RPS Consulting Engineers

Residential Development at East Wall Road, Co. Dublin

Combined Stage 1 & 2 Road Safety Audit

September 2021
# Residential Development at East Wall Road, Co. Dublin

## Combined Stage 1 & 2 Road Safety Audit

<table>
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<th>Rev</th>
<th>Prepared By</th>
<th>Reviewed By</th>
<th>Approved By</th>
<th>Issue Date</th>
<th>Reason for Revision</th>
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<td>TAG</td>
<td>7th Sept 2021</td>
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1 Introduction

1.1 General

This report results from a Combined Stage 1 & 2 Road Safety Audit on the proposed Residential Development at East Wall Road, Co. Dublin, carried out at the request of Mr Padraic Mac Giolla Bhride of RPS Consulting Engineers.

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

Mr. Aly Gleeson  
(MBA, MEng, BSc, RSACert, CEng, FIEI)  
Road Safety Audit Team Leader

Mr. Alan O’Reilly  
(BA BAI MSc CEng MIEI RSACert)  
Road Safety Audit Team Member

The Road Safety Audit took place during July 2021 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 15th July 2021. Weather conditions during the site visit were dry and the road surface was dry. 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 Combined Stage 1 & 2 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) Publication’s 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
- Drainage
- Public Lighting
- Visibility splays
2 Project Description

2.1 General

A new residential development is proposed on East Wall Road (R131) in Co. Dublin (see Figure 2-1). East Wall Road is a two-way single carriageway road that extends in a south-eastern direction from its junction with the R105. It includes public footways on both sides of the carriageway, traffic calming measures (speed cushions), public lighting and a 50kph speed limit.

The proposed development is located on a brownfield site and shall include a combination of 17No 1 bed units, 28No 2 bed units, and 23No 3 bed units surrounding an internal courtyard. The development shall have a priority controlled access (5.5m wide) on East Wall Road. The existing pedestrian footway on East Wall Road shall continue across the development access, such that drivers will need to yield to pedestrians when entering or exiting the development.

The development shall include parking for 27 vehicles, and 122 bicycles, plus up to 10 bicycle parking spaces for visitors. Pedestrians can access the development via a dedicated footway connection between East Wall Road and the internal Courtyard, as well as stepped and ramped accesses at the front of the development.
3 Main Report

3.1 General Problem

Location: Drawing No SHB3-EAW-COA-DR-005 (Rev P02)

Summary: Information regarding drainage not provided to the Audit Team.

Information regarding drainage within the proposed development has not been provided to the Audit Team. Should inadequate drainage measures be provided, this could lead to ponding on the footpath or within the carriageway resulting in slips and trips during wet or icy weather.

Recommendation

Ensure the proposed drainage provision removes all surface water from the pedestrian and vehicle catchment areas.

3.2 General Problem

Location: Drawing No SHB3-EAW-COA-DR-005 (Rev P02)

Summary: No lighting has been indicated within the development.

No public lighting columns have been indicated within the development. A lack of public lighting provision within the development may lead to drivers being unable to see vulnerable road users within the footpath or carriageway during the hours of darkness, resulting in an increased risk of collisions between vehicles and vulnerable road users.

Recommendation

Public lighting should be provided within the development.

3.3 Problem

Location: Drawing No SHB3-EAW-COA-DR-005 (Rev P02)

Summary: No junction control or priority type has been indicated at the development access.

The junction control (stop, yield etc.), and subsequently priority, at the proposed development access has not been indicated. This could increase the risk of overshoot collisions where drivers fail to slow and stop when exiting the development's access.

Recommendation

Ensure the junction control at the development access is clear (via signage/road markings) to drivers exiting the development.
3.4 General Problem

Location: Drawing No SHB3-EAW-AR-COA-DR-005 (Rev P02)

Summary: No tactile paving provision within the development.

Formal pedestrian crossing points, including dropped kerbs and tactile paving, have not been indicated within the development. A failure to provide dropped kerbs at crossing points and along pedestrian desire lines could result in mobility impaired pedestrians being unable to safely and independently enter the courtyard. This could result in slips, trips or falls as these pedestrians attempt to descend the kerb. Similarly, a failure to provide tactile paving at dopped kerb locations could lead to an increased risk of visually impaired pedestrians unintentionally entering the courtyard where they could be struck by vehicles.

Additionally, steps have been indicated at the front of the development. Hazard tactile paving has not been indicated at the top or bottom of these steps. This could lead to visually impaired pedestrians being insufficiently aware of the vertical hazard ahead resulting in them inadvertently entering the steps leading to trips, falls and serious injuries.

Recommendation

Formal uncontrolled pedestrian crossings, including dropped kerbs and tactile paving, should be provided at pedestrian crossing points/desire lines.

Additionally, ensure hazard paving (corduroy tactile paving) is provided at the top and bottom of steps within the development to warn visually impaired pedestrians of the vertical height hazard.

3.5 General Problem

Location: Drawing No SHB3-EAW-AR-COA-DR-005 (Rev P02)

Summary: Insufficient turning radii for vehicles within the development.

In the absence of a swept path analysis, it is not clear if vehicles can safely turn into or out of the development’s internal access, and the southernmost carpark. Insufficient turning radii may result in vehicles needing to perform unsafe turning manoeuvres to navigate the tight turns, leading to material damage collisions.

Recommendation

Using Swept Path analysis, ensure sufficient turning radii are provided to support safe turning movements within the development.
3.6 Problem

Location: Drawing No SHB3-EAW-AR-COA-DR-005 (Rev P02)

Summary: Insufficient inter-visibility at the internal access roads may lead to low speed side-on and vehicle/VRU collisions.

The development appears to include partitions, possibly timber fences or walls to separate apartments on the ground floor. There is a risk that these partitions may reduce inter-visibility between internal drivers within the internal access roads, or between drivers and Vulnerable Road Users (i.e. peds/cyclists). Reduced inter-visibility within the development may increase the risk of personal injury collisions between internal road users.

Recommendation

Ensure internal road users within the development have sufficient inter-visibility.

3.7 Problem

Location: Drawing No SHB3-EAW-AR-COA-DR-005 (Rev P02)

Summary: Existing speed cushions on East Wall Road may interfere with the safe movement of vehicles entering/exiting the development.

It is unclear if the existing speed cushions on East Wall Road are directly adjacent the new development access. The location of raised cushions directly adjacent the development access may complicate the safe movement of vehicles entering or exiting the development, leading to driver hesitation and poor lane discipline. This may increase the risk of rear-end-shunt and side-swipe collisions.

Recommendation

If near the development access, the speed cushions should be relocated so as not to interfere with entry/exit manoeuvres.
4  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
Aly Gleeson  Signed:  
Dated:  7th Sept 2021

ROAD SAFETY AUDIT TEAM MEMBER
Alan O’Reilly  Signed: 
Dated:  7th Sept 2021
Appendix A – Road Safety Audit Brief Checklist
Have the following been included in the audit brief? (if ‘No’, reasons should be given below)

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Any other information?  
(if ‘Yes’, describe below)

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Appendix B – Documents Submitted to the Road Safety Audit Team
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Appendix C – Feedback Form
# Road Safety Audit Feedback Form

**Scheme:** Residential Development at East Wall Road, Co. Dublin  
**Route No.:** R131  
**Audit Stage:** Combined Stage 1 & 2 RSA  
**Date Audit Completed:** 27th July 2021

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Signed:  
Designer  
Date: 6th Sept ‘21

Signed:  
Audit Team Leader  
Date: 7th Sept ‘21

Signed:  
Employer  
Date:
Appendix D – Problem Locations
Problem 3.6

Problem 3.3

Problem 3.7

Problem 3.6

Problem 3.3

Problem 3.7

General Problem 3.1

General Problem 3.2

General Problem 3.4

General Problem 3.5