

Stage 1 / 2 Road Safety Audit

**Proposed Large Scale Residential
Development, Broomfield West,
Midleton, Co. Cork**

Castle Rock Homes (Midleton) Ltd

November 2023

HDC1296/02

Hegsons Design Consultancy Limited

Dublin | Cork | London | Bedford | Wendover | Buxton | Saint-Denis-Le-Gast



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1 Introduction

This report details the findings of a Stage 1/2 Road Safety Audit carried out on the proposed large scale residential development and creche facility at Broomfield West, Midleton Co. Cork, on behalf of Castle Rock Homes (Midleton) Limited

The Audit Team members were as follows:-

Ken Hegarty, BE, MEngSc, CEng MIEI, MCIHT Hegsons Design Consultancy Ltd

Seamus Quigley, BE, CEng, MIEI, MCIHT Hegsons Design Consultancy Ltd

The site was inspected on the 15th September 2023 between 10.30 am and 12.00 pm, in daylight, by foot and in a car, during dry weather conditions. Record photographs were taken.

The application site is located approximately 1.3km from the town of Midleton on the northern site of the town, and it abuts the substantially complete Blossom Hill Housing development being carried out by Castle Rock Homes (Midleton) Ltd.

Midleton is a busy Cork County Town with a rapidly growing population and sits at the end of the Cork-Midleton rail line and along the N25 East Parkway. In the context of the town, the site would be considered elevated and is accessed via established routes through the established residential area of Broomfield, Midleton.

The subject site is c. 8.273ha and located at Broomfield Midleton, Co. Cork. The site is located to the north of Midleton town and to the east of the R626. The site is bound by Broomfield Village to the south and agricultural lands to the east. The subject site is bound on the north and western side by the L-7630 Broomfield Road and the Midleton Water Treatment Plant.

Access to the existing site is off the L-7630 Broomfield Road. The section of the L-7630, known as Avoncore Place, forms an arm of the signal-controlled junction at the R626 / Northern Relief Road. The road is subject to a 50kph speed limit and provides access to the Broomfield residential area. To the north, the road becomes L-7630 Broomfield Road which has recently been upgraded from a rural in nature road which provided local access to residential properties, to a 5.5m – 7.0m wide road with a 2.0m wide footpath along the western side. The road, which has recently been upgraded as part of the new Park Hill View residential development (Council Ref: 18/7236), is traffic calmed and is subject to an 80kph speed limit at present.

The proposed development will consist of a large scale residential development consisting of the development of 272 No. residential units, creche and all associated ancillary developments works at Broomfield West, Midleton, Co. Cork.

The proposal for the 272 No dwellings units is for a mix of 4-bedroom semi-detached dwellings, 3-bedroom semi-detached dwellings, 2, 3 & 4 bedroom terraced dwellings, 2, 3 & 4 bedroom terraced mews style dwellings, 2 bed duplexes and 1 bed apartments.

Access to the proposed development is via 4 proposed access points off the L-7630 Broomfield Road. The accesses will take the form of priority junctions and provide access to various numbers of residential dwellings. The proposed accesses will accommodate all vehicular, pedestrian and cycle movements to and from the proposed development.

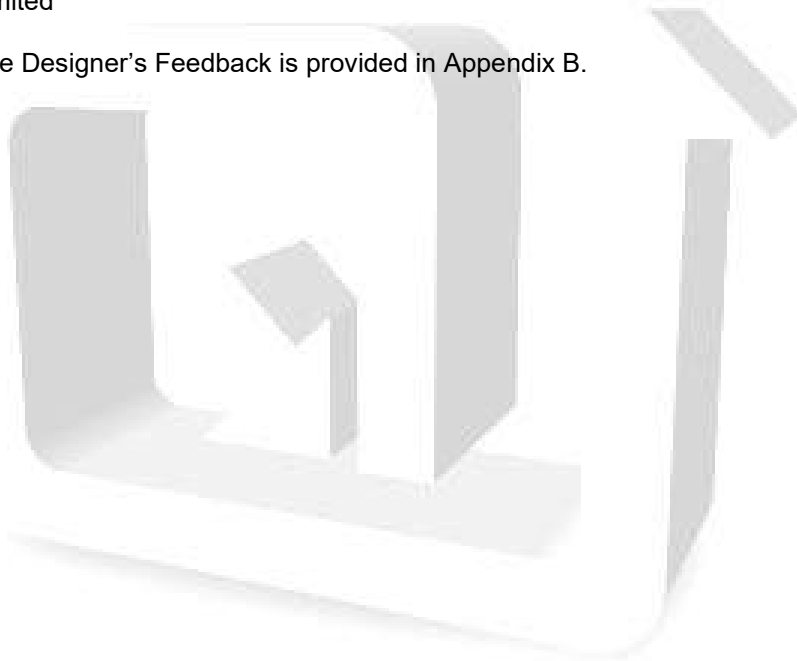
The drawings and other documents provided to carry out the Audit are listed in Appendix A.

This Audit has been carried out in the context of the procedures provided in the relevant sections of the TII Road Safety Audit GE-STY-01024 December 2017 and TII Road Safety Audit Guidelines GE-STY-01027 December 2017; and in accordance with the DoTTS Design Manual for Urban Roads and Streets (DMURS).

The Auditors have examined and reported only on those features of the design considered to have road safety implications and have not examined or verified the compliance of the scheme to any other criteria.

Section 2 of this report presents the findings of a Stage 1/2 Road Safety Audit carried out on the proposed large scale residential development and creche facility at Broomfield West, Midleton Co. Cork, on behalf of Castle Rock Homes (Midleton) Limited

The Designer's Feedback is provided in Appendix B.



2 Findings of the Stage 1/2 Road Safety Audit

Internal Site Layout & Access Arrangement

2.1 Comment – Compliance with DMURS

This audit is required in the context of DMURS. It is considered that the proposed layout is generally compliant with DMURS' philosophy, by virtue of the reduced speeds likely to result from the curved alignment of the access road and internal roads, and short internal cul-de-sac roads.

2.2 Comment – Dwell Areas not Shown at the Access Junctions

The tie-in details, long sections and gradients at the approaches to access points are not provided. It is recommended that appropriate dwell areas on approach to junctions are provided, with suitable cross-falls and drainage.

2.3 Problem – Access / Egress from Car Parking Spaces to the South of the Creche

Vehicle egressing from the 3 No. car parking spaces to the south of the Creche will be required to either reverse back into or out of the spaces and this may result in a safety concern for pedestrians, cyclists and other general traffic entering and egressing via the southern access (especially during Creche drop-off and pick-up periods). Inappropriate manoeuvres could result in other road users being put at risk of conflicts, collisions and injuries.

Recommendation:

It is recommended that appropriate signage should be provided at the car parking spaces to warn drivers of other road user movements in the area and to have caution when entering and exiting the parking spaces.

2.4 Problem – Access / Egress from Drop-off Spaces on L-7630 North of the Wastewater Treatment Plan

The orientation of parking spaces on the L-7630 could result in vehicles doing U-turns on the public road or result in vehicles turning in the access to the proposed development to head back in the opposite direction. Inappropriate turning manoeuvres could be required to exit or enter these drop-off spaces just south of the proposed access. Lack of appropriate signage or car parking

orientation could result in other road users being put at risk of conflicts, collisions and injuries.

Recommendation:

It is recommended that appropriate signage should be provided at all car parking spaces to encourage drivers not to U-turn on the L-7630.

2.5 Problem – Lack & Unclear Footpath Crossing Facilities within the Site

No details for the footway crossing have been provided within the development at the roads off the main spine road just north of the Wastewater Treatment Plant. It is unclear if the proposed access arrangement to the site is to be raised to provide a continuous footway with pedestrian priority adjacent to residential dwellings No. 127 and No. 138 and also residential dwelling No. 259. Priority for pedestrian movements within the site would be recommended in order to be consistent along the footways.

Recommendation:

It is recommended that continuous pedestrian facilities should be provided across the proposed site access consistent with the current and other access points along the road, with reference to DMURS and the Traffic Management Guidelines.

2.6 Problem – Lack & Unclear Footpath Crossing Facilities at the Staggered Junction

No details for the footway crossings have been provided within the development at the staggered junction in the northern section of the site. As the area is not raised due to the road gradients, no tactile paving or dished kerbs have been identified. Priority for pedestrian movements within the site would be recommended in order to be consistent along the footways. Lack of appropriate surface and gradients and inadequate facilities for pedestrians could result in potential trips, falls and injuries and pedestrians on the road carriageway at risk of vehicle impacts and injuries.

Recommendation:

It is recommended that continuous pedestrian facilities should be provided consistent with others, with reference to DMURS and the Traffic Management Guidelines.

Public Road Widths

2.7 Comment – Road Width along L-7630 Broomfield Road

The width of the public road, Broomfield Road, along the frontage of the site seems to vary in width from 5.3m to 7.5m. Potential issues may occur if large vehicles are to pass each other along this section of the road which may result in additional congestion.

Vulnerable Users

2.8 Problem – Lack of Dedicated Disabled User Parking Spaces

There does not appear to be parking provision for disabled users. Lack of appropriate provision could result in conflicts for users, including visitors. Users entering the carriageway could be at increased risk of vehicle impact and injury.

Recommendation:

It is recommended that an appropriate quantum of disabled user parking spaces should be provided at suitable locations, with appropriate facilities.

2.9 Problem – No Details for Tactile Paving Treatments

No crossing details for pedestrians have been provided at many of the uncontrolled pedestrian crossing points within the proposed development. Inadequate facilities for pedestrians could result in potential trips, falls and injuries; and pedestrians on the road carriageway at risk of vehicle impacts and injuries.

Recommendation:

It is recommended that appropriate facilities for vulnerable users should be provided. Provide appropriate dropped kerbs and tactile paving where necessary, with reference to DMURS and the Traffic Management Guidelines.

2.10 Problem – Lack of Details for Footpath / Cycle Ramp between Southern and Northern site Sections of the Proposed Development

The details for the footway / cycle link in the middle of the proposed development connecting the northern and southern sections are incomplete. No details have been provided in relation to its width, levels and landing areas (especially on the southern end where the

steps seem to meet the ramp). The angle of the crossing point to the south of the ramp should also be reconsidered, as convenient priority access for pedestrian and cycle movements throughout the site would be recommended.

Lack of appropriate surface and gradients and inadequate facilities for pedestrians and cyclists could result in potential trips, falls and injuries and at risk of vehicle impacts and injuries when re-entering the internal road network.

Recommendation:

It is recommended that continuous facilities should be provided across the proposed area, with reference to DMURS and to be Building Regulations Part M compliant.

2.11 Problem – No Road Tie-In's to the L-7630 Broomfield Road

There are no details provided for the roadway tie-in to the existing road network at the boundary of the proposed development to the L-7630 Broomfield Road, including pedestrian facilities. Lack of appropriate facilities for vulnerable road users could put them at risk of vehicle impacts and collisions; and could increase the risk of vehicles swerving out into on-coming traffic and other road users.

Recommendation:

It is recommended that appropriate pedestrian facilities, with appropriate dropped kerbs and tactile paving, should be provided with reference to DMURS and the Traffic Management Guidelines.

2.12 Problem – Location of Cycle Parking Spaces

It is unclear if provision has been made for public cycle parking spaces within the proposed development. Lack of appropriate parking provisions could result in bicycles being left in unsafe and inconvenient locations, thus presenting a risk to all road users. Suitable connections to cycle parking are also required for users.

Recommendation:

It is recommended that cycle parking provisions are made with reference to Cork County Council's recommended parking standards.

2.13 Problem – Unclear Detail for Pedestrians Facility

It is proposed to provide dwellings with individual driveways crossing the footpaths along the internal access road. The access details are unclear. Providing priority for vehicles accessing these dwellings, in preference to pedestrians walking along the proposed footway, could

result in pedestrians walking on the carriageway, either in front or to the rear of waiting vehicles. This could put them at risk of vehicle impact and injury.

Recommendation:

It is recommended that pedestrian priority should be provided along footways with appropriate inter-visibility between pedestrians travelling along the footway and accessing vehicle drivers.

2.14 Comment – Visibility within the Proposed Development

Adequate visibility splays are to be always maintained and kept clear of any physical obstructions. Obstruction to the visibility splays at the internal junctions (e.g. overgrown landscaping, etc) could result in other road users being put at risk of conflicts, collisions and injuries.

Road Markings & Signage

2.15 Problem – Unclear Line Road Markings or Signage

Unclear road marking lines are proposed on the road carriageway within the proposed development. The lack of stop / yield lines and confusing direction arrows could increase the risk of driver confusion putting them at risk of impact collisions and consequent injuries for vehicle occupants.

The lack of road signage could increase the risk of driver confusion and inappropriate vehicle speeds, putting them, and other users, at risk of impact collisions and consequent injuries for vehicle occupants.

Recommendation:

It is recommended that appropriate road markings and associated signage should be provided and positioned, with reference to the DoT Traffic Signs Manual, including appropriate 30 km/h Slow Zone speed limit signage.

Lighting

2.16 Comment – No Lighting Details Provided for Audit

No lighting details have been provided for this Audit. Potential issues include lack of coverage that could result in dark spots, which could put pedestrians at risk of vehicle impact and injury, or potential

personal security issues. Appropriate lux levels should be generated as the design progresses, with appropriately located lamp standards.

Drainage

2.17 Comment – No Drainage Details Provided for Audit

No drainage details have been provided for this Audit. Appropriate drainage should be provided, with appropriately located gullies, manhole covers and associated details.

Landscaping

2.18 Comment – Incomplete Landscape Details Provided for Audit

Full landscape details have not been provided for this Audit. Risks include that inappropriately located planting could restrict visibility or access. In particular, appropriate plant levels should be provided. This should be subject to Audit prior to completing detailed construction drawings.

3 Audit Team Statement

We certify that we have examined the drawings and other information listed in Appendix A of this report. The examination has been carried out for 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 we have identified are noted in the report, together with suggestions for improvement, which we recommend should be studied for implementation.



2nd November 2023

Signed: _____ Date: _____

Ken Hegarty, BE, MEngSc, CEng MIEI, MCIHT
Audit Team Member



2nd November 2023

Signed: _____ Date: _____

Seamus Quigley, BE, CEng MIEI, MCIHT
Audit Team Leader

Appendix A : List of Documents Provided for Audit



Drawings:-

Brian O'Kennedy & Associates Ltd

Date: September 2023

22/673-P-1101: Proposed Part Site Layout – Southern Section

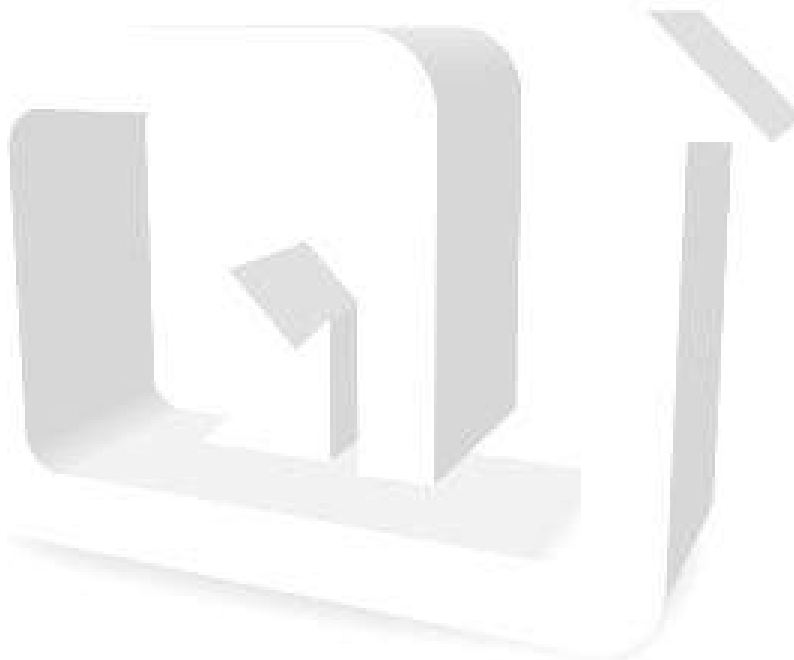
22/673-P-1102: Proposed Part Site Layout – Northern Section

Other Documents:-

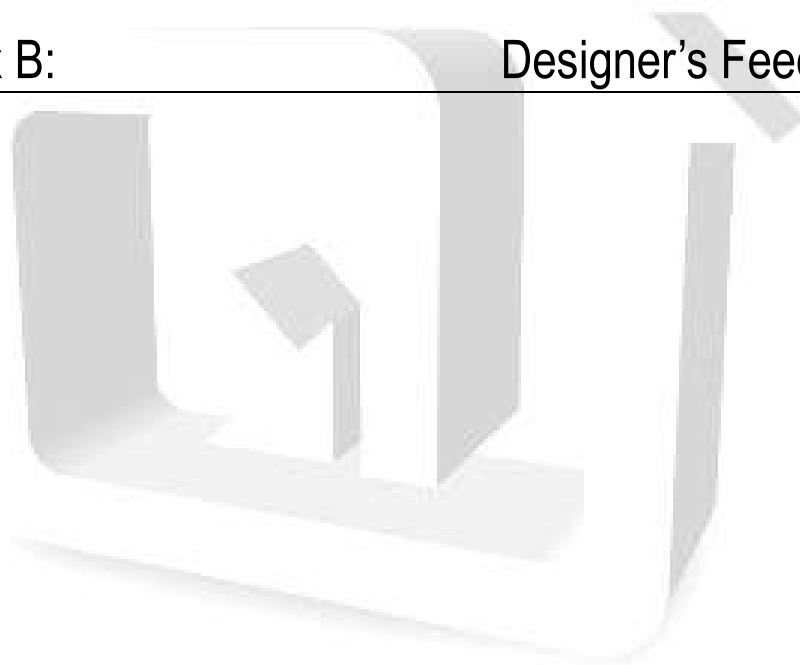
Hegsons Design Consultancy Ltd

Traffic and Transport Assessment

Date: June 2023



Appendix B: Designer's Feedback




ROAD SAFETY AUDIT FEEDBACK FORM

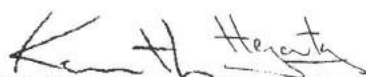
SCHEME: PROPOSED LARGE SCALE RESIDENTIAL DEVELOPMENT, BROOMFIELD WEST, MIDLETON, CO. CORK

ROUTE(s): BROOMFIELD WEST, MIDLETON, CO. CORK

AUDIT STAGE: STAGE 1 / 2 **DATE AUDIT COMPLETED:** 3RD NOVEMBER 2023

Paragraph No. in Safety Audit	To Be Completed By Designer			To Be Completed by Audit Team
	Problem Accepted (Yes/ No)	Recommended Measure Accepted (Yes/ No)	Describe Alternative Measure(s). Give Reasons for Not Accepting Recommended Measure	Alternative Measures Accepted by Auditors (Yes/ No)
2.1	Yes	Yes		
2.2	Yes	Yes		
2.3	Yes	Yes		
2.4	Yes	Yes		
2.5	Yes	Yes		
2.6	Yes	Yes		
2.7	Yes	Yes		
2.8	Yes	Yes		
2.9	Yes	Yes		
2.10	Yes	Yes		
2.11	Yes	Yes		
2.12	Yes	Yes		
2.13	Yes	Yes		
2.14	Yes	Yes		
2.15	Yes	Yes		
2.16	Yes	Yes		
2.17	Yes	Yes		
2.18	Yes	Yes		

SIGNED:  **DESIGNER** **DATE:** 3RD NOVEMBER 2023

SIGNED:  **AUDIT TEAM** **DATE:** 3RD NOVEMBER 2023

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