

Title: STAGE 1 ROAD SAFETY AUDIT

For;

Fosterstown development, R132, Swords, Co Dublin

Client: Waterman Moylan

Date: March 2022

Report reference: 1413R01

VERSION: FINAL (April 2022)

Prepared By:

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1.0 Introduction

This report was prepared in response to a request from Ms. Penelope Ingle, Waterman Moylan Consulting Engineers, for a Stage 1 Road Safety Audit of the proposed Fosterstown Development on the R132, Swords, Co Dublin.

The Road Safety Audit Team comprised of;

Team Leader: **Norman Bruton**, BE CEng FIEI, Cert Comp RSA.

TII Auditor Approval no. NB 168446

Team Member: **Daniel Pentony**, CEng MIEI PGDipPM

TII Auditor Approval no. DP3383505

The Road Safety Audit comprised an examination of the drawings provided and a site visit by the Audit Team, on the 4th of March 2022.

The weather at the time of the daytime site visit was dry and the road surface was dry.

This Stage 1&2 Road Safety Audit has been carried out in accordance with the requirements of TII Publication Number GE-STY-01024, dated December 2017.

The 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 to require action in order to improve the safety of the scheme for road users.

If any of the recommendations within this safety audit report are not accepted, a written response is required, stating reasons for non-acceptance. Comments made within the report under the heading of Observation are intended to be for information only. Written responses to Observations are not required.

A location map showing where each problem occurs is provided in **Appendix A**.

A list of the documents provided to the Audit Team is provided in **Appendix B**.

The feedback form to be completed by the Design Team Leader is provided in **Appendix C**.

2.0 Background

It is proposed to seek planning permission for a new development off the R132 at Fosterstown in Swords, Co. Dublin consisting of residential units, a creche, play area, outdoor gym and football pitches.

The existing R132 at this location is a wide single carriageway with one traffic lane northbound, 2 traffic lanes southbound and a bus lane in either direction. The speed limit is 60km/h.

The site location is shown below.



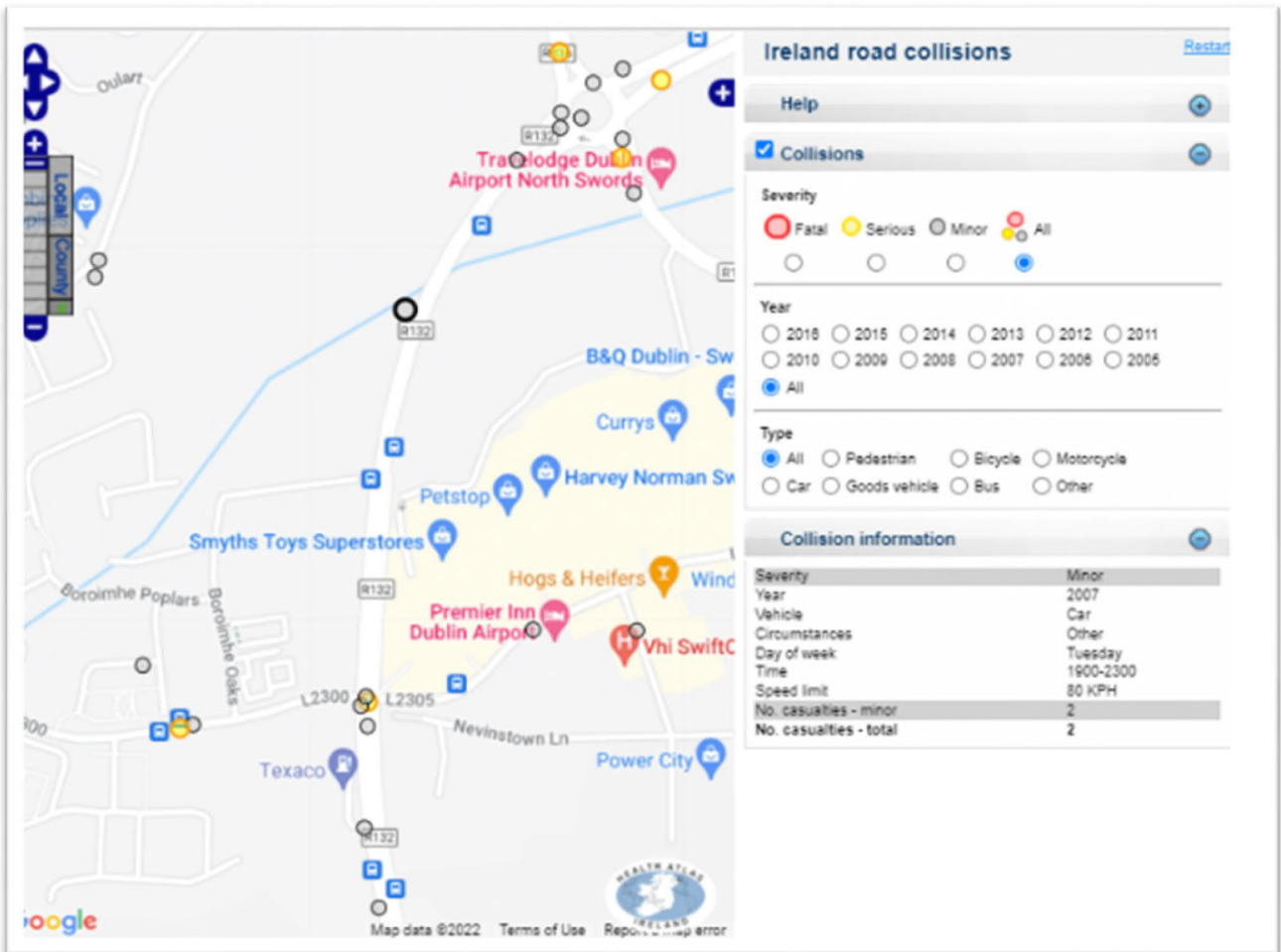
Site location Plan. (Image courtesy of openstreetmap.org)

STAGE 1 RSA – FOSTERSTOWN DEVELOPMENT, R132, SWORDS, CO DUBLIN



The Road Safety Authority’s website www.rsa.ie shows that there was one minor injury collision on the R132 in the 12-year period 2005 to 2016.

In addition, at the traffic signals south of the site there have been 3 minor injury collisions and 1 serious injury collision.



3.0 Issues Raised in This Road Safety Audit.

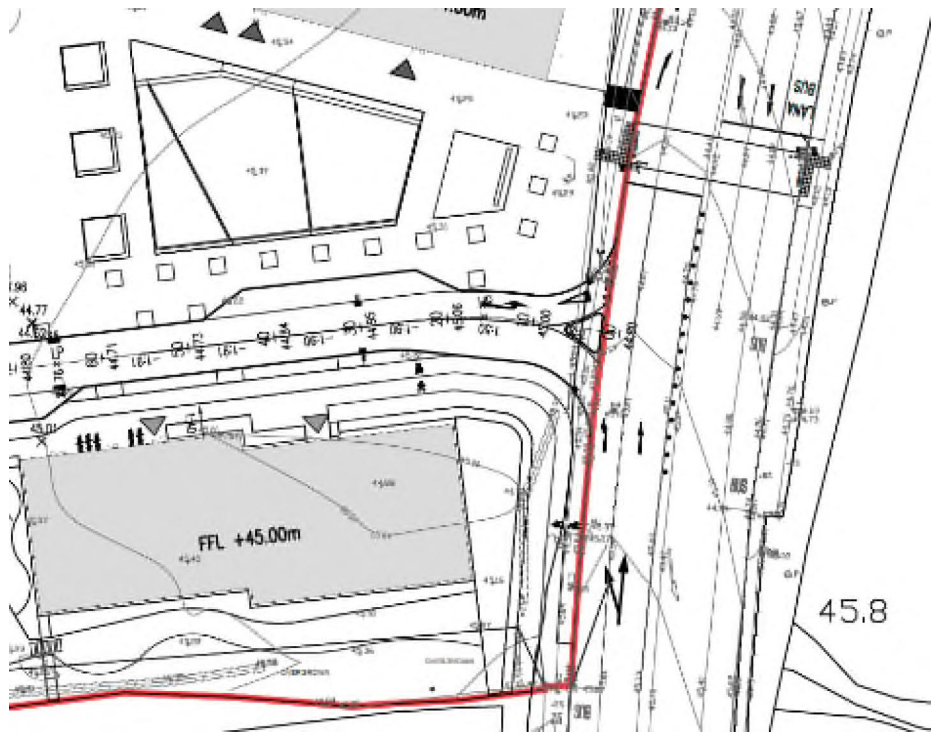
3.1 Problem

LOCATION

Drawing 17-062-P100

PROBLEM

The proposed Junction with the R132 is a left in / left out for use of vehicle solely on the R132 northbound direction. It appears pencil bollards are proposed to prohibit right turning vehicles entering the development from the southbound direction on the R132. The proposed junction design will result in vehicles doing U-turn maneuvers on the R132 or at the L2300/L2305 crossroads with the R132 leading to an increased risk of side-impact and rear-end collisions.



RECOMMENDATION

It is recommended that either;

1. The junction be upgraded to a signalised junction, or
2. The crossroads junction at the R132/L2300/L2305 be upgraded to permit and facilitate U turning manoeuvres.

STAGE 1 RSA – FOSTERSTOWN DEVELOPMENT, R132, SWORDS, CO DUBLIN

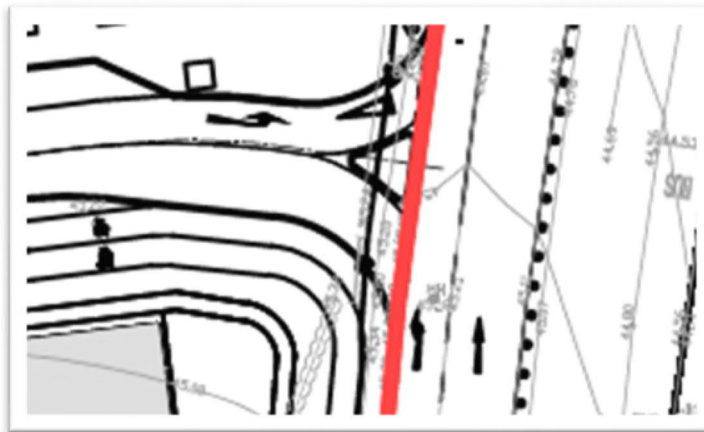
3.2 Problem

LOCATION

Drawing 17-062-P100

PROBLEM

The proposed junction with the R132 does not include for a pedestrian/cyclist crossing. The left in / left out arrangement will have high vehicle turning speeds off/onto the R132 resulting in an increased risk of vulnerable road user/vehicular collision.

*RECOMMENDATION*

It is recommended that a pedestrian/cyclist crossing be provided through the R132 junction.

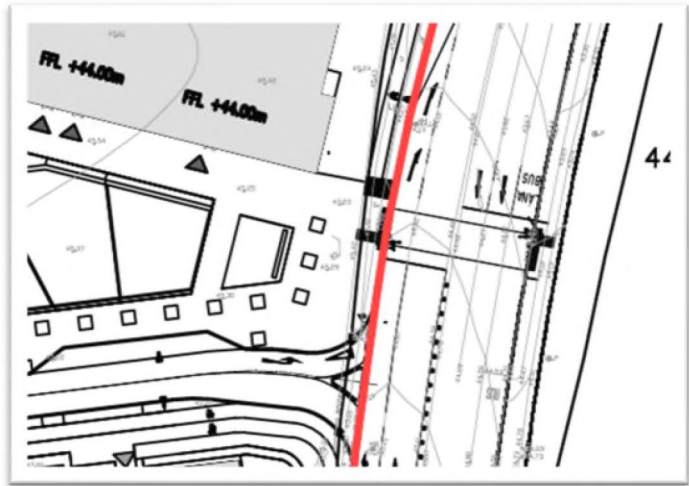
3.3 Problem

LOCATION

Drawing 17-062-P100

PROBLEM

The proposed yield merge arrangement from the development onto the R132 will be used as an acceleration lane. Drivers will be focused on looking to their right to check for through traffic and may collide with crossing pedestrians.



RECOMMENDATION

It is recommended that the junction layout be amended to require vehicles to stop at the R132 and to tighten the junction corner radii.

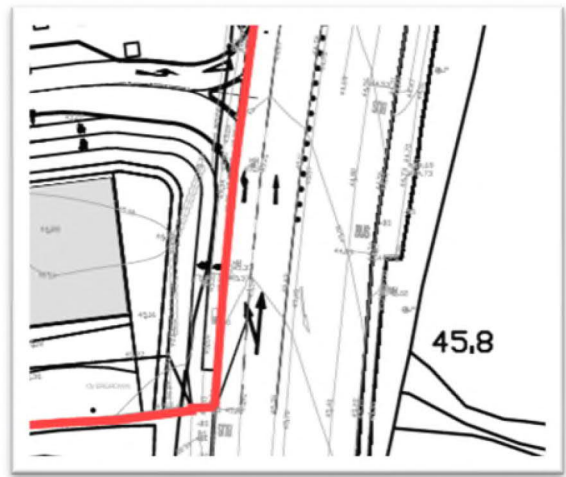
3.4 Problem

LOCATION

Drawing 17-062-P100

PROBLEM

The proposed exit off the R132 into the development will have high turning speeds due to the nature of the left turn junction. This could increase the likelihood of pedestrian/vehicular collisions.



RECOMMENDATION

It is recommended that the junction be amended to;

- reduce high turning speeds into the development by removing the parallel left turn lane, and
- permit the bus lane all the way through the junction with a dashed bus lane road marking section for left turning cars to enter.

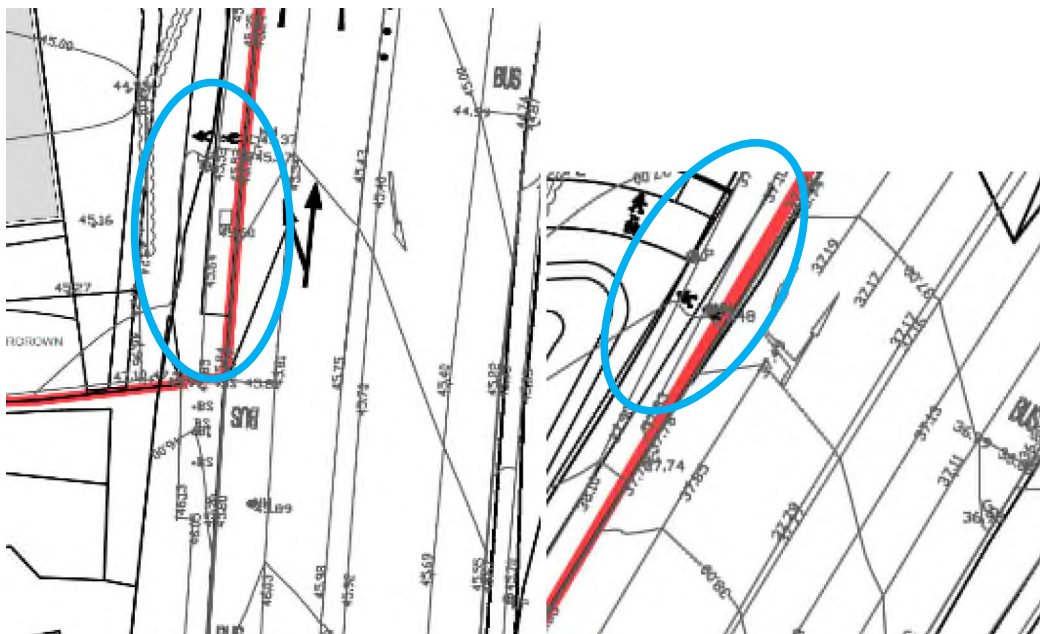
3.5 Problem

LOCATION

Drawing 17-062-P100

PROBLEM

The proposed cycle lane has no transition details at either the northern or southern end of the R132 onto the existing footpath. A lack of transition detail could result in pedestrian/cyclist collisions at the transition points.



RECOMMENDATION

It is recommended that the appropriate transition details including ladder & tramline tactile paving be provided.

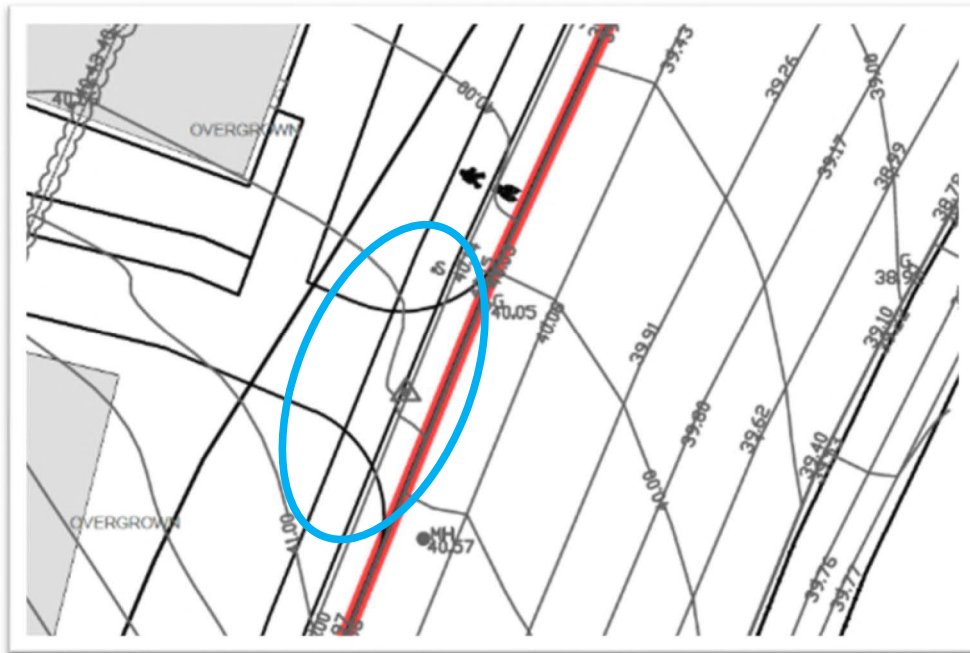
3.6 Problem

LOCATION

Drawing 17-062-P100

PROBLEM

It appears an emergency access point from the R132 is located to the north end of the site. It is unclear whether pedestrian & cyclists have priority at this location. Vehicles on the R132 may mistake this as an access point to the development increasing the risk of vulnerable road user/vehicular collision if they enter by mistake.



RECOMMENDATION

It is recommended that the footpath and cyclist facilities are continuous through the access.

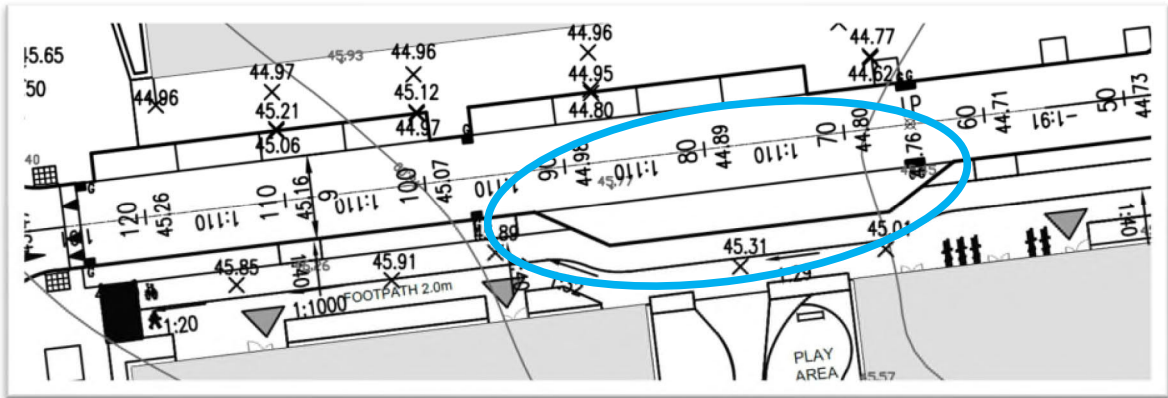
3.7 Problem

LOCATION

Drawing 17-062-P100

PROBLEM

Bus Lay-bys are provided at locations within the development. The cycle lane is adjacent to the lay-by and there is a risk pedestrians exiting the bus may collide with cyclists.



RECOMMENDATION

It is recommended that a buffer zone be provided for to allow pedestrians exit the buses safely.

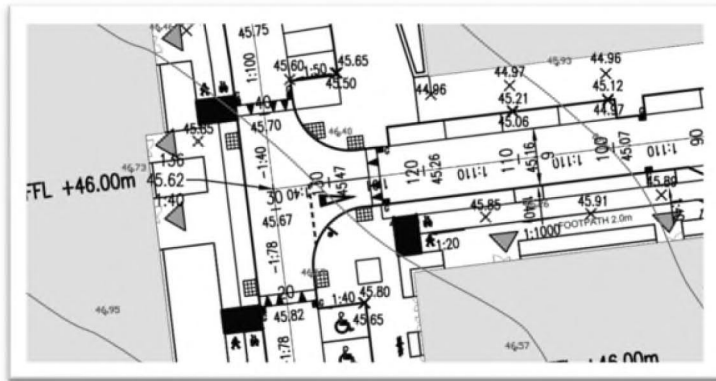
3.8 Problem

LOCATION

Drawing 17-062-P100

PROBLEM

The proposed internal priority junction is a yield. A yield style junction will encourage higher turning speeds which increase the likelihood of vehicular/pedestrian collisions at the adjacent crossing points.



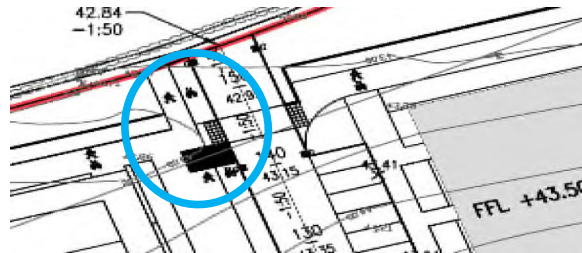
RECOMMENDATION

It is recommended that the junction type be changed to a 'STOP' priority junction.

4.0 Observations

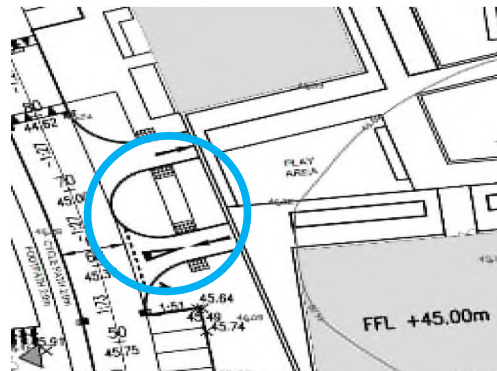
4.1 Observation

An assumed future connection, the shared surface returns back to a segregated footway and cycleway. A ladder and tramline detail is missing at this location with the adjacent detail appearing quite close to the crossing point.



4.2 Observation

The entry / exit into the play area appears to be a basement style entrance. It is assumed the pedestrian crossing will not be on a steep slope into a basement.





5.0 Audit Statement

We certify that we have examined the site on the 4th March 2022. The examination has been carried out with the sole purpose of identifying any aspects of the design which could be added, removed or modified in order to improve the safety of the scheme.

The problems identified have been noted in this report together with associated safety improvement suggestions which we would recommend should be studied for implementation. The audit has been carried out by the persons named below who have not been involved in any design work on this scheme as a member of the Design Team.

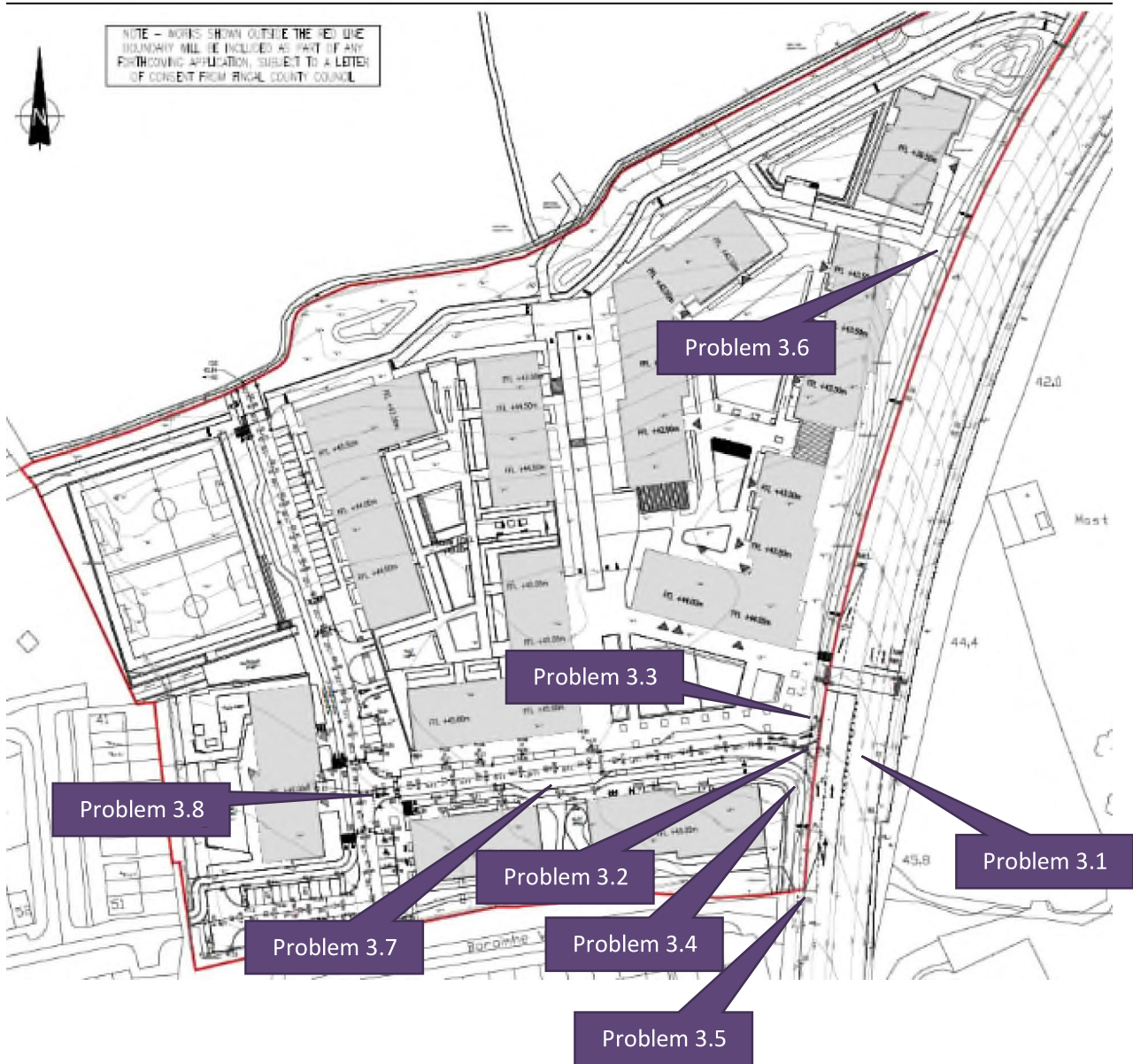
Norman Bruton Signed: 

(Audit Team Leader) Dated: 5/4/2022

Daniel Pentony Signed: 

(Audit Team Member) Dated: 5/4/2022

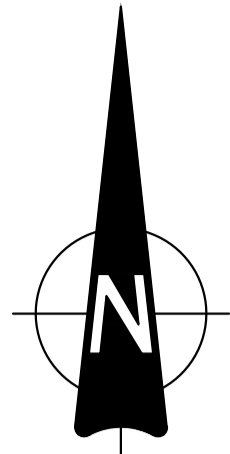
Appendix A – Problem Location Map



Appendix B

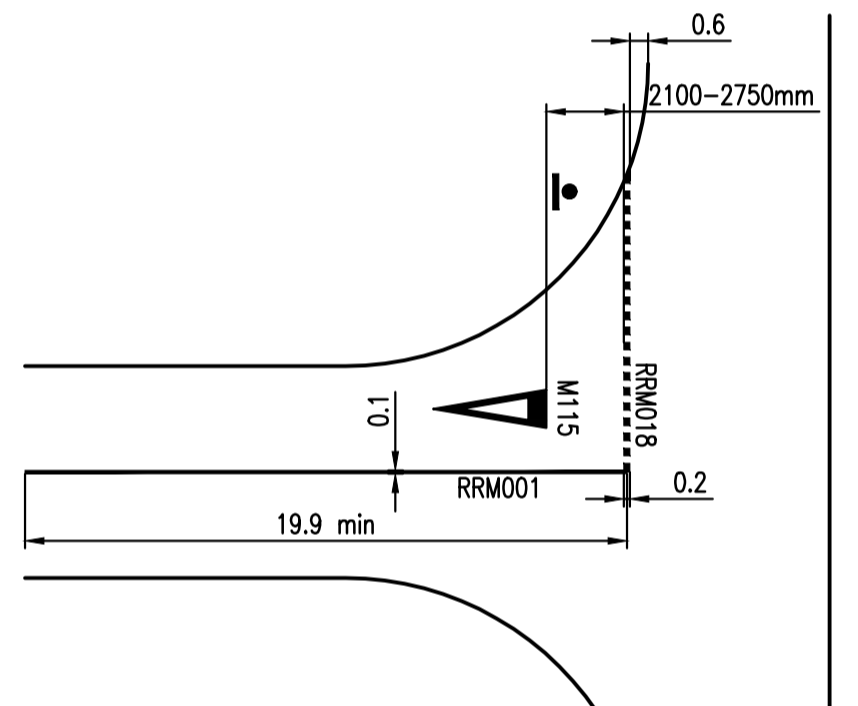
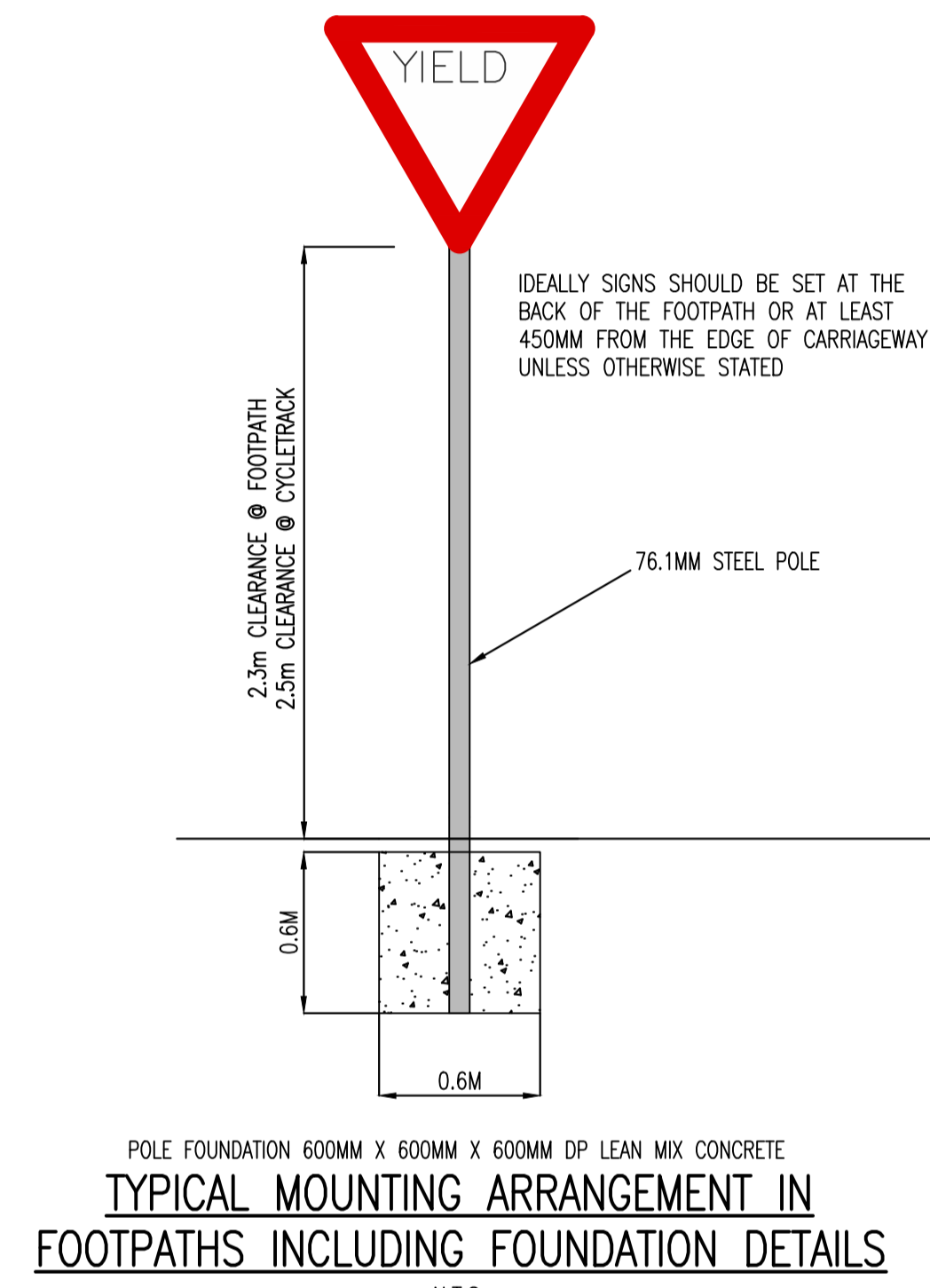
Information Supplied to the Audit Team

- Drawing 17-062-P100
- Drawing 17-062-P110
- Drawing 17-062-P110

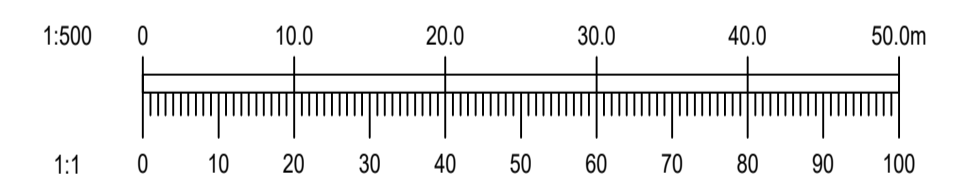


- NOTES:
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NOTE – WORKS SHOWN OUTSIDE THE RED LINE BOUNDARY WILL BE INCLUDED AS PART OF ANY FORTHCOMING APPLICATION, SUBJECT TO A LETTER OF CONSENT FROM FINGAL COUNTY COUNCIL



1 March 2022
-- DRAFT --
 Penelope Ingle 13:01



REV.	DATE	AMENDMENT	DRN	APPD
01	02/22	FIRST ISSUE	PW	EC

STATUS: **FOR PLANNING ONLY
NOT FOR CONSTRUCTION**

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 Email: info@waterman-moylan.ie www.waterman-moylan.ie

CLIENT: MURLYN (INVESTMENTS) LIMITED
 ARCHITECT: PCOT ARCHITECTS

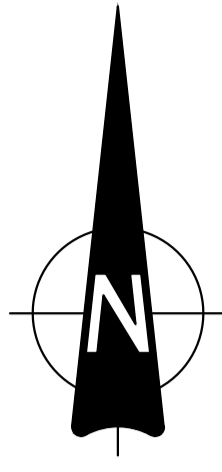
PROJECT: FOSTERTOWN SOUTH SHD
 FOSTERTOWN, SWORDS, Co. DUBLIN

TITLE: ROAD MARKINGS & SIGNAGE ON SITE

DRAWN PW	DESIGNED EC	APPROVED JG	DATE FEB. 2022
SCALE 1:500 @ A1	JOB NO. 17-062	DRG. NO. P110	REVISION -

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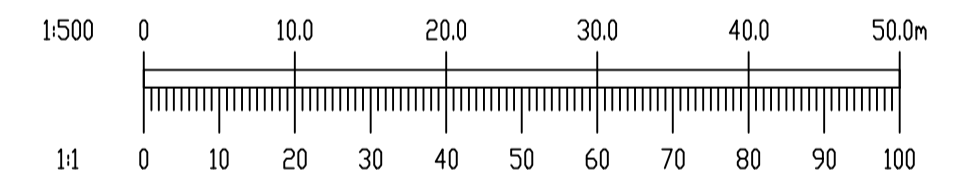


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LEGEND	
	SITE BOUNDARY
XX.XX	PROPOSED ROAD LEVEL
XXX	PROPOSED CHAINAGE
1/XXX	PROPOSED ROAD GRADIENT
FFL	PROPOSED FINISHED FLOOR LEVEL
XX.XX	PROPOSED FINISHED FLOOR LEVEL



1 March 2022
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 Penelope Ingle



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02/22	FIRST ISSUE	PW	EC
REV. DATE	AMENDMENT	DRN	APPD

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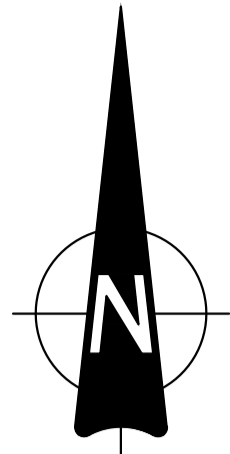
CLIENT **MURLYN (INVESTMENTS) LIMITED**
 ARCHITECT **PCOT ARCHITECTS**

PROJECT **FOSTERSTOWN SOUTH SHD
FOSTERSTOWN, SWORDS, Co. DUBLIN**

TITLE **PROPOSED ROADS LAYOUT & LEVELS**

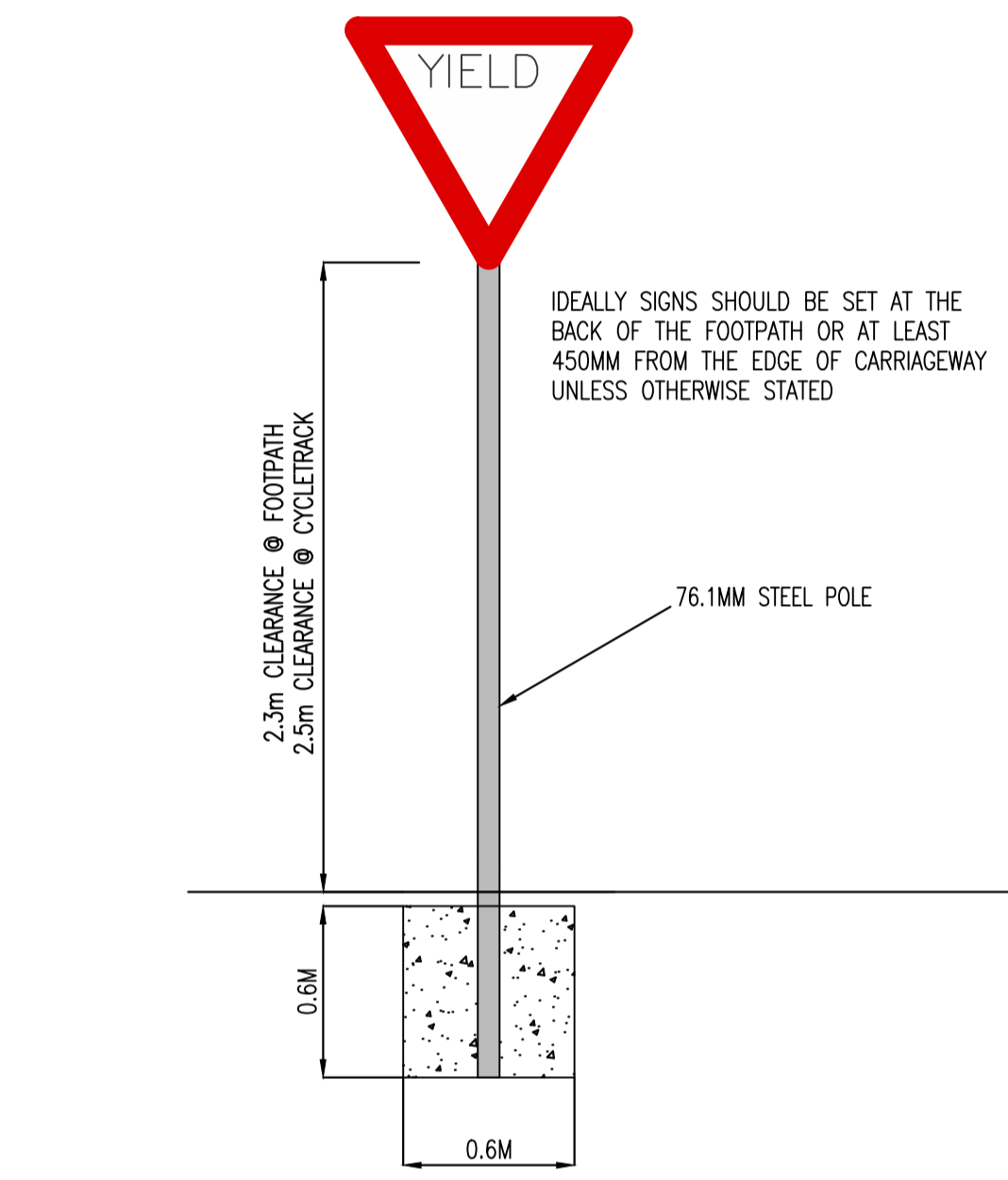
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SCALE 1:500 @A1	JOB NO. 17-062	DRG. NO. P100	REVISION -

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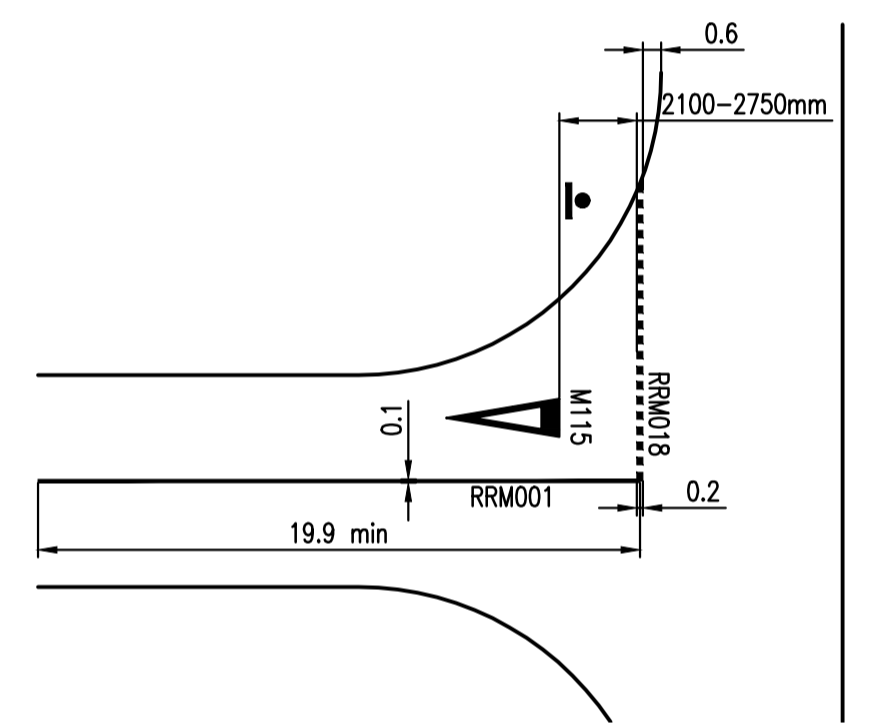


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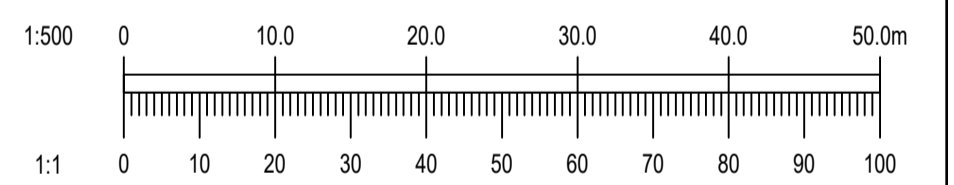
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POLE FOUNDATION 600MM X 600MM X 600MM DP LEAN MIX CONCRETE
TYPICAL MOUNTING ARRANGEMENT IN FOOTPATHS INCLUDING FOUNDATION DETAILS
N.T.S.



PRIORITY CONTROLLED YIELD JUNCTION DETAIL
SCALE 1:250



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CLIENT **MURLYN (INVESTMENTS) LIMITED**
ARCHITECT **PCOT ARCHITECTS**

PROJECT **FOSTERSTOWN SOUTH SHD
FOSTERSTOWN, SWORDS, Co. DUBLIN**

TITLE **ROAD MARKINGS & SIGNAGE ON SITE**

DRAWN PW	DESIGNED EC	APPROVED JG	DATE FEB. 2022
SCALE 1:500 @ A1	JOB NO. 17-062	DRG. NO. P110	REVISION —

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1 March 2022
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Penelope Ingle 13:01



Appendix C

Feedback Form

ROAD SAFETY AUDIT FORM – FEEDBACK ON AUDIT REPORT

Scheme: Fosterstown Development, Swords, Co Dublin

Stage: Stage 1 Road Safety Audit

Date Audit (Site Visit) Completed: 04-03-2022

Paragraph No. in Quality Audit Report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measures (describe)	Alternative measures accepted by Auditors (Yes/No)
3.1	YES	NO	See response to item 3.1 below.	Yes
3.2	Yes	Yes See revised drawing attached.		Yes
3.3	Yes	Yes See revised drawing attached.		Yes
3.4	Yes	Yes See revised drawing attached.		Yes
3.5	Yes	Yes See revised drawing attached.		Yes
3.6	Yes	Yes See revised drawing attached.		Yes
3.7	No	These are not a bus layby's they are laybys for deliveries/set-down.		Yes
3.8	Yes	Yes See revised drawing attached.		Yes

Signed *James Coulwell*
Design Team Leader

Date 06/04/2022

Signed *Norman Bawton*
Audit Team Leader

Date...5/4/2022....

Signed
Employer/Developer

Date

Response to item 3.1 Vehicles travelling southbound will have to leave the R132 at the Pinnock Hill roundabout and travel around Airside to the R132 at Boromihe. Vehicle exiting the proposed development who wish to travel southbound towards Dublin will be able to turnaround at the Pinnock Hill Roundabout to access the southbound side of the R132. In the event that this junction is upgraded to a signal controlled junction (currently proposed by Fingal County Council) those wishing to travel southbound can turn right in to airside and travel through Airside to the R132 at Boromihe. Vehicles arriving from the north will turn left at Pinnock Hill roundabout and travel through Airside. Details of the routes are presented in Figure 1 below.



Figure 1 – Access Routes for Southbound Traffic Entering/Exiting the Development