AFEC International

Primary School, Kishoge, Lucan, Co. Dublin

Stage 1 Road Safety Audit

P·M·C·E

December 2022

AFEC International

Primary School, Kishoge, Lucan, Co. Dublin

Stage 1 Road Safety Audit

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Rev	Prepared By	Reviewed By	Approved By	Issue Date	Reason for Revision
2.0	AOR	PJM	PJM	20th Dec. 2022	Final
1.0	MAH	PJM	PJM	7th Dec. 2022	Draft Report

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1 Introduction

1.1 General

This report results from a Stage 1 Road Safety Audit of the proposed new Primary School at Kishoge, Lucan, Co. Dublin carried out at the request of Mr Denis Lenihan of AFEC International.

The members of the Road Safety Audit Team are independent of the design team, and include: -

Mr. Peter Monahan
(BE MSc CEng FIEI RSACert)
Road Safety Audit Team Leader

Mr. Mazen Al Hosni
(BEng, MSc, MIEI)
Road Safety Audit Team Member

The Road Safety Audit took place during May and December 2022 and comprised an examination of the documents provided by the designers (see Appendix B). In addition to examining the documents supplied the Road Safety Audit Team visited the site of the proposed measures on the 17th May 2022. Weather conditions during the site visit were wet and the road surface was wet. Traffic volumes during the site visit were moderate, pedestrian and cyclist volumes were low and traffic speeds were considered to be generally within the posted speed limit.

Where problems are relevant to specific locations these are shown on drawing extracts within the main body of the report and their locations are shown in Appendix D. Where problems are general to the proposals sample drawing extracts are within the main body of the report where considered necessary.

This Stage 1 Road Safety Audit has been carried out in accordance with the requirements of GE-STY-01024 - Road Safety Audit (December 2017), contained on the Transport Infrastructure Ireland (TII) Publications website.

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 and considers the perspective of all road users. 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 and minimise collision occurrence.

If any of the recommendations within this road 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 Observations are intended to be for information only. Written responses to Observations are not required.

1.2 Items Not Submitted for Auditing

Details of the following items were not submitted for audit; therefore no specific problems have been identified at this stage relating to these design elements, however where the absence of this information has given rise to a safety concern it has been commented upon in Section 3: -

- Personal Injury Collision data
- Vehicle swept paths
- Visibility splays

2 Project Description

2.1 General

FIGURE 2.1: LOCATION PLAN (SOURCE: WWW.OPENSTREETMAP.ORG)

The proposed development would be located on a greenfield site adjacent to Thomas Omer Way, which is bounded to the north by Thomas Omer Way, to the east and south by greenfield sites and to the west by the Kishoge Community College and the Giffeen Community College.

Thomas Omer Way is a dual carriageway road with a narrow central kerbed median and has an overall width of approximately 22m in the vicinity of the site. Both the eastbound and westbound carriageways have a footpath and cycle track adjacent to the carriageway, and a bus lane and a general-traffic lane. The posted speed limit on Thomas Omer Way is 60 kph.

The proposed school would be constructed on a greenfield site to the south of Thomas Omer Way, and would consist of a main school building, playground areas, two ballcourts, bicycle parking spaces, staff car parking and other ancillary elements.

It is proposed to provide access to the school via a single carriageway internal road, consisting of two traffic lanes, which meets the Thomas Omer Way westbound carriageway at a priority junction. Thomas Omer Way would be amended to facilitate the new junction by curtailing the existing bus lane on the westbound carriageway, providing a dedicated left-turn deceleration lane on the westbound approach to the school access, and by providing a gap in the existing median to facilitate right-turning traffic entering the new school. The new access road would include footpaths on either side, a cycle track on one side and bus set-down areas.

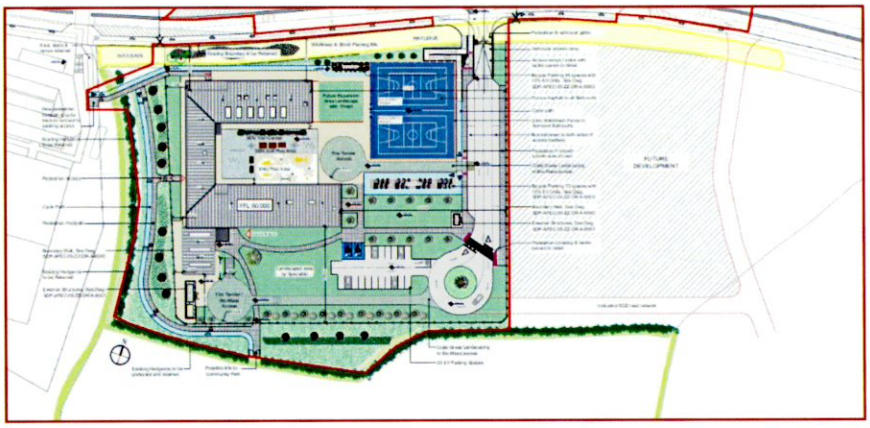


FIGURE 2.2: PROPOSED DEVELOPMENT

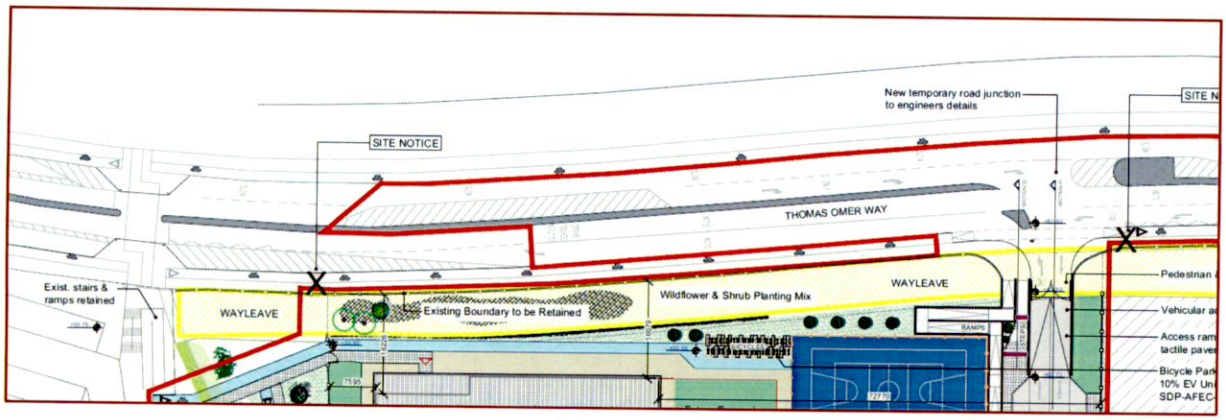
3 Main Report

3.1 Problem

Location: *Thomas Omer Way*

Summary: *Acceleration lane may lead to drivers approaching the existing signalised pedestrian crossing to the west of the proposed new school access at inappropriate speeds.*

It is proposed to provide an acceleration lane for drivers exiting the school to join the westbound traffic lane on Thomas Omer Way. There is a concern that drivers accelerating upon exiting the school in order merge with other traffic on Thomas Omer Way might fail to appreciate the proximity of the existing signalised pedestrian crossing to the west, leading to drivers approaching the crossing at inappropriate speeds and a failure to stop resulting in overshoot into the crossing and possible vehicular/pedestrian collisions.



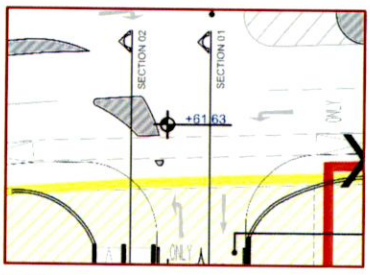
Recommendation

The acceleration lane should be omitted and vehicles exiting the school access should do so directly into the westbound traffic lane.

3.2 Problem

Location: *School Access Junction*

Summary: *Proposed splitter island location/layout may result in left-turning large vehicles mounting the kerb and entering the path or fail to deter unsafe right-turning manoeuvres.*



The indicated location and layout of the splitter island intended to guide exiting vehicles to turn left may not safely accommodate the swept path of large left-turning exiting vehicles, potentially resulting in these vehicles mounting the kerb and encroaching onto the path presenting a hazard to non-motorised road users within the path.

In addition, the indicated layout may fail to deter some drivers from turning right when exiting from the school access, a manoeuvre which may be difficult to achieve safely due to the number of lanes approaching in each direction.

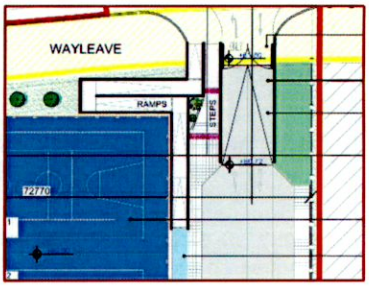
Recommendation

The location & layout of the proposed splitter island should be amended to ensure that the swept path of all vehicles exiting the school can be safely accommodated while ensuring right-turning exiting manoeuvres are prevented.

3.3 Problem

Location: *School Access*

Summary: *Lack of ramped access for pedestrians at the school's main access.*



There appears to be no ramped access for pedestrians at the Main School entrance, with the ramp at this location indicated as tying in with the internal cycle track only.

The absence of pedestrian ramps would present an obstacle to mobility-impaired non-motorised road users accessing/egress in the school, in particular wheelchair users. It is considered likely that mobility impaired individuals would use the cyclist ramp where they are at increased risk of conflict with cyclists.

Recommendation

The ramp should be designed to cater for both cyclists and pedestrians, and should tie-in with shared areas at the top/bottom which, in turn, tie-in with the segregated footpath and cycle tracks with Ladder & Tramline tactile paving provided as appropriate.

3.4 Problem

Location: *Thomas Omer Way*

Summary: *Possible pedestrian desire line not catered for.*

No pedestrian crossing of Thomas Omer Way has been indicated east of the new school access. There is a concern that pedestrians traveling to/from the east along the northern side of Thomas Omer Way might attempt to cross Thomas Omer Way at the school access. This may lead to vehicle/pedestrian collisions as pedestrians attempt to cross the multi-lane dual carriageway road away from designated crossing points.

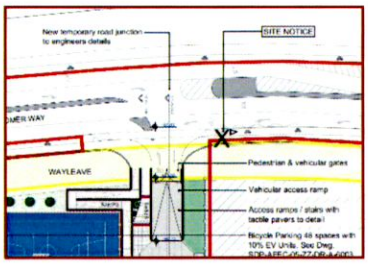
Recommendation

The likely pedestrian desire lines arising as a result of the proposed development should be identified and, where necessary, safe crossing arrangements should be provided.

3.5 Problem

Location: *Thomas Omer Way*

Summary: *Risk of visually-impaired pedestrians inadvertently entering carriageway where the cycle track joins/leaves the Thomas Omer Way carriageway.*



It is proposed to retain the existing cycle track at the same level as the footpath on Thomas Omer Way, however no tactile paving has been indicated where the cycle track transitions on-road on the approach & departure to/from the new school access.

There is a risk that a visually-impaired pedestrian could inadvertently enter the cycle track and consequently the carriageway where they are at increased risk of being struck by cyclists/drivers.

Recommendation

Tramline tactile paving should be provided where the cycle lane transitions to/from the carriageway.

3.6 Problem

Location: *School access*

Summary: *Lack of pedestrian crossing facilities across school access road at the school access junction.*

It is unclear from the information provided if it is proposed to provide a pedestrian crossing across the school access road at its junction with Thomas Omer Way. Should no crossing be provided, this may result in unsafe non-motorised road user crossings and difficulties for partially-sighted or mobility-impaired non-motorised road users.

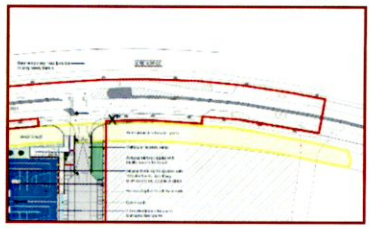
Recommendation

A pedestrian crossing of the school access road should be provided at its junction with Thomas Omer Way. Depending on the expected/forecast volume of crossing pedestrians, a controlled crossing may be required.

3.7 Problem

Location: *Thomas Omer Way*

Summary: *Hatched areas on Thomas Omer Way may attract inappropriate parking and unsafe re-entry to the traffic lanes.*



The proposed revised road layout on Thomas Omer Way includes the provision of extensive hatched areas where the existing bus lane is curtailed, and where the right- & left-turn lane is created. The extensive hatched areas may attract inappropriate parking, in particular during school drop-off and off & pick-up times, resulting in unsafe entry/exit manoeuvres into the traffic lane and possible unsafe pedestrian crossings to/from parked vehicles.

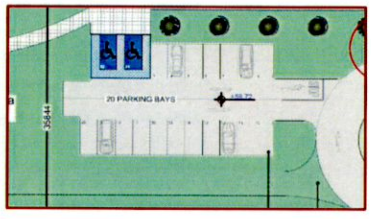
Recommendation

Measures should be provided to prevent inappropriate parking in these areas.

3.8 Problem

Location: *School car park*

Summary: *No buffer zone is indicated at the proposed Electric Vehicle parking spaces*



20 electric car parking spaces have been noted on the drawings as being provided, however it is unclear if a sufficient buffer zone is to be provided either side of each parking space to allow for drivers to access charging points which may be located on the side of their vehicle, without impeding vehicles parked in adjacent spaces and having the charging lead being pulled by moving vehicles.

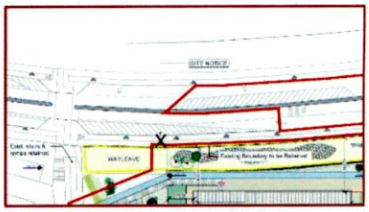
Recommendation

A buffer zone should be provided at EV parking spaces in accordance with Chapter 7 of the Traffic Signs Manual.

3.9 Problem

Location: *Thomas Omer Way*

Summary: *Short taper and short section of two lanes may result in side-swipe collisions.*



It is proposed to provide a right turning lane on the Thomas Omer Way eastbound carriageway approaching the new school access junction. The road layout indicated includes the retention of two traffic lanes immediately to the east of the existing pedestrian crossing and a relatively short taper where the offside lane is terminated.

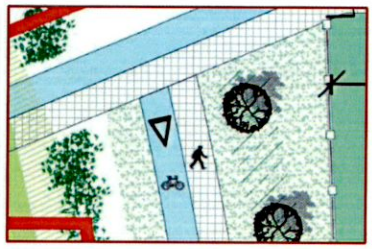
The is a risk that eastbound drivers on Thomas Omer Way may inadvertently stay in the offside lane, resulting in late lane-change manoeuvres which may not be anticipated by following drivers behind them, leading to possible side-swipe collisions.

Recommendation

A single straight-ahead lane should be provided on the section of the eastbound carriageway, with a more gradual taper which commences closer to the existing crossing. The dashed line between the two lanes should be omitted.

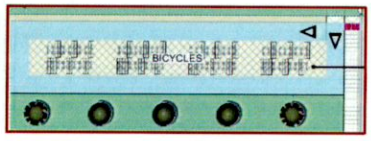
4 Observations

4.1 It is unclear from the information provided if it is intended to provide vertical separation between the proposed cycle tracks and adjacent footpath.



Vertical separation is preferred as it provides clear guidance to visually-impaired pedestrians on the extents of the footpath and prevents them from inadvertently straying into the cycle track.

4.2 It is unclear from the information provided if the proposed bicycle parking stands will be able to accommodate all types of bicycles (e.g. cargo bicycles, and-operated bicycles, standard bicycles, etc.).

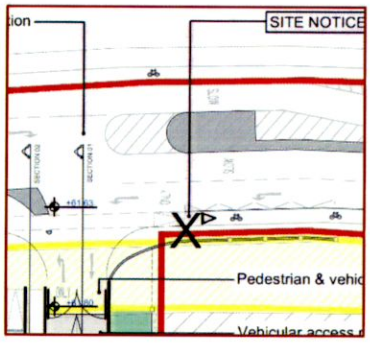


In order to cater the widest range of possible bicycle users, the proposed bicycle stands should be able to accommodate all types of bicycles.

4.3 Two mobility-impaired parking spaces are proposed within the proposed moment, however it is unclear if dropped kerbs and tactile paving are to be provided to enable mobility-impaired vehicle occupants to access/leave their parked vehicle to/from the adjacent footpath.

During the design development dropped kerbs and tactile paving should be provided at the mobility-impaired parking spaces.

4.4 Zig Zag road markings are indicated at the westbound left-turn lane along Thomas Omer Way is the use of zigzag road markings are only permitted on the immediate approaches to/departure from a signalised crossing.



This assumed to be CAD error, and if so and the lines are redundant, then they should be omitted.

5 Road Safety Audit Team Statement

We certify that we have examined the drawings referred to in this report. The examination has been carried out with the sole purpose of identifying any features of the design that could be 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.

No one on the Road Safety Audit Team has been involved with the design of the scheme.

ROAD SAFETY AUDIT TEAM LEADER

Peter Monahan Signed: Peter J. Monahan

Dated: 20th December 2022

ROAD SAFETY AUDIT TEAM MEMBER

Mazen Al Hosni Signed: Mazen Al Hosni

Dated: 20th December 2022

Appendix A – Road Safety Audit Brief Checklist

Have the following been included in the audit brief?: (*if 'No', reasons should be given below)*

		Yes	No
1.	The Design Brief	☐	☑
2.	Departures from Standard	☐	☑
3.	Scheme Drawings	☑	☐
4.	Scheme Details such as signs schedules, traffic signal staging	☐	☑
5.	Collision data for existing roads affected by scheme	☐	☑
6.	Traffic surveys	☐	☑
7.	Previous Road Safety Audit Reports and Designer's Responses/Feedback Form	☐	☑
8.	Previous Exception Reports	☐	☑
9.	Start date for construction and expected opening date	☐	☑
10.	Any elements to be excluded from audit	☐	☑

Any other information?

(if 'Yes', describe below)

☐ ☑

Appendix B – Documents Submitted to the Road Safety Audit Team

DOCUMENT/DRAWING TITLE	DOCUMENT/DRAWING NO.	REVISION
Proposed Site Plan	SDP-AFEC-05-00-DR-A-1002	P04

Appendix C – Feedback Form

Road Safety Audit Feedback Form

Scheme: Primary School, Kishoge, Lucan, Co. Dublin

Route No.: L1059

Audit Stage: 1 **Date Audit Completed:** 8th December 2022

	To be Completed by Designer			To be Completed by Audit Team Leader
Paragraph No. in Safety Audit Report	**Problem Accepted (Yes/No)**	**Recommended Measure(s) Accepted (Yes/No)**	**Describe Alternative Measure(s). Give reasons for not accepting recommended measure**	**Alternative Measures or Reasons Accepted by Auditors (Yes/No)**
3.1	Yes	Yes		
3.2	Yes	Yes		
3.3	Yes	Yes		
3.4	Yes	No	The proposed school access junction on Thomas Omer Way is an interim layout and a permanent access junction will be constructed, to the east of the interim access junction, in the future which will include pedestrian crossing facilities. In the interim, the existing signalised crossing of Thomas Omer Way to the west of the proposed access junction is considered to be sufficient for pedestrians to cross Thomas Omer Way safely.	Yes
3.5	Yes	Yes		
3.6	Yes	Yes		
3.7	Yes	Yes		
3.8	Yes	Yes		
3.9	Yes	Yes		

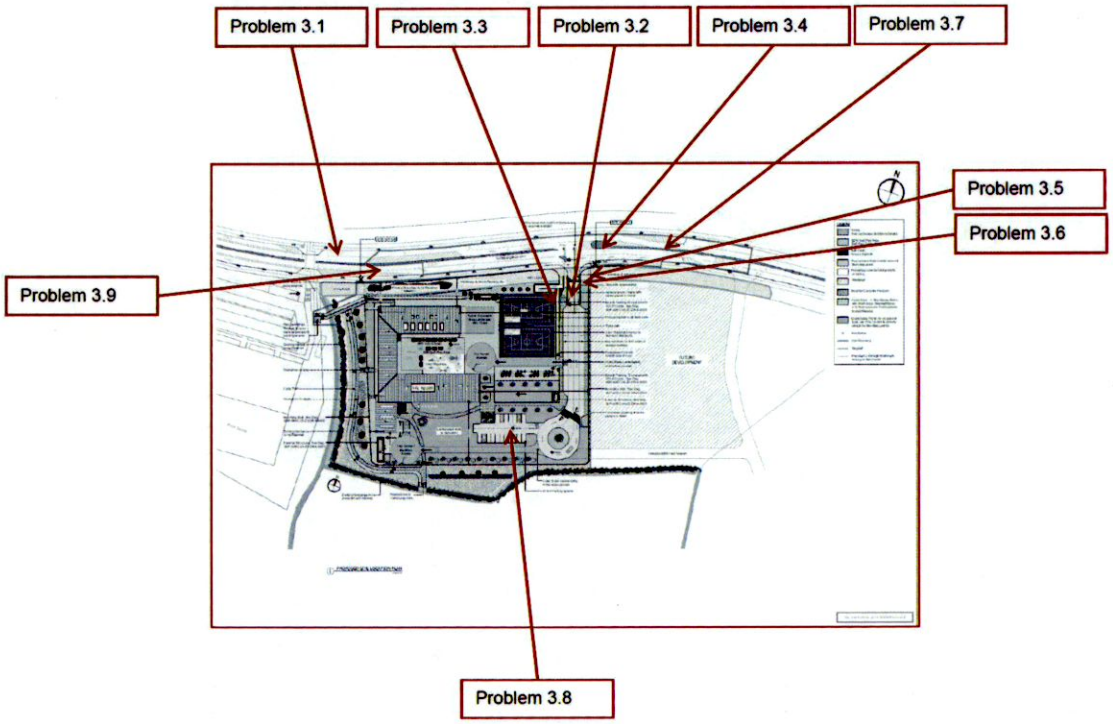
Signed: Denis Lawlor Designer **Date** 20th December 2022

Signed: Peter J. Monahan Audit Team Leader **Date** 20th December 2022

Signed: Employer **Date** 20th December 2022

On behalf of the Department of Education

Appendix D – Problem Locations


Problem 3.1
Problem 3.3
Problem 3.2
Problem 3.4
Problem 3.7
Problem 3.5
Problem 3.6
Problem 3.9
Problem 3.8