

Title: **PRELIMINARY DESIGN STAGE QUALITY AUDIT**  
**For;**  
**Leydens Wholesalers & Distributors Dublin, No. 158A**  
**Richmond Road**

Client: **DBFL Consulting Engineers**

Date: **February 2023**

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VERSION: **FINAL**

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## 1.0 Introduction

This report was prepared in response to a request from Mr. Thomas Jennings, DBFL Consulting Engineers, for a Quality Audit of the proposed mixed use development at Leyden's Wholesalers & Distributors Dublin, No. 158A Richmond Road, Dublin 3, D03 YK12.

The Quality Audit has been carried out in accordance with the guidance in the Design Manual for Urban Roads and Streets (DMURS), produced by Department of Transport Tourism and Sport in March 2013 and as updated in June 2019.

This portion of the Quality Audit is a design stage audit and includes a Stage 1 Road Safety Audit (in accordance with TII Publication GE-DTY-01024, dated December 2017), an access audit, a walking audit and a cycling audit (i.e. aspects of a quality Audit carried out independent of the Design Team and generally included as appendices to the overall Audit)

The Road Safety and Quality Audit Team comprised of;

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

**TII Road safety Auditor approval number: NB 168446**

Team Member: **Mark Kelly**, BAI (Hons) MA MSc PGradDip CEng MIEI

**TII Approval Number: MK 279758**

This portion of the Quality Audit involved the examination of drawings and other material and a site visit by the Audit Team, on the 2nd of February 2023. The weather at the time of the site visit was dry and the road surface was also dry.

The problems raised in this Quality Audit may belong to more than one of the categories of Audit named above. A table has been provided at the start of Section 3 of this report detailing which category of audit each problem is associated with.

Recommendations have been provided to help improve the quality of the design with regard to the areas described above. A feedback form has also been provided for the designer to complete indicating whether or not he/she will accept those recommendations or provide alternative recommendations for implementation.

The information supplied to the Audit Team is listed in **Appendix A**.

The feedback form is contained in **Appendix B**.

A plan drawing showing the problem locations is contained in **Appendix C**.

## 2.0 Background

### OVERVIEW

The proposed development consists of: a Large-scale Residential Development (LRD) comprising of 133 No. residential units, including artist studios, a creche, retail unit and a gym and other ancillary works at Richmond Road, Drumcondra, Dublin 3.

The proposed development provides ancillary residential amenities and facilities such as 25 No. car parking spaces including 13 No. electric vehicle parking spaces, 2 No. mobility impaired spaces and 3 No. car share spaces; a set down space; loading area; bicycle parking spaces; motorcycle parking spaces; electric scooter storage and all associated works above and below ground.

Richmond Road is currently a single carriageway road with a speed limit of 50km/hr. It varies in cross section and has footpaths on both sides west of the development but only on the northern side, East of the development.

Improvement works to Richmond Road are also proposed including carriageway widening up to c. 6 metres in width, the addition of a c. 1.5 metre wide one-way cycle track/lane in both directions, the widening of the northern footpath on Richmond Road to a minimum of c. 1.8 metres and the widening of the southern footpath along the site frontage which varies from c. 2.2 metres to c. 4.9 metres, in addition to a new signal controlled pedestrian crossing facility,

**Figure 2-1** below illustrates the proposed plan layout of the proposed development (Source: DBFL Drawing No. 210178-DBFL-RD-SP-DR-C-1200).

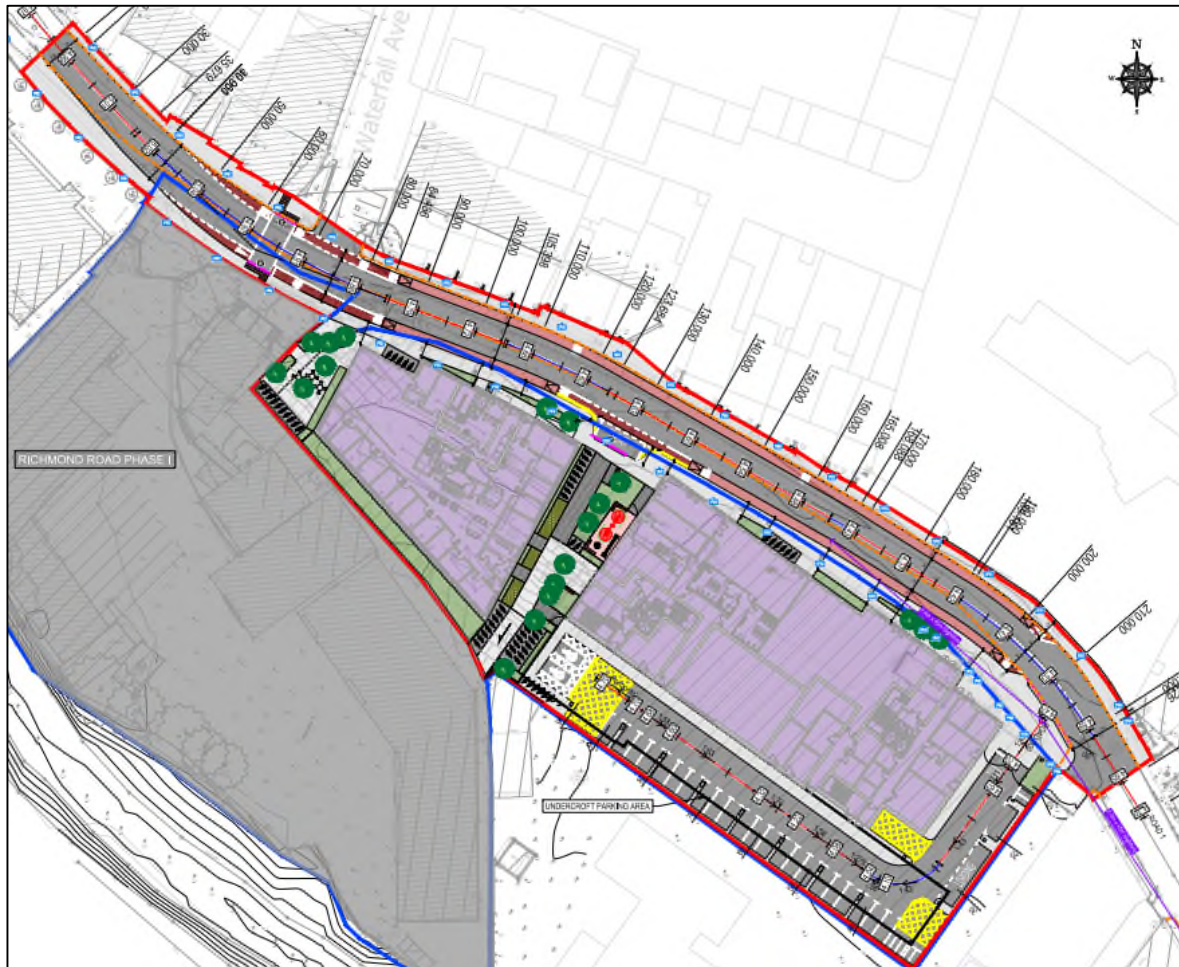


FIGURE 2-1: PROPOSED DEVELOPMENT SITE LAYOUT

## SITE ACCESS

The subject development will benefit from direct vehicular access onto Richmond Road as presented in **Figure 2-2** below. The proposed site access will be located to the west of the Distillery Lofts and the Stables Apartment complex access. The access will take the form of a priority-controlled junction onto Richmond Road.

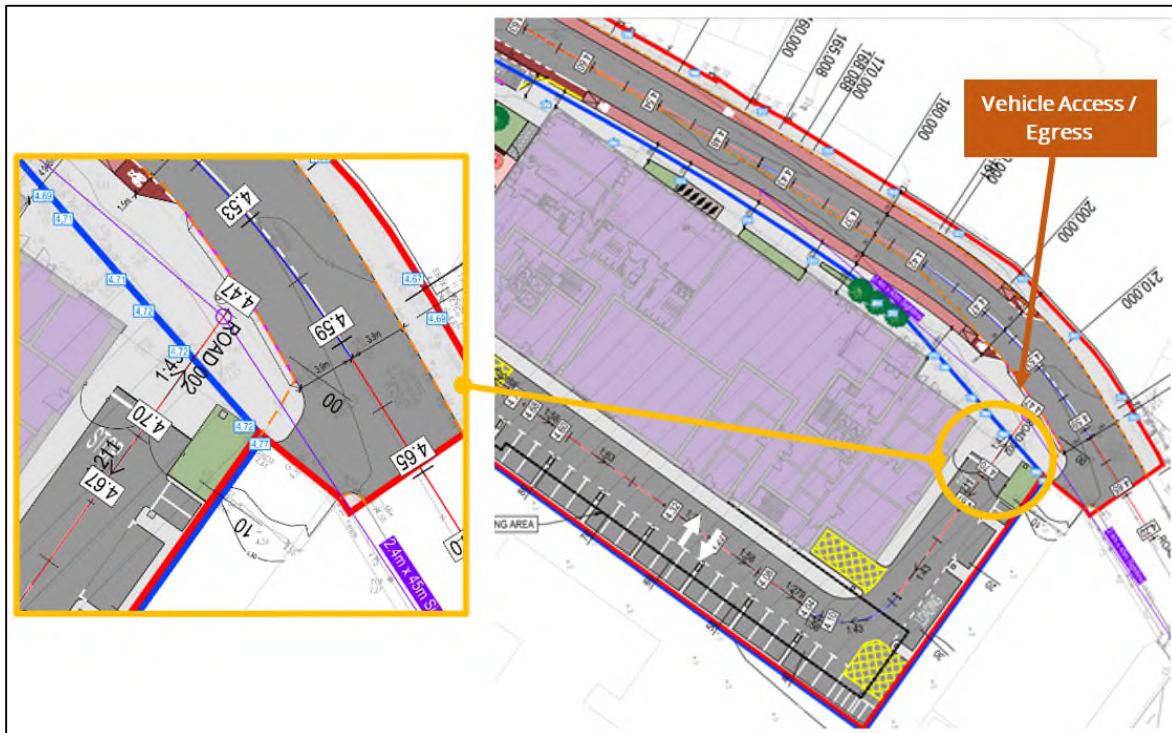


Figure 4-2: Proposed Developments Vehicle Access on Richmond Road

## 3.0 Issues Identified in this Quality Audit

Summary Table of Problem Categories

Problem No.	Road Safety	Pedestrian	Cycle	Accessibility
G1	X	X	X	X
G2	X	X	X	
G3	X	X	X	
S1	X	X		
S2	X	X	X	
S3	X	X		X
S4	X		X	
S5		X		X
S6	X		X	
S7	X			X
S8	X	X	X	

Table 3.1

## ITEMS RAISED DURING THIS PRELIMINARY DESIGN STAGE QA

### GENERAL PROBLEMS AT MULTIPLE LOCATIONS

#### Problem G1 - Street lighting

The drawings provided for the purpose of this audit do not detail any upgrades or relocation of the current street lighting columns within the scheme and along the new pedestrian footpaths. In the absence of appropriate street lighting, safety issues such as trip hazards could arise for pedestrians and dark spots on the carriageway which could lead to road collisions.

#### Recommendation:

During the detailed design stage, appropriate levels of internal (and external along any new pedestrian / cycle connections if necessary) lighting should be provided across all pedestrian, cycle and vehicle routes. The location of the street lighting columns should also be carefully considered to ensure that they do not impact access levels or present a hazard.

#### Problem G2 – Surface Drainage

From the scheme information provided for this audit it has not been possible to ascertain the specific details of the surface drainage strategy. Surface water can prove a slip hazard in both warm and cold



weather conditions in addition to adversely impacting the skid resistance of bicycles and motorised vehicles.

**Recommendation:**

During the detail design stage ensure adequate measures are taken to ensure that the scheme has sufficient drainage and that localised ponding does not arise during wet weather conditions. All access routes leading to/from the subject site should have adequate surface water drainage.

**Problem G3 – Servicing Arrangement**

The auditors are unclear about the servicing arrangements (refuge collections) for the proposed development. Inappropriate practices in regard to; (i) temporary wheelie bin storage at surface level (e.g. temporary transfer area) which could block pedestrian and vehicle routes and (ii) refuge vehicles access requirements and the potential for reversing in areas were conflicts with other vehicles, cyclists and pedestrians may arise.

**Recommendation:**

The designers should confirm the arrangements being considered for refuge collections for the subject site, associated bin storage (permanent/temporary on day of collection) and refuge vehicle access/egress arrangements to all bin storage areas. A swept path analysis along the proposed servicing route should be undertaken.



## PROBLEMS AT SPECIFIC LOCATIONS

### Problem S1 – No Tactile Paving at uncontrolled crossing

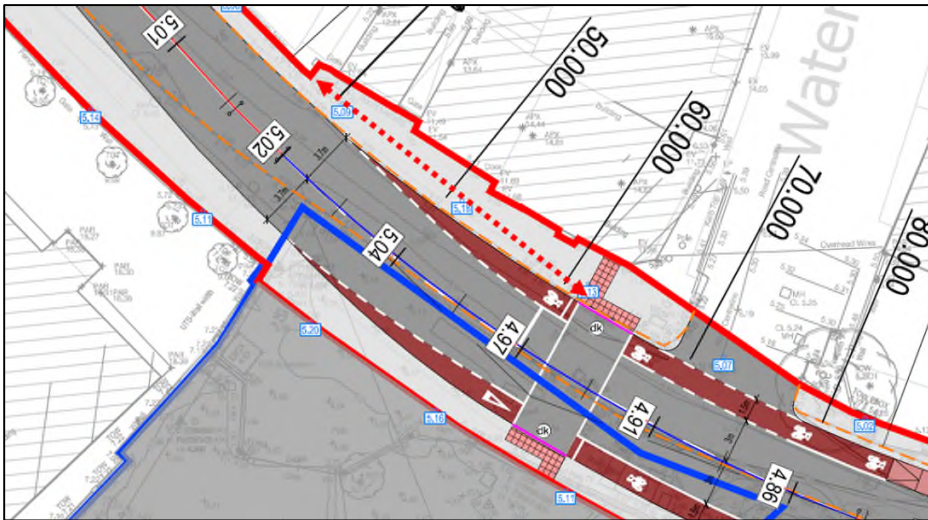
It is proposed to provide a signalised pedestrian crossing to bring pedestrians across Richmond Avenue to the continuous footpath on the northern side. There is however no tactile paving and only partially dropped kerbs at the crossing at the mouth of Waterfall Avenue. This could lead to blind or partially sighted pedestrians not realising that there is a hazard ahead and they may inadvertently stray into the Richmond Road carriageway where they would be at greater risk of being struck by a passing vehicle.

#### Recommendation:



### Problem S2 – Visibility at Signalised Pedestrian Crossing

Visibility to the right for pedestrians wishing to cross Richmond Road at the proposed signalised crossing location is limited by a built out wall. Eastbound vehicle speed were observed to be relatively high at the time of the site visit. A lack of inter-visibility between pedestrians and vehicle drivers could lead to collisions.



#### Recommendation:

It is recommended that traffic calming measures be provided on Richmond Road to ensure slow traffic speeds. A raised crossing may be one such measure.

### Problem S3 – Insufficient width of Proposed Footpath

The width of the proposed footpath at the pinch north of the proposed signalised crossing appears quite tight. There were no legible dimensions for auditors to decipher the minimum width proposed. If the footpath width is less than 1.8m, it could lead to pedestrians experiencing difficulty when two people pass each other, particularly for wheelchair users and with buggies.



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#### Recommendation:

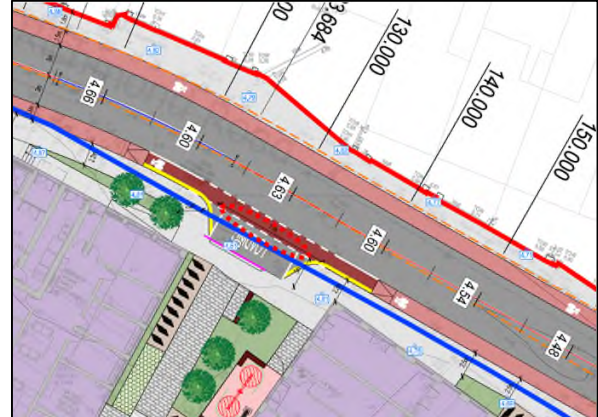
The designers should ensure that an appropriate footway width in accordance with (i) the requirements of DMURS and (ii) the anticipate pedestrian volumes is provided.

#### Problem S4 – No buffer between the loading bay and the cycle lane

A buffer has not been provided between the loading and the northbound cycle lane. The auditors have concerns that loading vehicle operators may open their door to on-coming cyclists, resulting in potential serious injuries.

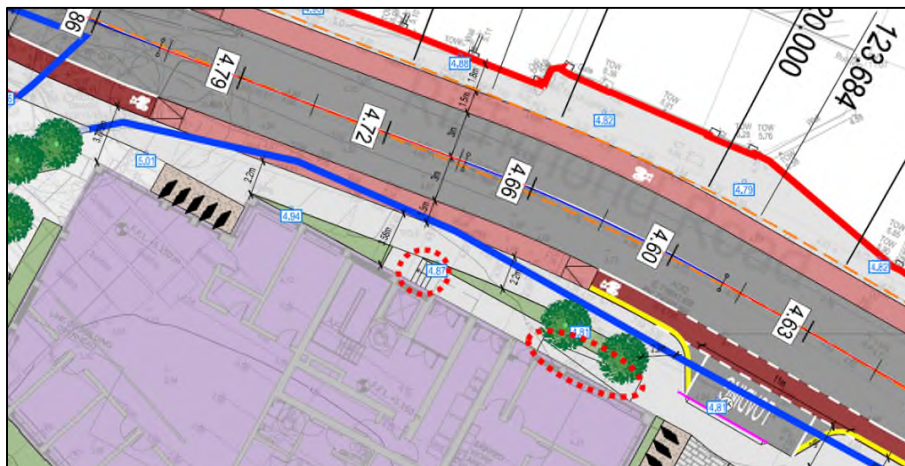
##### Recommendation:

The auditors recommend a buffer is provided between the loading bay and the northbound cycle lane. This buffer may be provided by road markings, which should encourage suitable kerbside loading while providing sufficient distance between the loading bay and the cycle lane.



#### Problem S5 – Steps on pedestrian links

It is unclear to the auditors what the proposed levels for the pedestrian links to the proposed development are to be. It appears that steps are proposed at a pedestrian access to the development, which may limit its use by mobility impaired users. Mobility impaired users may have a longer journey to reach their homes depending on their origin.



##### Recommendation:

It is recommended that pedestrian links without steps be provided throughout the scheme to cater for all users (particularly mobility impaired users).



**Problem S6 – Site access visibility splay.**

The auditors note that visibility splays have been provided for a 50kph road with no bus routes, as per DMURS guidance. The auditors have concerns that if future bus routes are provided on Richmond Road that sufficient visibility splay will not be achievable and may result in vehicular collisions.

**Recommendation:**

It is recommended visibility splays for a 50kph Road with bus routes, as per DMURS guidance, are provided to future proof the proposed site access.



**Problem S7 – Vehicular accesses to houses.**

It is unclear to the auditors what kerb heights are proposed for the cycle track and pedestrian route adjacent to the vehicular accesses to houses along Richmond Road. Failure to provide suitable kerb heights/access to the houses may result in material damage to vehicles or damage to the pedestrian or cycle facilities which may result in trips or falls.



**Recommendation:**

The design team should clarify the cross section/detail for the pedestrian and cycle route adjacent to the houses access on Richmond Road. Suitable transitions/kerb heights should be provided.

**Problem S8 – Vehicular accesses to Charthouse Business Centre.**

During the site visit, the auditors noted an HGV exiting the Charthouse Business Centre. It is unclear to the auditors the kerb heights proposed for the cycle track and pedestrian route adjacent to the vehicular access to Charthouse Business Centre. Failure to provide a suitable access treatment may result in material damage to vehicles or damage to the pedestrian or cycle facilities which may result in trips or falls.

**Recommendation:**

The design team should clarify the access treatment proposed at the Charthouse Business Centre. Suitable transitions/kerb heights should be provided.



## 4.0 Quality Audit Statement

This portion of the Quality Audit has been carried out in accordance with the guidance given in DMURS and takes into consideration the principles approaches and standards of that Manual.

The quality 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: Norman Bruton

(Quality Audit Team Leader) Dated: 17-2-2023

Mark Kelly

Signed: Mark Kelly

(Quality Audit Team Member) Dated: 17-2-2023

## Appendix A

### List of Material Supplied for this Quality Audit;

- 210178- DBFL-RD-Sp-Dr-C-1200 Roads layout
- For info – Richmond Road Phase 1 Road Safety Audit



## Appendix B

### Feedback Form

**QUALITY AUDIT FEEDBACK FORM**
**Scheme:** Leydens Wholesalers & Distributors Dublin, No. 158A

**Audit Stage:** Preliminary Design Stage Quality Audit

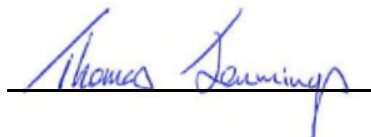
**Date Audit Completed:** 2<sup>nd</sup> February 2023

To be Completed By Designer				To be Completed by Audit Team Leader
Problem No. in QA 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)
<b>G1</b>	Yes	Yes		
<b>G2</b>	Yes	Yes		
<b>G3</b>	Yes	Yes	All waste collections are to be undertaken off-road within the developments under-croft area as per the planning authority's request. An internal HGV turning area and parking area is provided within the undercroft area. On waste collection days the management company will arrange for the waste bin's to be transferred from the 4 no. permanent store rooms to the internal transfer area to facilitate efficient loading to the waste collection lorry. The requested vehicle swept path analysis is detailed in drawing 210178-DBFL-TR-SP-C-1103.	<b>Yes</b>
<b>S1</b>	Yes	Yes		
<b>S2</b>	Yes	Yes		
<b>S3</b>	Yes	No	The scheme presented in the submitted development proposals is an interim tie-in (between existing street alignment and improvement works by applicant across its site frontage) until such time that DCC implements its works as part of the Richmond Road corridor enhancements. This existing footpath at its narrowest section is 1.3m wide. Due to third party boundary constraints to the north AND south of the Richmond Rd corridor it has not been possible for the applicant to widen this specific off-site section of the northern footpath without narrowing the southern footpath to less than the 2.0m wide (at this narrowest point at Deakin Court). The southern footpath experiences the larger number of pedestrian traffic in addition to it leading to a new active travel connection to/from the proposed Tolka River Greenway (along the eastern boundary of Deakin Court as part of a separate SHD application on the adjoining Phase 1 plot). It is subsequently considered a greater priority to retain the 2m width at the southern footpaths pinch point (adjoining position of	<b>Yes</b>

To be Completed By Designer				To be Completed by Audit Team Leader
			proposed active travel link to Tolka Greenway) than in the short term increase the width of the 1.3m wide northern footpath. The northern footpath will be widened at the time when the local authority is advancing its own proposals (identified as a specific roads objective in the DCC Development Plan) for the Richmond Road enhancement works beyond that being delivered by the subject development proposals. The local authority will be made away of the auditors concerns thereby informing the design of the Richmond Road enhancement works being delivered by DCC in the future.	
<b>S4</b>	Yes	Yes		
<b>S5</b>	Yes	No	The internal ground floor level of proposed development is being designed at a higher level to the existing road carriageway in part in response to long term flooding events of the adjoining Tolka River. Whilst pedestrian steps are proposed to the west of the Block A entrance / exit point an alternative route incorporating a ramp of appropriate gradient and width is provided to the east of the buildings entrance / exit point to accommodate the access requirements of mobility impaired users. The replacement of the proposed steps with a second ramp treatment is not possible without adversely impacting upon the width of the 'public' footpath which is to be adopted and managed by the local authority.	<b>Yes</b>
<b>S6</b>	Yes	Yes	Visibility Splays of 49m as per DMURS guidance can be provided to approaching vehicles should buses be rerouted along the Richmond Road corridor sometime in the future.	
<b>S7</b>	Yes	Yes		
<b>S8</b>	Yes	Yes	The existing macadam surfacing treatment is to be replaced with a raised reinforced concrete footpath (with bevel edge) which affords priority to pedestrians and required vehicle drivers to yield to vulnerable road users. In the context of the modest volume of vehicle movements traveling to/from this small business park and overriding policy context to prioritise active travel uses this approach is considered a safer design solution.	

Signed:

Designer:



Date: **13<sup>th</sup> February 2023**

**Employer:**

  
\_\_\_\_\_

**Date:** 13<sup>th</sup> February 2023

**Audit Team Leader:**

  
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**Date:** 14 -2 2023

## Appendix C

### Problem Location Plan.

