

Title: STAGE 1 ROAD SAFETY AUDIT

For

Proposed Residential Development at Hacketstown, Skerries.

Client: DBFL/Land Development Agency

Date: February 2022

Report reference: 1389R01

VERSION: FINAL (March 2022)

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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 Stage 1 Road Safety Audit of a proposed housing development and associated works by the Land Development Agency at Hacketstown, Skerries, 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: **Owen O'Reilly**, B.SC. Eng Dip Struct. Eng NCEA Civil Dip Civil. Eng CEng MIEI

TII Auditor Approval no. OO1291756

The Road Safety Audit comprised an examination of the drawings and a site visit by the Audit Team, together, on the 20th of July 2021.

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

This Stage 1 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 list of the documents provided to the Audit Team is contained in **Appendix A**.

A Problem Location Map is contained in **Appendix B**.

A Feedback Form is contained in **Appendix C**.

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DBFL/LDA

2.0 Background

The Land Development Agency proposes to construct a residential development at Hacketstown, Skerries, Co. Dublin. The site is located to the South of Phase 1 of Ballygossan Park.

Phase 2 of the Ballygossan Park residential area is currently being planned and is anticipated to be submitted Q2/Q3 2022.

The proposed speed limit within the development is 20km/hr.

Golf Links road to the south of the development is a narrow single carriageway. It is noted that future road improvements are planned in the area and that traffic generated will mainly travel northwards towards the town centre and not to the south.

The site location is shown in the map below.



Image courtesy of Openstreetmap.org

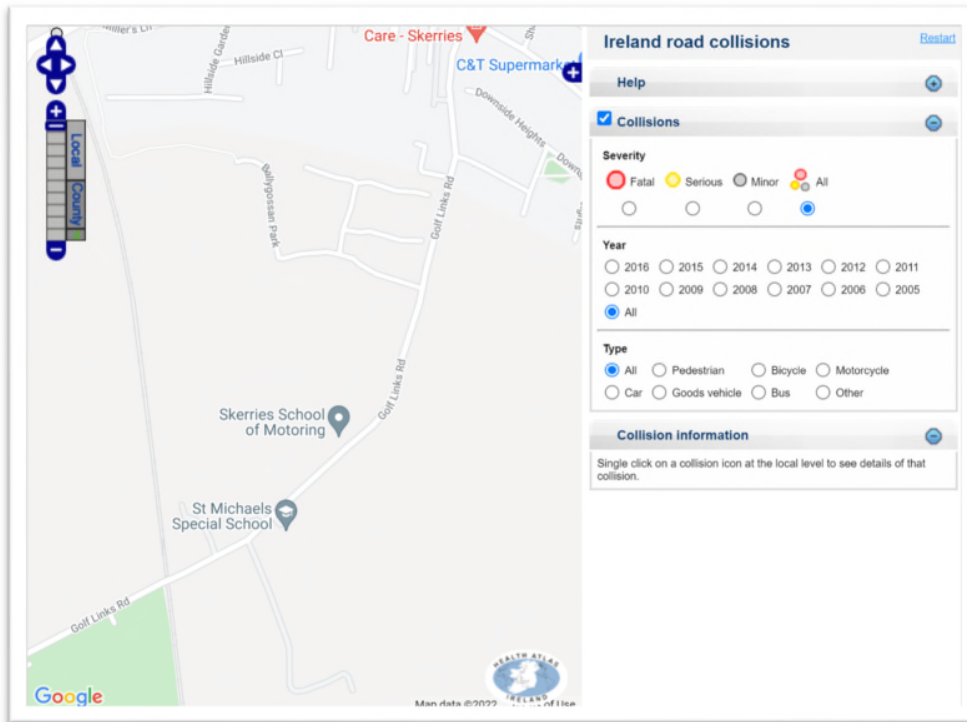
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The scope of the Audit includes the existing Ballygossan Park access from Golf Links Road as well as the proposed development and the direct access onto Golf Links Road. The scope is outlined in yellow on the image below.



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The Road Safety Authority’s website (www.rsa.ie) shows that there were no recorded collisions within the area of the Audit scope in the 12-year period 2012 to 2016. More recent data is unavailable from the RSA.



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3.0 Issues Identified in This Audit.

3.1 Problem

LOCATION

Drawing 190170-DBFL-RD-SP-DR-C-1002 Rev P02.01, Road Marking & Signage Layout Plan, Link to Ballygossan Park.

PROBLEM

Details have not been provided of the section of road to be provided linking the proposed development to the main access road in Ballygossan Park. A varying cross section may lead to risks for pedestrians and cyclists and a steep vertical alignment could lead to lack of traction for vehicles and possibly affect stopping sight distance.



RECOMMENDATION

It is recommended that a constant cross section be provided along the link and that the vertical alignment takes into account the required stopping sight distance.

3.2 Problem

LOCATION

Drawing 190170-DBFL-RD-SP-DR-C-1002 Rev P02.01, Road Marking & Signage Layout Plan, Link to Ballygossan Park.

PROBLEM

Details have not been provided of the section of road to be provided linking the proposed development to the main access road in Ballygossan Park. Given the topography of the site a bridge structure will likely be

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required. There is a risk that errant vehicles could descent the height hazard and also a risk that vulnerable road users could fall from a height.



RECOMMENDATION

It is recommended suitable parapet railings/walls/restraint systems be provided which extend over the length of need.

3.3 Problem

LOCATION

Drawing 190170-DBFL-RD-SP-DR-C-1002 Rev P02.01, Road Marking & Signage Layout Plan, Cycle track.

PROBLEM

It was observed during the site visit that the existing two-way cycle track in Ballygossan Park has red surfacing. It is unclear if the proposed two-way cycle track is to have a similar colour. A lack of consistency in colour of the cycle tracks may lead to confusion for users and lead to cyclists mixing with pedestrians.

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RECOMMENDATION

It is recommended that a consistent approach be provided as already exists in Ballygossan Park.

3.4 Problem

LOCATION

Drawing 190170-DBFL-RD-SP-DR-C-1002 Rev P02.01, Road Marking & Signage Layout Plan, Site Observation.

PROBLEM

When the link from Ballygossan Park is completed those that turn right into and left out of units 72-103 will have to give way to through traffic. The road markings show that they currently have to stop however this is not reinforced with a stop sign or other warning sign and there is currently no conflicting traffic so drivers are not used to stopping.



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RECOMMENDATION

It is recommended that a stop sign be added at the sideroad and that warning signage (temporary only should be suffice) to warn drivers of a revised layout at the junction.

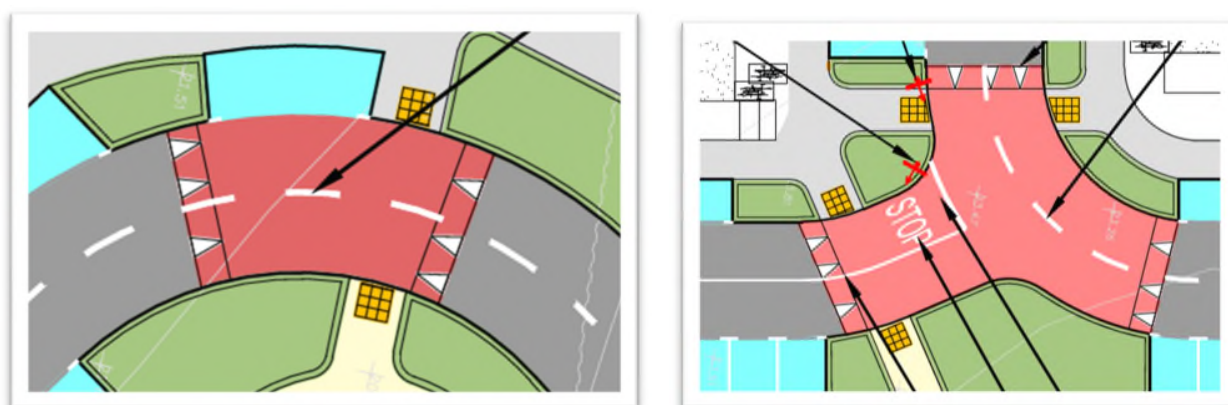
3.5 Problem

LOCATION

Drawing 190170-DBFL-RD-SP-DR-C-1002 Rev P02.01, Road Marking & Signage Layout Plan, Raised Tables throughout the development.

PROBLEM

It is proposed to provide raised tables throughout the development including at sharp changes in direction. There is a risk that drivers will cut the corners and mount the adjacent verge/footpath if the raised tables are at the same height. This could be a risk for pedestrians.



RECOMMENDATION

It is recommended that suitable vertical segregation between the top of the raised table and the top of the kerbs be provided.

3.6 Problem

LOCATION

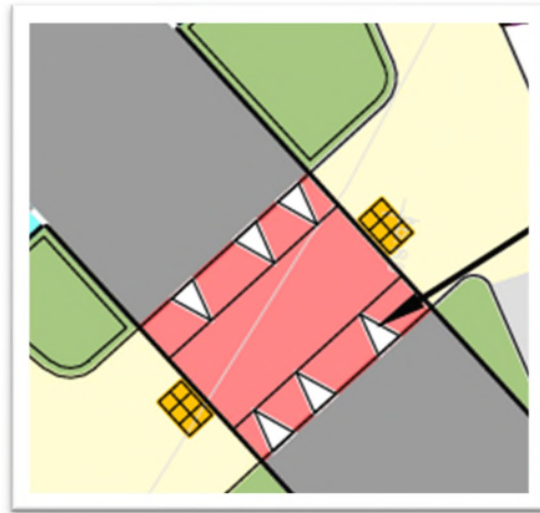
Drawing 190170-DBFL-RD-SP-DR-C-1002 Rev P02.01, Road Marking & Signage Layout Plan, Raised Tables throughout the development.

PROBLEM

The raised tables throughout the development generally have associated uncontrolled pedestrian crossings. It is unclear if the crossings are dished at the tactile paving only or across the entire footpath width. If there are areas where the footpath is flush with the raised table and without tactile paving a blind or partially

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sighted pedestrian may inadvertently enter the carriageway. This could lead to collisions with passing vehicles. In addition, some pedestrian crossing locations appear to be narrow (three tiles i.e. 1200mm) which may not cater for the volume of users.



RECOMMENDATION

It is recommended that tactile paving be provided over the entire width of dropped kerbs/flush kerbs with the raised tables and that the area of dropped kerb be of sufficient width to match the demand.

3.7 Problem

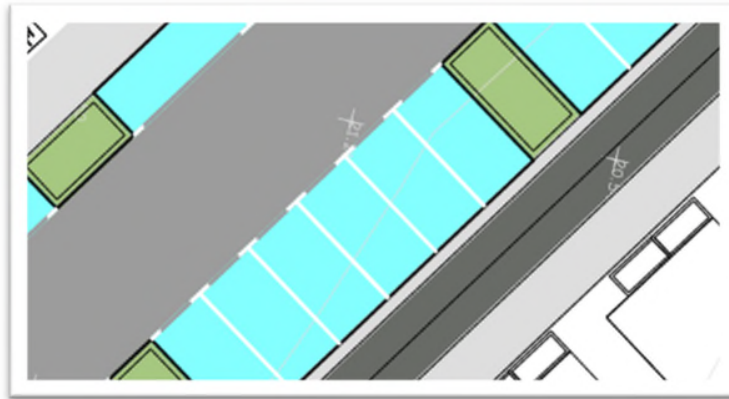
LOCATION

Drawing 190170-DBFL-RD-SP-DR-C-1002 Rev P02.01, Road Marking & Signage Layout Plan, Perpendicular Parking outside Block A2.

PROBLEM

It is unclear how vehicle occupants who park in the perpendicular parking spaces outside Block A2 can access the residential units if they are pushing buggies or are somewhat mobility impaired. The gaps in the parking will be landscaped and it is assumed that there will be a high kerb at the buffer zone between the parking spaces and the two-way cycle track.

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RECOMMENDATION

It is recommended that convenient access routes be provided without steps or trip hazards to cater for the mobility impaired. A similar situation exists at other Blocks within the development.

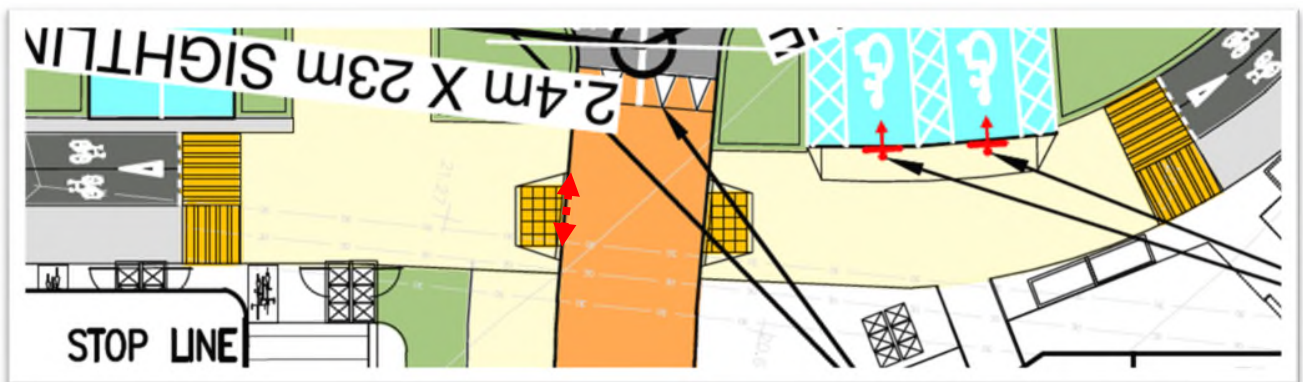
3.8 Problem

LOCATION

Drawing 190170-DBFL-RD-SP-DR-C-1002 Rev P02.01, Road Marking & Signage Layout Plan, Shared use Street between Block B1 and Block A2

PROBLEM

There is a proposed to provide a 2m wide uncontrolled crossing of the shared street. This may lead to collisions between two-way cyclists and pedestrians as they try and share the same space.



RECOMMENDATION

It is recommended that a wider crossing area be provided.

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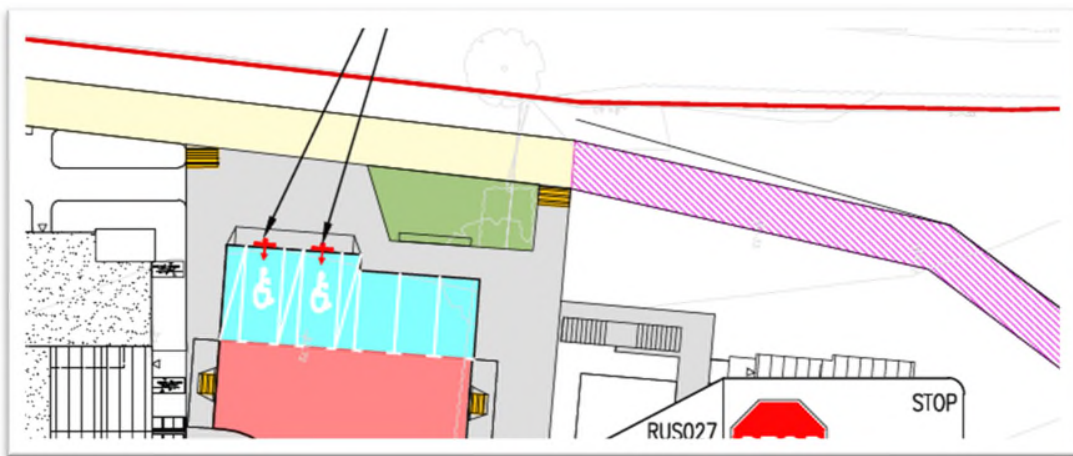
3.9 Problem

LOCATION

Drawing 190170-DBFL-RD-SP-DR-C-1002 Rev P02.01, Road Marking & Signage Layout Plan, Landscape Path.

PROBLEM

It is unclear if the landscape path is designed for cyclists. The landscape path joins the shared use pedestrian cycle route at the northern side of the site. If the path is unsuitable for cyclists it is unclear where they should travel once they reach the interface point. A lack of provision could lead to cyclists sharing with pedestrians and thereby increasing the risk of a collision.



RECOMMENDATION

It is recommended that cyclists be given a clear route to get to the link to Ballygossan Park.

3.10 Problem

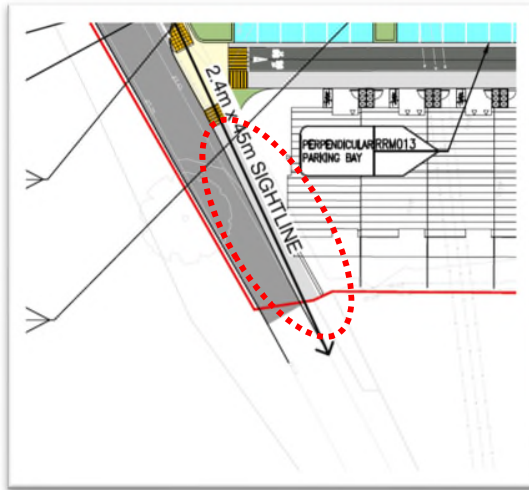
LOCATION

Drawing 190170-DBFL-RD-SP-DR-C-1002 Rev P02.01, Road Marking & Signage Layout Plan, Access onto Golf Links Road.

PROBLEM

There will be a discontinuity in the footpath provision on Golf Links Road between the direct access and the Ballygossan Park access. Pedestrians will step into the carriageway where they will be at greater risk of being struck by a passing vehicle.

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RECOMMENDATION

It is recommended that the footpath be made continuous along Golf Links Road.

If this is not feasible due to land ownership issues then the footpath should continue no further than the link to the internal network of footpaths and cycle tracks.

3.11 Problem

LOCATION

Drawing 190170-DBFL-RD-SP-DR-C-1002 Rev P02.01, Road Marking & Signage Layout Plan, Access onto Golf Links Road.

PROBLEM

Golf Links Road has a steep vertical alignment at the St. Michael's special school side. There is a risk that visibility in the vertical plane might not be sufficient for vehicles exiting from the proposed accesses. This could lead to side-impact or rear-end collisions.



RECOMMENDATION

It is recommended that visibility in the vertical plane be checked for compliance with the relevant standards.

4.0 Audit Statement

We certify that we have examined the site on the 20th of July 2021. 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: *Norman Bruton*
(Audit Team Leader) Dated: 16/3/2022

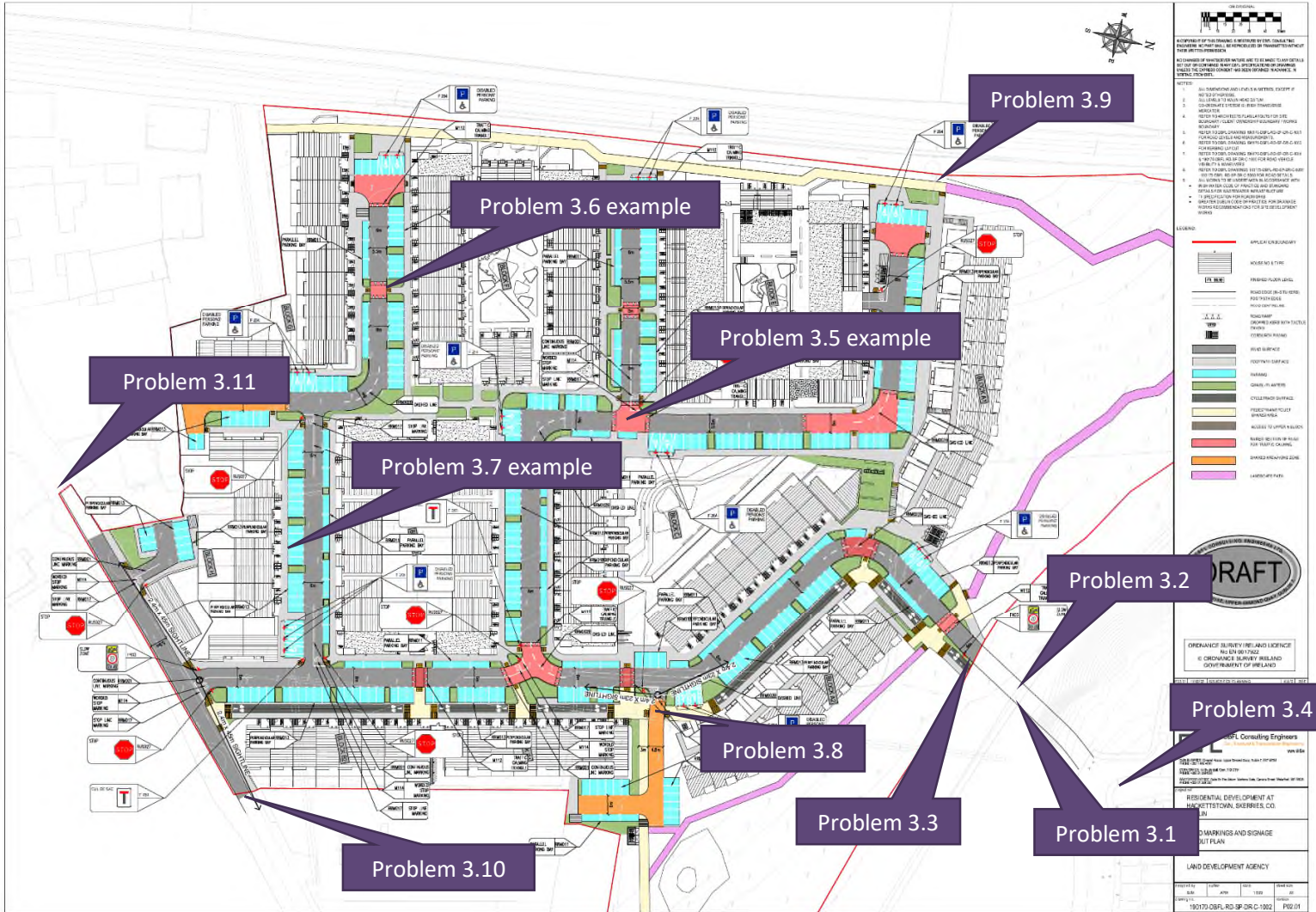
Owen O'Reilly Signed: *Owen O'Reilly*
(Audit Team Member) Dated: 16/3/2022

Appendix A

Information Supplied to the Audit Team

- Drawing 190170-DBFL-RD-SP-DR-C-1002 Rev P02.01
- Drawing 19020A-OMP-00-00-M2-A-1000, O Mahony Pike.
- Drawing - Landscape Masterplan Draft Rev 00, Bernard Seymour.
- Draft Traffic & Transport Assessment Report, DBFL Feb 2022.
- Scope of Audit.

Appendix B - Problem Location Map



Appendix C

Feedback Form

SAFETY AUDIT FORM – FEEDBACK ON AUDIT REPORT

SAFETY AUDIT FORM – FEEDBACK ON AUDIT REPORT

Scheme: LDA, Hacketstown, Skerries

Stage: Stage 1 Road Safety Audit

Date Audit (Site Visit) Completed: 20-7-2021

| 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) |
|--------------------------------------|---------------------------|---------------------------------------|--|--|
| 3.1 | Yes | Yes | The road link across the Regional Drainage Facility and associated open space is subject to a separate planning application (by the same applicant) for which planning permission by FCC has been granted. We confirm that the design of this link provides a constant cross section, the required visibility splays safeguard, and appropriate tie-in provided with Ballygossan Rd Phase 1 infrastructure; as per auditors recommendations. | Yes |
| 3.2 | Yes | No | The subject road link is to be constructed using an embankment with gently sloping sides (and rounded transitions) opposed to the alternative bridge structure option considered by the auditors. The gradient of the embankments side slopes varies (typically 1:7) however at its steepest position it will still be relatively shallow with a max fall of 1:5 with an overall the height difference of criteria 4.15m. The provision of this level of gradient with appropriate transitions and a height difference of less than 6m negates the need to provide the requested restraint system. | Yes |
| 3.3 | Yes | Yes | | |
| 3.4 | Yes | Yes | | |
| 3.5 | Yes | Yes | | |
| 3.6 | Yes | Yes | | |
| 3.7 | Yes | Yes | | |
| 3.8 | Yes | Yes | | |
| 3.9 | Yes | Yes | | |
| 3.10 | Yes | No | The footpath has been retained as it leads to/from a private side entrance to the rear | |

| | | | | |
|------|-----|-----|--|-----|
| | | | garden of the adjoining residential dwelling. The scheme proposals will deliver a number of alternative safe segregated high quality pedestrian routes through the proposed residential development which will accommodate the subject travel desire line for pedestrians seeking to gain access to destinations to the north. | Yes |
| 3.11 | Yes | Yes | | |

Signed *Thomas Jennings*
Design Team Leader

Date. 10th March 2020

Signed *Geramen Bruton*
Audit Team Leader

Date... 16/3/2022...

Signed *Camonn Reidy*
Fmnlover

Date... 14/03/2022...