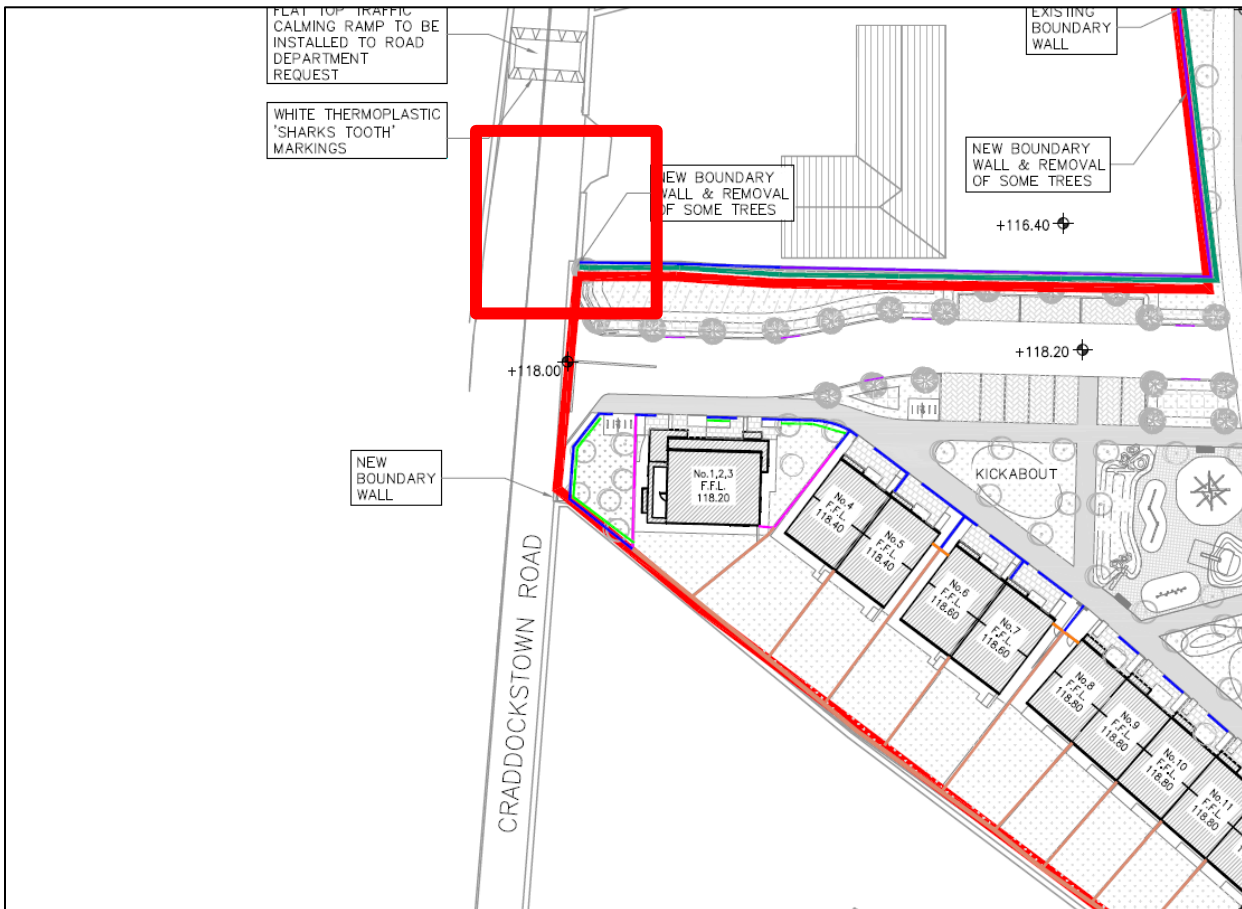
Recommendation:

The design team should ensure that overgrown vegetation along Craddockstown Road is removed to establish and preserve clear sightlines at the proposed site access junction, ensuring safety for drivers and pedestrians.

Problem No.02: Tie into the Existing Infrastructure

Location: Location Identified

The audit team notes from the site visit and the drawings provided that there is no existing footpath along Craddockstown Road at the location shown to link to the proposed surfaces. The audit team is concerned that vulnerable road users on the proposed footpath will have to walk onto the carriageway which could lead to collisions between vulnerable road users and vehicles.



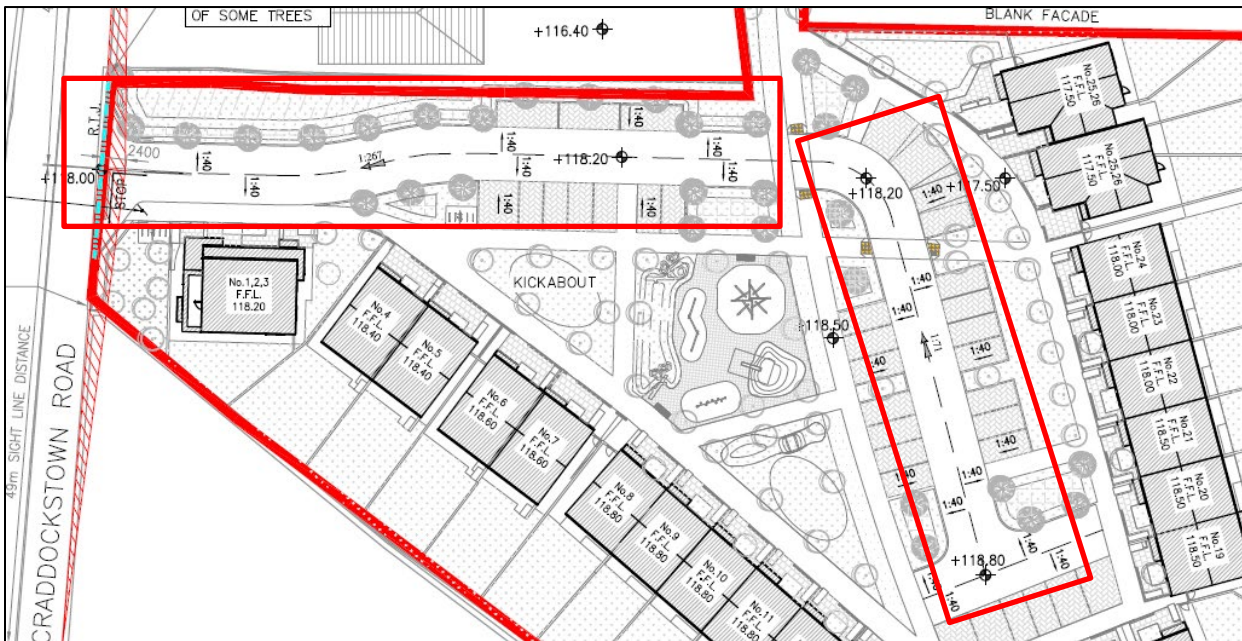
Recommendation:

The design team should clearly illustrate how the proposed surfaces integrate with the existing infrastructure along Craddockstown Road and ensure that they do not terminate at the edge of the carriageway, where uneven surfaces or proximity to oncoming traffic could create difficulties for pedestrians.

Problem No.03: Absence of Speed Control Measures

Location: Access Road

The audit team has observed from the provided drawings that there is no speed control measures along the length of the main access road. The lack of speed reduction features raises significant concerns regarding the potential for excessive vehicle speeds. This poses a heightened risk to vulnerable road users, such as pedestrians and cyclists, particularly in the event of a collision. The absence of adequate traffic calming infrastructure increases the likelihood of severe injuries among these road users, compromising overall safety within the development.



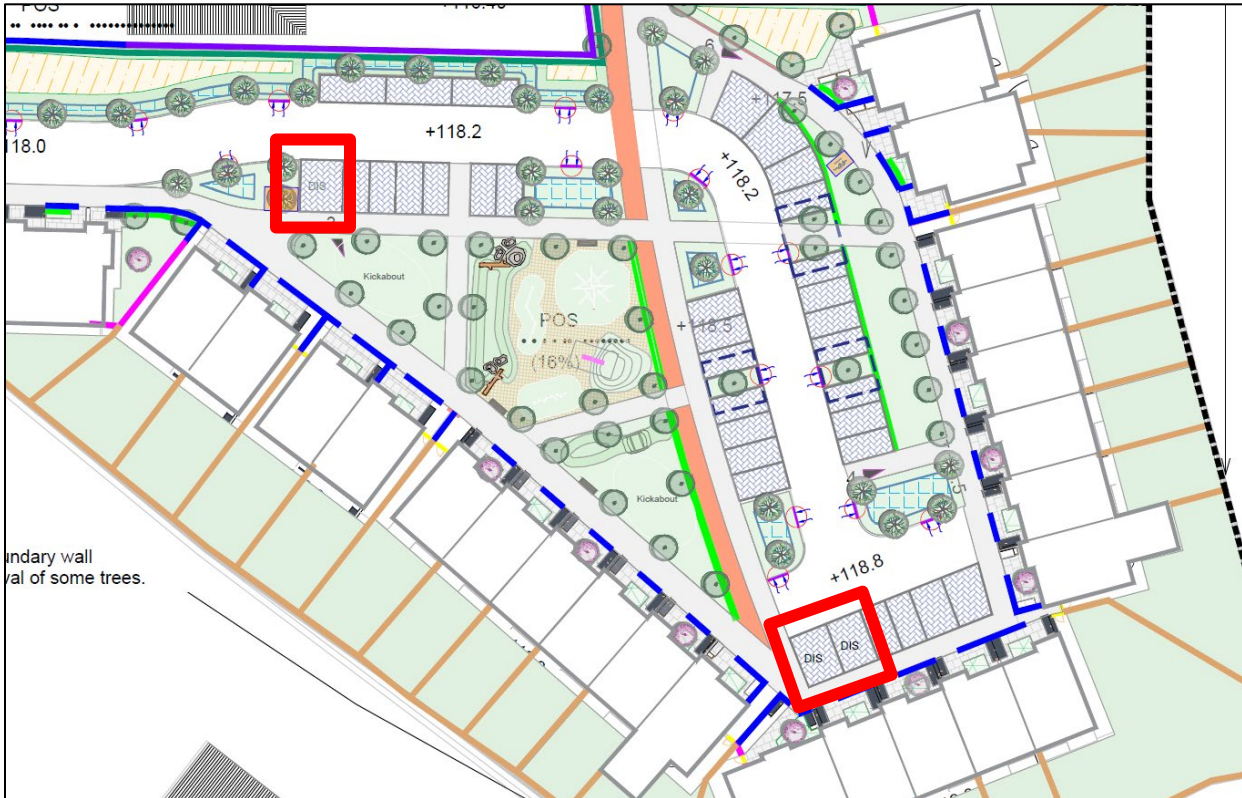
Recommendation:

The design team should ensure that appropriate speed control measures are incorporated within the development to reduced vehicular speeds.

Problem No.04: Accessibility of Disabled Parking Spaces

Location: Disabled Parking Spaces Identified

The audit team note from the drawings provided, that there is disabled parking spaces provided within development. It is not clear from the drawings provided if appropriate dropped kerbing is provided for these spaces at the locations identified below. The audit team are concerned that users of the spaces may not have access to the footpath and may use the closest road to access the footpath resulting in potential collisions between vehicles and vulnerable road users.



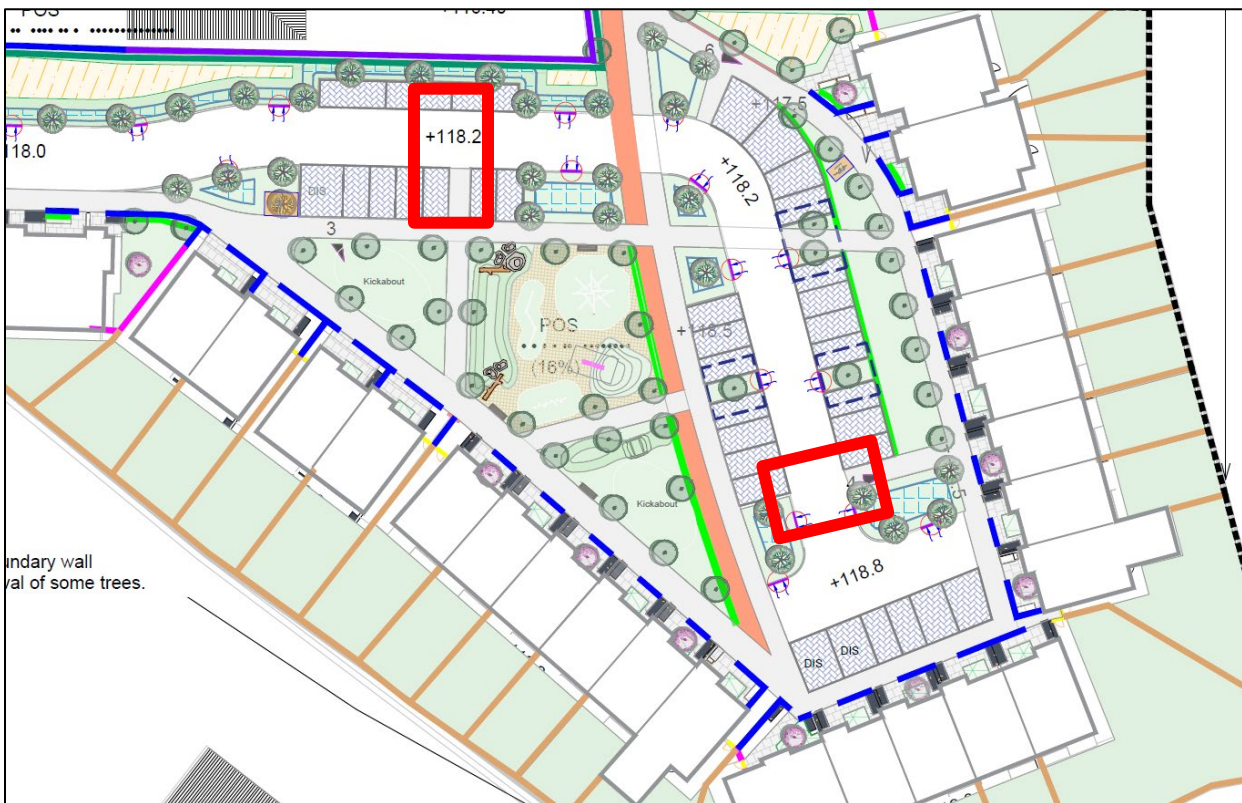
Recommendation:

The design team should provide adequate provision for users of the spaces to access the footpath safely.

Problem No.05: Pedestrian Permeability

Location: Locations Identified

The audit team notes from the provided drawings that the proposed concrete footpath terminates at an opening onto the vehicular carriageway between two car parking bays. It is unclear from the drawings whether this opening is intended to serve as a pedestrian crossing, as there is no corresponding footpath on the opposite side. Therefore, the audit team finds no clear purpose for this footpath opening directly onto the carriageway. Furthermore, this design could be misinterpreted by pedestrians as a crossing point, potentially leading them to enter the carriageway without a safe route, thereby increasing the risk of pedestrian-vehicle conflicts. The audit team is also concerned about visibility at the crossing point due to the close proximity to the parked vehicles.



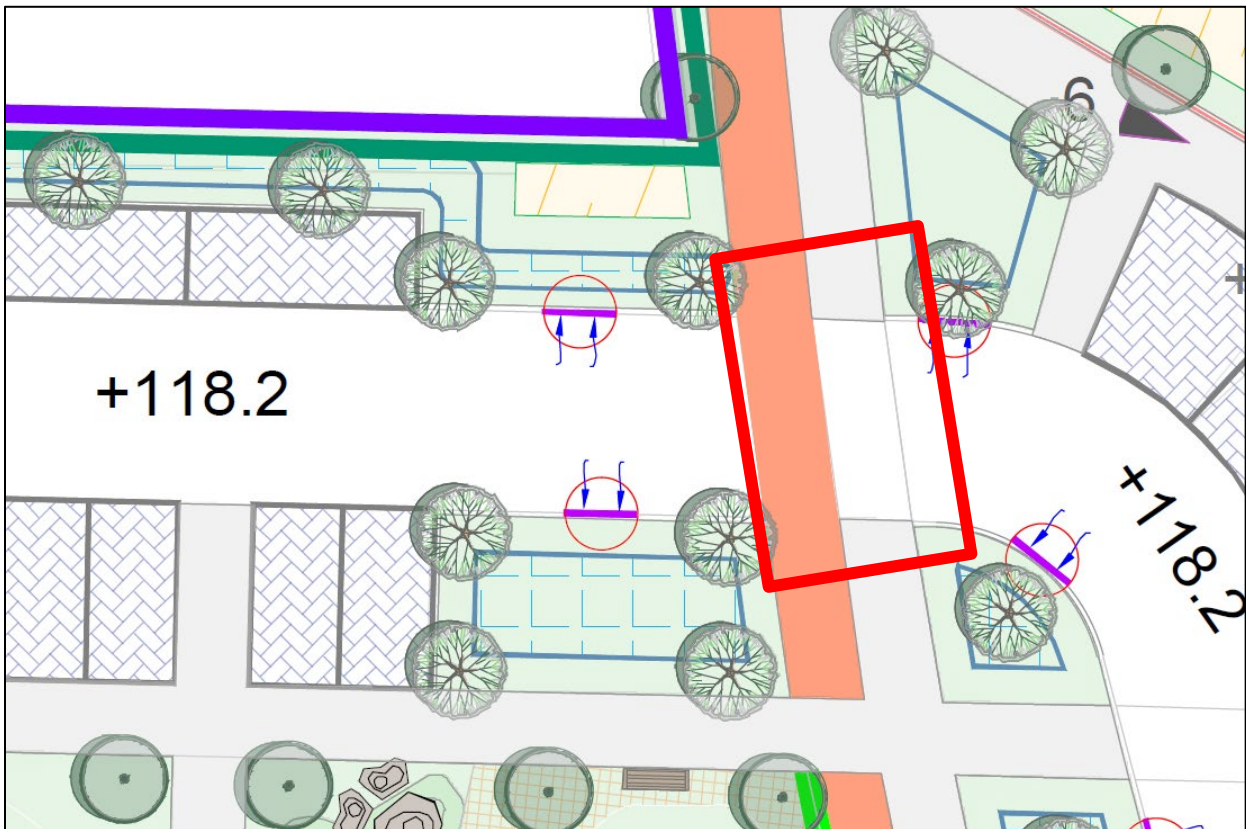
Recommendation:

The design team should revise the footpaths at the locations identified if it is not intended to use the footpaths as a crossing location and ensure that appropriate visibility can be achieved at all crossing locations.

Problem No.06: Lack of Safe Crossing Infrastructure

Location: Shared Pedestrian/Cycle Path on Vehicular Carriageway

The audit team notes from the provided drawings that the proposed Shared Pedestrian/Cycle Path intersects the vehicular carriageway without any controlled or uncontrolled crossing facility, appropriate warning signage, dropped kerbs or tactile paving. This design poses a significant safety risk, as pedestrians and cyclists may continue directly onto the carriageway without stopping, due to the absence of a designated crossing point. Without proper crossing infrastructure and warning signage, there is an increased likelihood of collisions between vehicles and pedestrians/cyclists.



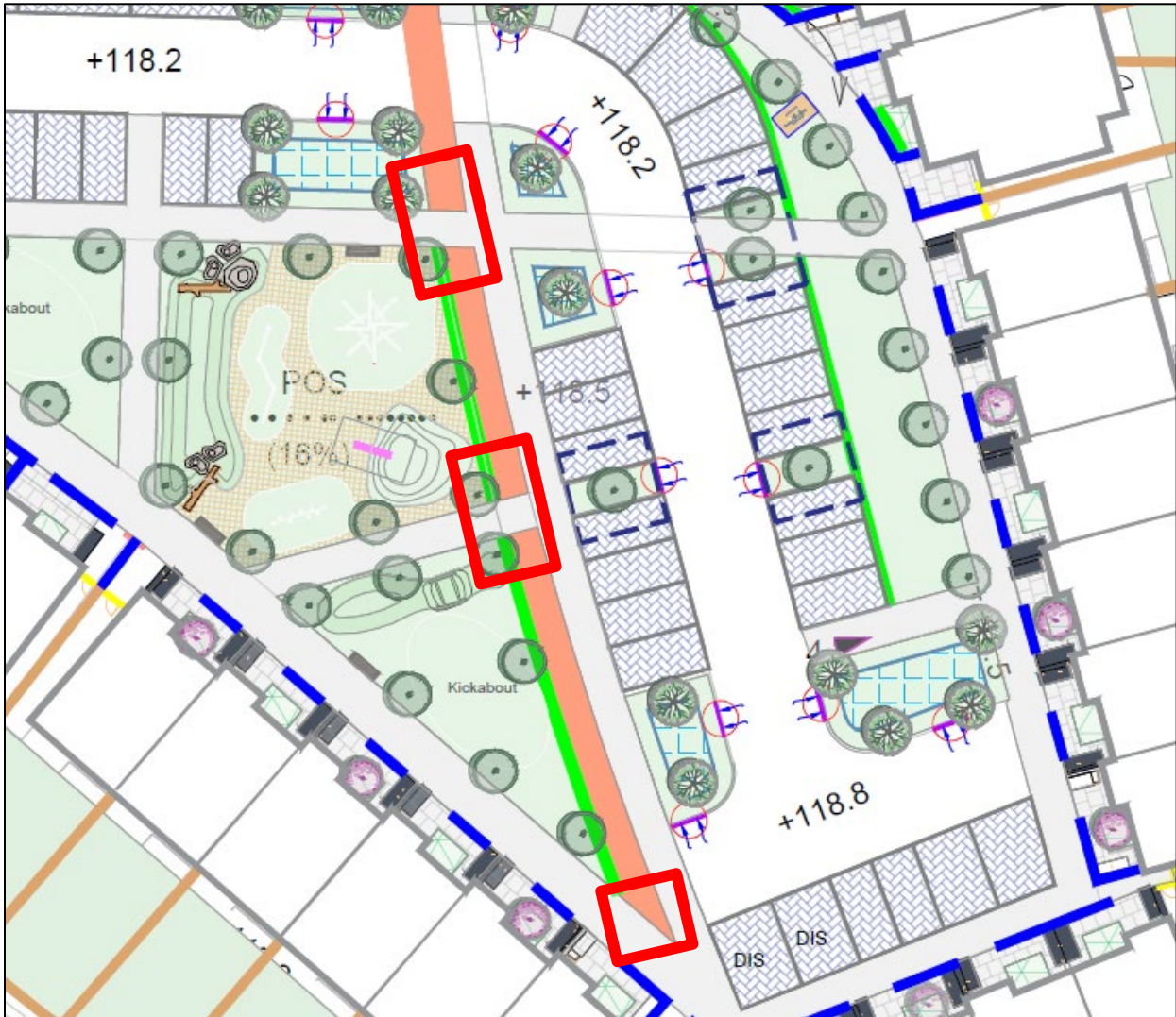
Recommendation:

The design team should ensure that this crossing location is appropriately designed including any raised areas, tactile paving and warning signage.

Problem No.07: Cycle Path/Footpath Intersection

Location: Locations Identified

The audit team notes from the provided drawings that the proposed cycle path crosses over the footpath at the locations identified. The Cycle Path intersects the footpath without any controlled or uncontrolled crossing facility, appropriate warning signage or tactile paving. This design poses a safety risk, to pedestrians as cyclists may continue directly onto the footpath without stopping, due to the absence of any warning.



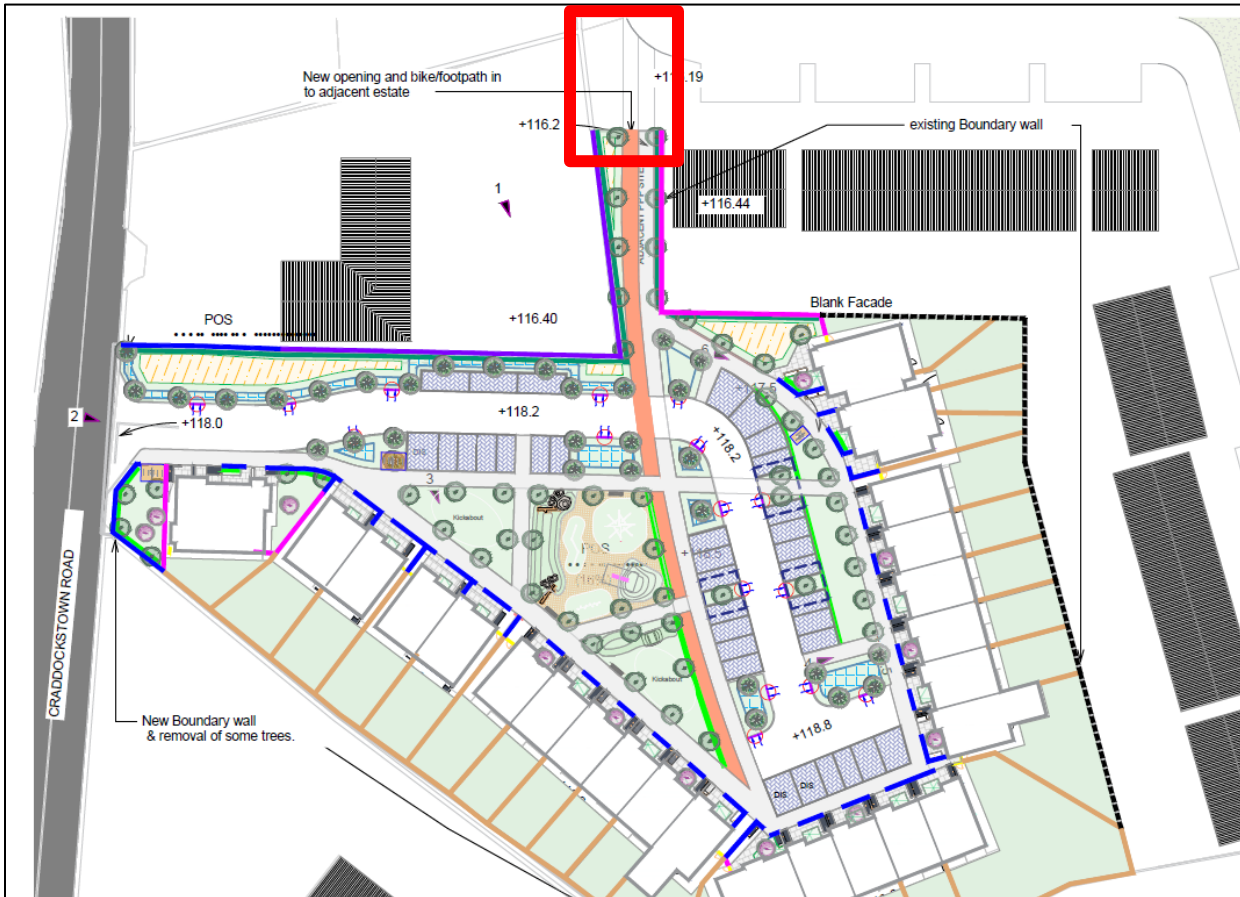
Recommendation:

The design team should ensure that this crossing locations is appropriately designed including any tactile paving and warning signage.

Problem No.08: Tie-in to Existing Cycle Path/Footpath

Location: Location Identified

The audit team note from the drawings provided that there are no details of the existing infrastructure that the scheme ties into at the location identified. Lack of an appropriate tie-in to the existing cycle path/footpath could lead to cyclists, pedestrians discharging into inappropriate infrastructure.



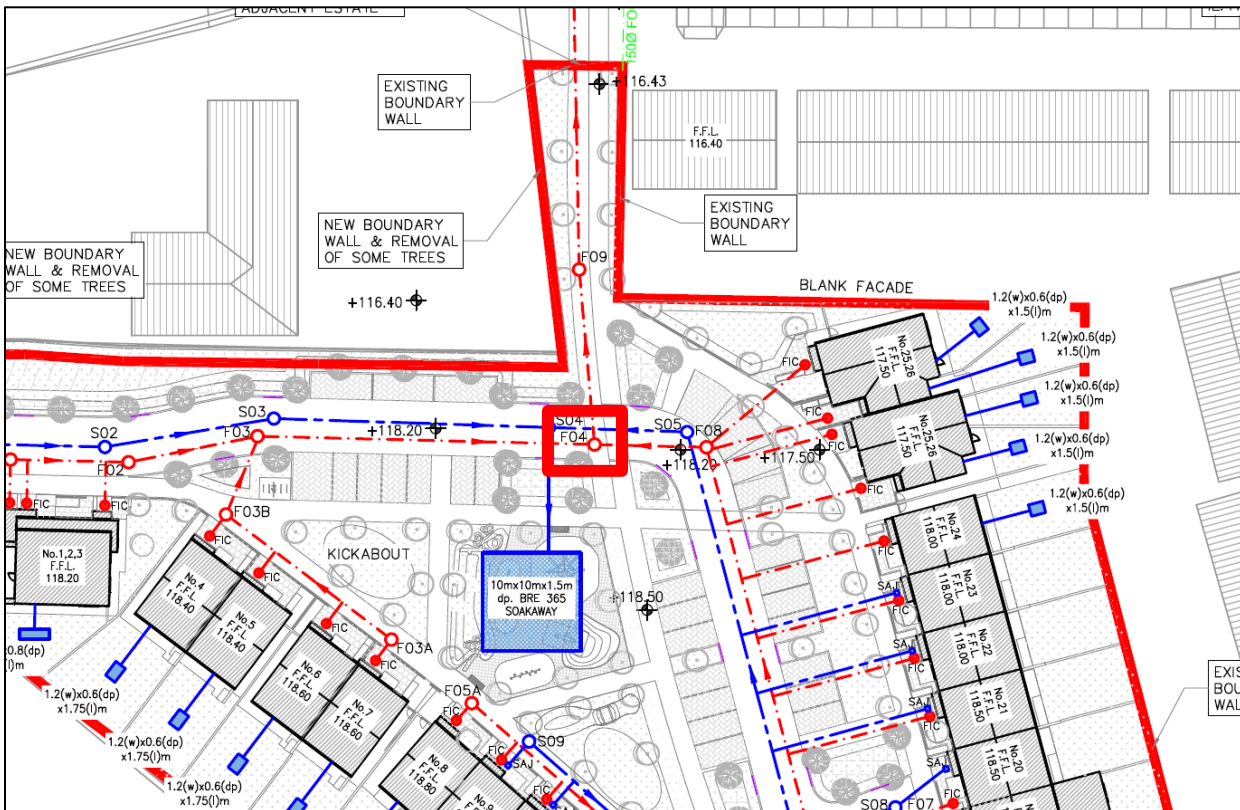
Recommendation:

The design team should provide appropriate details at the tie in location and any associated signage, markings and tactile paving.

Problem No.09: Manholes on Cycleway Crossing

Location: Location Identified

The audit team has observed from the provided drawings that proposed surface water and foul water manholes are located on the cycle path surface on the crossing at the location identified. If these manholes are not flush with the footpath or if their surfaces are uneven, they pose a significant tripping hazard for cyclists, particularly in wet conditions. This misalignment can lead to increasing the risk of falls and injuries to cyclists on the crossing.



Recommendation:

The design team should ensure that all manholes are installed flush with the surrounding footpath surface and apply a non-slip surface treatment on the manholes to enhance traction for cyclists, particularly in wet conditions.

3.3 General Problems Identified

Problem No.10: Signage and Road Markings

Location: Throughout Scheme

The audit team noted that there are no home zone signage, regulatory signage or road markings on the drawings provided. Signage and road markings aid in, informing road users of the direction of travel and the presence of vulnerable road users and ramps. The lack of adequate signage and road markings in this case may result in conflicts of vehicles with vulnerable users and vehicles with other vehicles.

Recommendation:

The design team should ensure that signage and road markings are provided in line with DMURS and the applicable Traffic Signs Manual.

Problem No.11: Lack of Dimensions

Location: Proposed Scheme

The audit team note from the drawings provided, that there is a lack of dimensions on the drawings. Roadway widths, corner radii, footpath widths are not detailed on the drawings. Inadequate infrastructure geometry may create an increased risk of potential conflicts for both vulnerable road users and motorists.

Recommendation:

The design team should ensure that adequate roadway widths, corner radii, footpath widths are detailed on the drawings.

Problem No.12 Public Lighting

Location: Throughout Scheme

The audit team note from the drawings provided that no public lighting was detailed for the development. Areas in low light conditions may result in slips, trips and falls on pedestrian paths. Drivers may not be able to see pedestrians in the internal road network and at pedestrian crossings which has the potential to lead to pedestrian – vehicle collisions resulting in, injuries to pedestrians.

Recommendation:

The design team should ensure that details and locations of all public lighting columns are provided for in the development and that the positioning does not cause any obstruction or hazard to vulnerable road users and that lighting is distributed uniformly throughout the development.

4 Audit Team Statement

We certify that we have examined the drawings listed in Appendix A and examined the site by means of a site visit. 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 issues that we have identified have been noted in the report, together with suggestions for improvement, which we recommend should be studied for implementation.

Audit Team Leader: Adam Price: BEng (Hons), CEng, MIEI
ORS

Signed:



Date: 15th of October 2024

Audit Team Member: Mark Gallagher, MIEI
ORS

Signed:



Date: 15th of October 2024

Audit Team Observer: Ankita Kirtane, B. Arch, MSc

Signed: Ankita Kirtane

Date: 15th of October 2024

Appendix A – Inspected Documents

The audit team reviewed the following drawings and documents provided by the Design Team:

- (1) 24D024_01_Rev B_Proposed Site Layout
- (2) 24D024_02_Rev B_Proposed Sight Line Layout
- (3) 24D024_03_Rev B_Proposed Drainage Layout
- (4) 24D024_07_Rev B_Proposed Swept Path Analysis Layout
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- (6) 1873 - Rev C - Craddockstown - KCC - RMDA-2 Boundary Plan
- (7) 23052-KCC-XX-XX-DR-A-1001-Proposed Site Plan-S1-P02

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Appendix B – Designer Response Form

Job: 240978 –Proposed Social Housing at Craddockstown, Naas, Co. Kildare
 Stage of Audit: Stage 1 Road Safety Audit
 Date Audit Completed: 11/10/2024.

Problem Reference in Safety Audit Report	To Be Completed by the Designer			To be Completed Audit Team Leader
	Problem Accepted (Yes/No)	Recommendation Accepted (Yes/No)	Alternative Option (Describe) (Only complete if recommendation not accepted)	Alternative Option Accepted by Auditors (Yes/No)
P1	YES	YES		
P2	YES	YES		
P3	YES	YES		
P4	YES	YES		
P5	YES	YES		
P6	YES	YES		
P7	YES	NO	THE DESIGNER TEAM DECIDED TO ELIMINATE THE CYCLE PATH IN THE LOCALS INDICATED, AS SHOWN	
P8	YES	YES		
P9	YES	NO	THE DESIGNER TEAM DECIDED TO ELIMINATE THE CYCLE PATH IN THE SECTION	
P10	YES	YES		
P11	YES	YES		
P12	YES	YES		

Signed:..... *Louise Mahony* Designer Date: 26/02/25.....

Signed:..... *[Signature]* Audit Team Leader Date: 13/03/2025....

Signed:..... *Dennise Kennedy (SEE)* Employer Date: 26/02/25.....

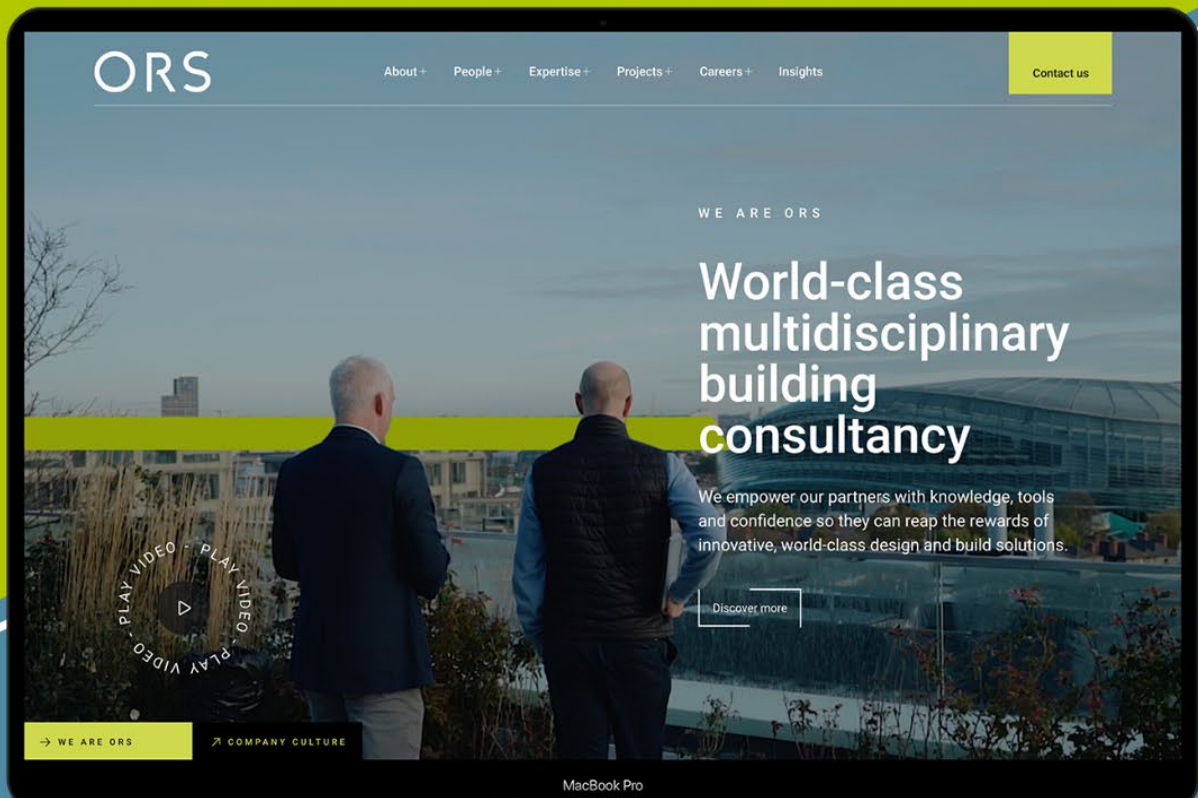
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