

**Title: Stage 1 DMURS Quality Audit,
Incl. Stage 1/2 Road Safety Audit
For;
Proposed Development at Lehaunstown, Cherrywood.**

Client: Dun Laoghaire Rathdown County Council.

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1.0 Introduction

This report was prepared in response to a request from Mr. Mark Richardson, PUNCH Consulting Engineers on behalf of Dun Laoghaire Rathdown County Council for a Stage 1 Quality Audit including Stage 1/2 Road Safety Audit for a proposed development at Lehaunstown, Cherrywood, Co. Dublin.

The Audit Team comprised of

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

TII Auditor Approval no. NB 168446

Team Member: **Owen O'Reilly**, B.SC. Eng Dip Struct. Eng NCEA Civil Dip Civil. Eng CEng FIEI

TII Auditor Approval no. OO 1291756

The Audits involved the examination of drawings and other material provided and a site visit by both team members, on the 15th of April 2024. The weather at the time of the site visit was dry and the road surface was damp.

The 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 Stage 1 (Preliminary Design) 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 including Advice Notes. The Quality Audit is composed of a number of distinct audits which include an Accessibility 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).

Many issues raised in the Road Safety Audit would also be raised in the various aspects of the Quality Audit, however to avoid repetition items that are common to more than the Road Safety Audit have been included in a table at the start of Section 3.0 of this report.

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 these audits 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.

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

It is proposed to construct a residential development in Lehaunstown Cherrywood. The site is located to the east of Grand Parade and to the south of Lehaunstown Lane.

Grand parade is constructed to the signalised junction with Gun and Drum Hill. There is a temporary signal arrangement as the number of movements are restricted until the junction is fully opened.

The junction arm leading to this proposed development is constructed but the connecting road is not. The site extent does not include the link road to Grand Parade or the link to Lehaunstown Lane.

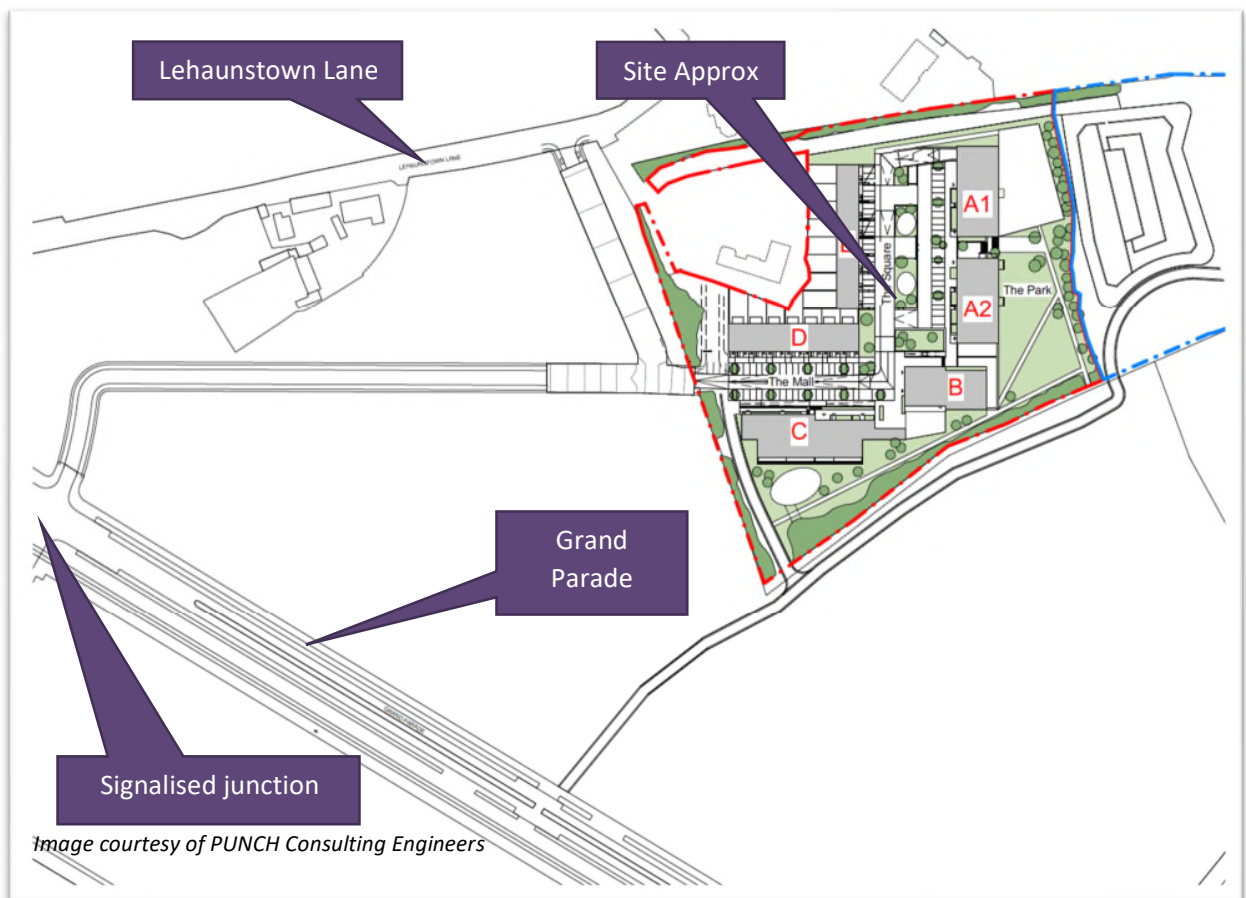
Lehaunstown Luas stop is operational.

The proposed speed limit within the development will be 30km/hr.

Raised tables are provided for traffic calming.

A car parking basement is to be provided which will have signal controls to allow for a shuttle traffic system in and out.

The site location is shown in the drawing extract below.



3.0 Issues Common to More Audits than RSA

Below is a summary table of problems raised in the Road Safety Audit that would also be raised in the Quality Audit however are not repeated for clarity and brevity.

Problem Reference	Road Safety Audit	Access Audit	Walking Audit	Cycling Audit
4.1	✓			
4.2	✓			
4.3	✓			
4.4	✓		✓	✓
4.5	✓			
4.6	✓			

4.0 Items Raised in This Stage 1&2 Road Safety Audit

4.1 Problem

LOCATION

Drawing 232250-PUNCH-XX-XX-DR-C-0461 Rev P04, Raised Tables.

PROBLEM

The kerb heights at the carriageway edge are to be 125mm. It is unclear what height the raised tables are to be and what taper length is to be provided. Too steep of a taper and too high of a table could lead to grounding and injury to vehicle occupants. Too shallow of a taper and height could lead to ineffective traffic calming, higher speeds and higher injury severity if a vulnerable road user is struck.



RECOMMENDATION

It is recommended that appropriate table heights and taper gradients be provided.

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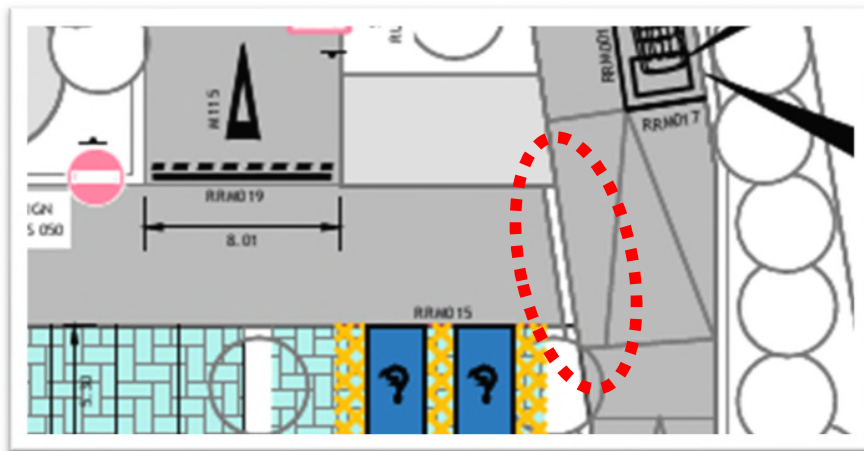
4.2 Problem

LOCATION

Drawing 232250-PUNCH-XX-XX-DR-C-0461 Rev P04, Link Between Street 1 and Street 2.

PROBLEM

There is a wall/structure between Street 1 and Street 2 close to the entry to the basement. It is unclear what height this wall is to be. A low level wall (kerb) may not be seen by drivers and they may travel over it if unfamiliar with the area and a low wall may be climbed over by children leading to falls.



RECOMMENDATION

It is recommended that a suitable height wall be provided.

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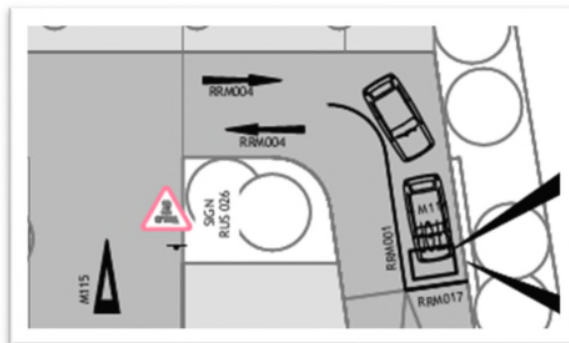
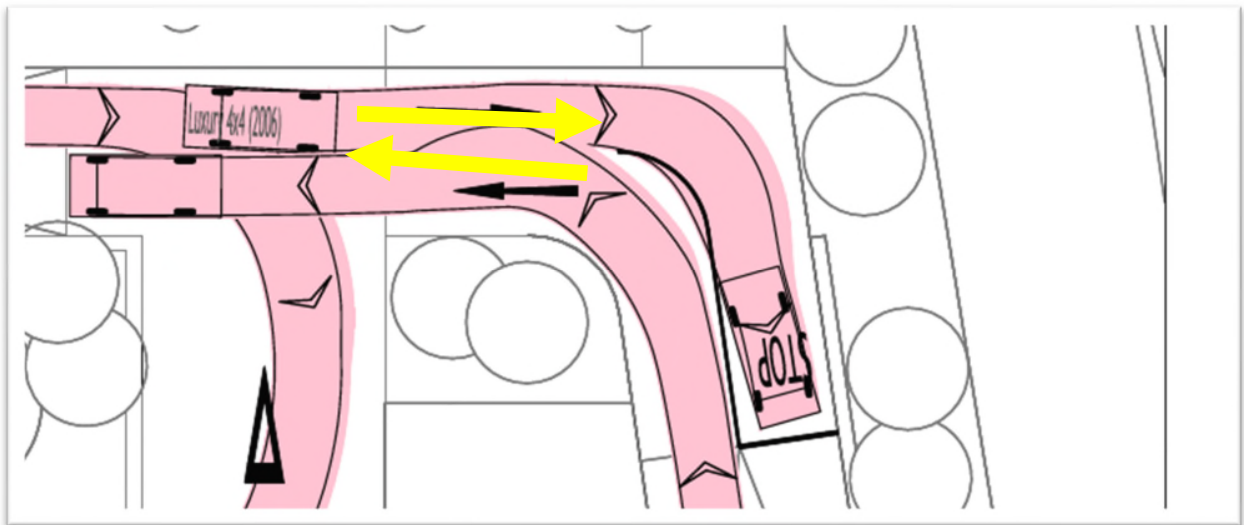
4.3 Problem

LOCATION

Drawing 232250-PUNCH-XX-XX-DR-C-0461 Rev P04 & 232250-PUNCH-XX-XX-DR-C-0602 Rev P02,
Entrance to basement.

PROBLEM

There is a risk of side-swipe collisions of vehicles entering and exiting the car park if a queue forms as far as the tight bend when a vehicle is exiting.



RECOMMENDATION

It is recommended that a suitable width of carriageway be provided for cars to pass without overlapping swept paths when waiting at the stop line of the signals for the basement car park.

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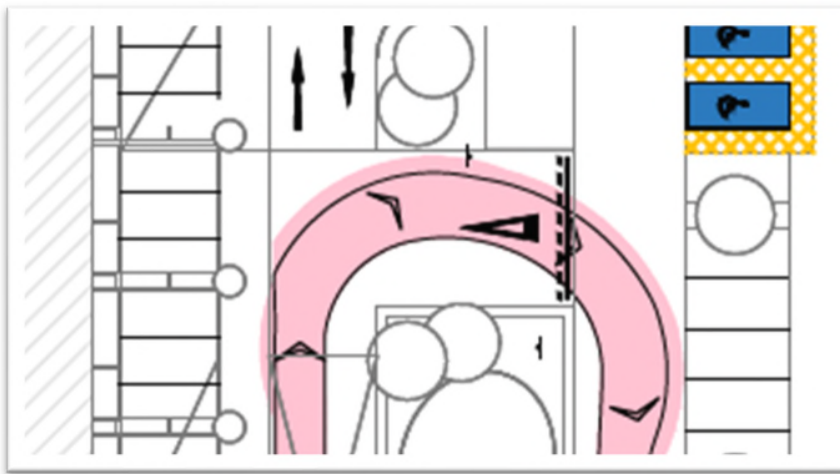
4.4 Problem

LOCATION

Drawing 232250-PUNCH-XX-XX-DR-C-0601 Rev P02,

PROBLEM

The entrance and exit of the one-way sections at Street 2 are very wide and have proposed yield control. This could lead to higher turning speeds and more severe collisions if a vulnerable road user is struck. The wide areas could also lead to informal two-way use by some residents. A wider area is needed for the swept path of refuse vehicles however these are only occasional vehicles.



RECOMMENDATION

It is recommended that the widths be minimised and overrun areas be provided for occasional larger vehicles. Stop control should be provided to ensure drivers check for pedestrian and cyclist activity.

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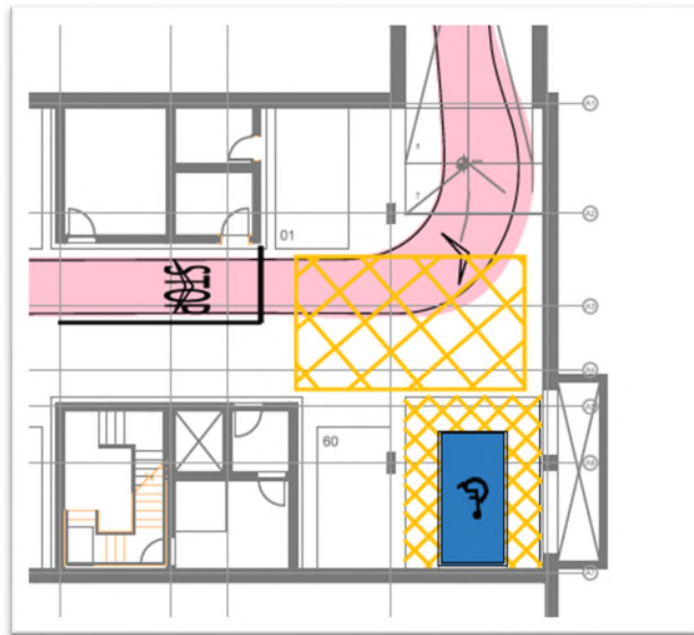
4.5 Problem

LOCATION

Drawing 232250-PUNCH-XX-XX-DR-C-0603 Rev P02, Basement.

PROBLEM

Users of the disabled parking space and spaces 01 and 60 will be within the shuttle signals. They could meet with incoming vehicles whose drivers do not expect oncoming traffic resulting in head-on collisions.



RECOMMENDATION

It is recommended that a detection system for these spaces be provided to stop incoming traffic.

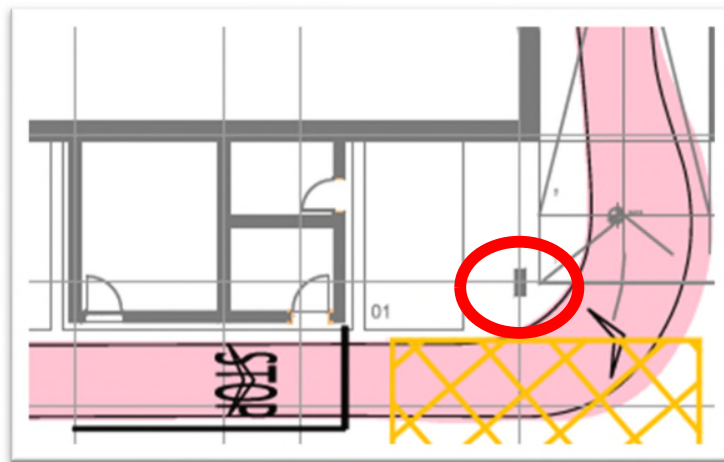
4.6 Problem

LOCATION

Drawing 232250-PUNCH-XX-XX-DR-C-0603 Rev P02, Basement.

PROBLEM

There is an exposed structural column at the base of the ramp. There is a risk that drivers may not see it leading to side swipe collisions and material damage of vehicles.



RECOMMENDATION

It is recommended that the column be relocated.

5.0 Items Raised in This Stage 1 Quality Audit – Accessibility Audit.

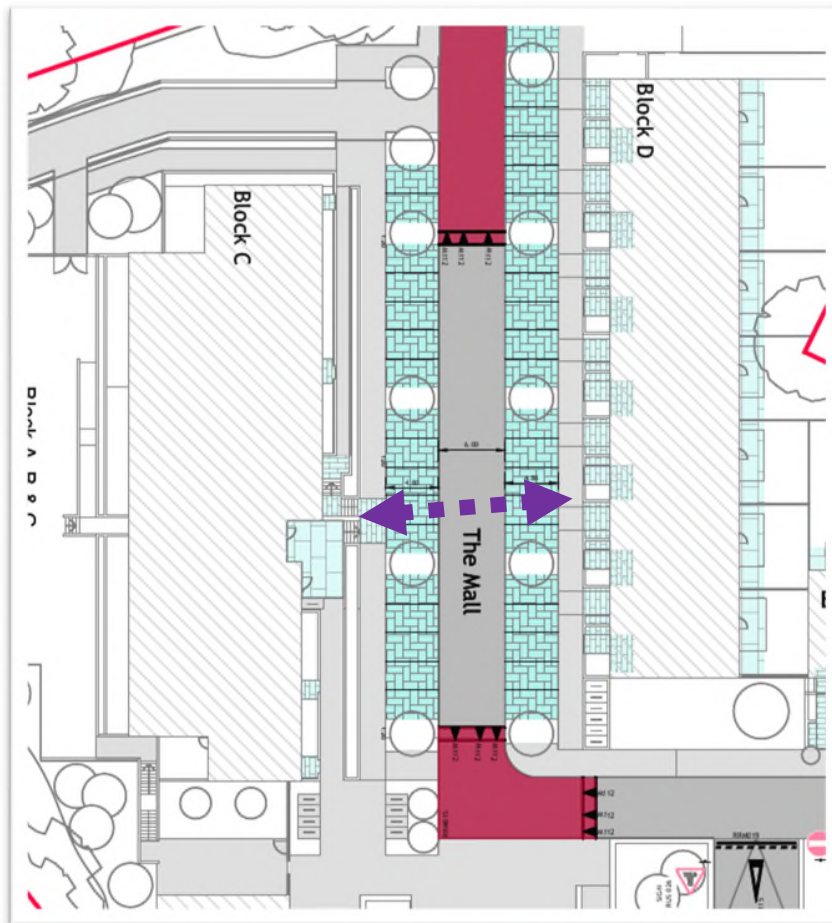
5.1 Problem

LOCATION

Drawing 232250-PUNCH-XX-XX-DR-C-0461 Rev P04, The Mall.

PROBLEM

There is perpendicular parking on both sides of 'The Mall'. There is no direct area for pedestrians to cross between Block C and Block D except at either end.



RECOMMENDATION

It is recommended that the potential desire line in the centre of the blocks be assessed and a crossing area be provided if such a demand is predicted.

7.0 Items Raised in This Stage 1 Quality Audit – Cycling Audit

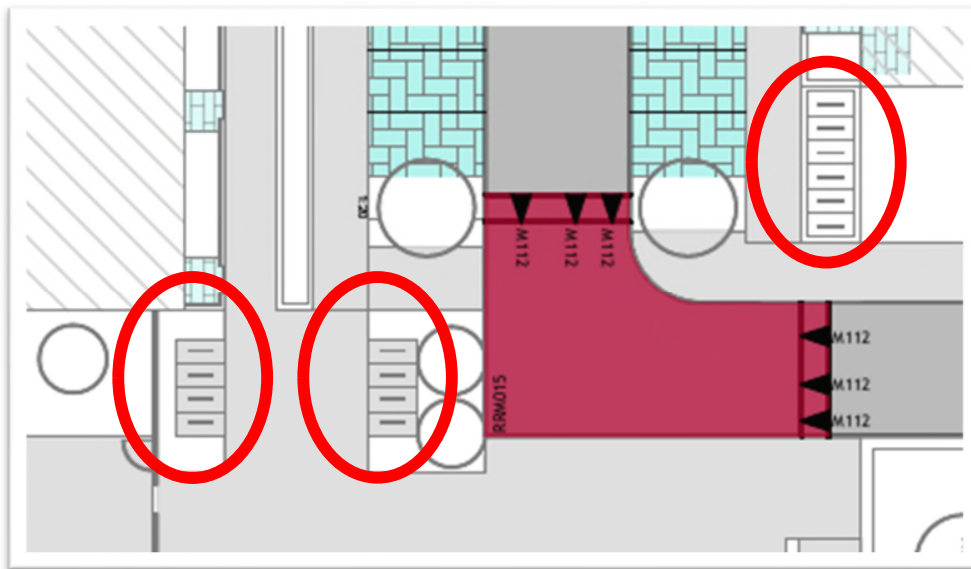
7.1 Problem

LOCATION

Drawing 232250-PUNCH-XX-XX-DR-C-0461 Rev P04, The Mall.

PROBLEM

Cycle parking is shown on the surface level. It is unclear if there is any sheltered and secured parking. A lack of shelter can lead to a reduction in bicycle use and an increase in car usage.



RECOMMENDATION

It is recommended that a suitable proportion of sheltered and secure bicycle parking be provided.

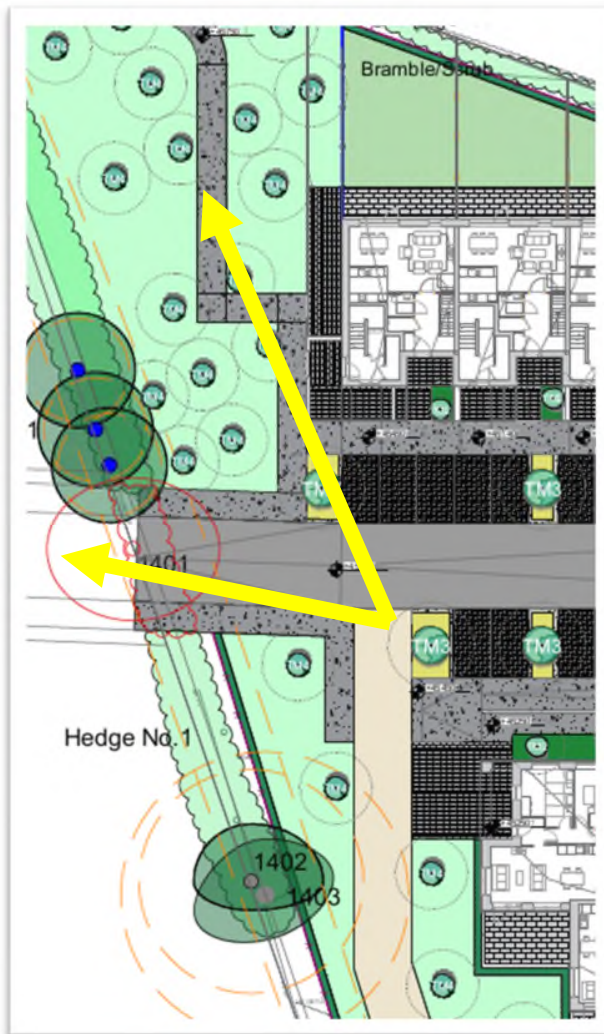
7.2 Problem

LOCATION

Drawing 531-PD-01 Rev B, Landscape Design Plan.

PROBLEM

The proposed greenway terminates at The Mall. There is no further link for cyclists towards Lehaunstown Lane or to Grand Parade.



RECOMMENDATION

It is recommended that a continuity of cycle facilities to the adjacent road network be developed.

8.0 Observations

8.1 Observation

The following have not been provided to the Audit Team.

- Drainage design
- Dropped kerbs
- Tactile paving
- Lighting design

Appendix A

List of Material Supplied for this Road Safety Audit and Quality Audit;

- Drawing 232250-PUNCH-XX-XX-DR-C-0151
- Drawing 232250-PUNCH-XX-XX-DR-C-0403
- Drawing 232250-PUNCH-XX-XX-DR-C-0461
- Drawing 232250-PUNCH-XX-XX-DR-C-0601
- Drawing 232250-PUNCH-XX-XX-DR-C-0602
- Drawing 232250-PUNCH-XX-XX-DR-C-0603
- Drawing 531-PD-01 Rev B, Landscape Design Plan.

Appendix B

Feedback Forms (Road Safety Audit & Quality Audit)


SAFETY AUDIT FORM – FEEDBACK ON AUDIT REPORT

Scheme: Lehaunstown, Cherrywood

Stage: 1&2 Road Safety Audit

Date Audit (Site Visit) Completed: 15-4-2024

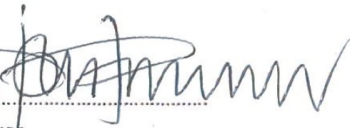
Paragraph No. in Safety Audit Report	Problem accepted (yes/no)	Recommended measure accepted (yes/no)	Alternative measures (describe)	Alternative measures accepted by Auditors (Yes/No)
4.1	Y	Y		
4.2	Y	Y		
4.3	Y	Y		
4.4	Y	N	Widths to be retained to accommodate fire tender movements. Roadmarking controls (chevrons) proposed to manage cars and other small vehicles. High quality visibility will enable yield marking.	Yes
4.5	Y	Y		
4.6	Y	N	Roadmarking and/or kerb to be provided to manage vehicle movements.	Yes

Signed 
Design Team Leader

Date 19/4/2024

Signed 
Audit Team Leader

Date 18-4-2024

Signed 
Employer

Date 20/06/2024

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DLRCC

CONSULTING
ENGINEERS

QUALITY AUDIT FORM – FEEDBACK ON QUALITY AUDIT REPORT

Scheme: Lehaunstown, Cherrywood
Quality Audit- Stage 1
Date Audit (site visit) 15-4-2024


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)
5.1	Y	Y		
5.2	Y	N	Accessible route to be provided along this desire line.	Yes
7.1	Y	Y		
7.2	Y	Y		

Signed 
Design Team Leader

Date 19/4/2024

Signed 
Audit Team Leader

Date: 18-4-2024

Signed 
Employer

Date 20/06/2024

Appendix C

Problem Location Plan.

