

Stage 1 Road Safety Audit

Proposed Residential Development at
Ladywell, Thomastown, Co Kilkenny

David Kelly and Partners on behalf of
Kilkenny County Council

October 2019

HDC/1232/002

Hegsons Design Consultancy Limited

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



Malachy Walsh and Partners
Engineering and Environmental Consultants

David Kelly and Partners on behalf of
Kilkenny County Council

Proposed Residential Development,
Ladywell, Thomastown, Co. Kilkenny
Stage 1 Road Safety Audit

October 2019



Pembroke Hall, 38/39 Fitzwilliam Square, Dublin 2.



Park House, Mahon Technology Park, Bessboro Road, Blackrock, Cork.

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1 Introduction

1.1 This report details the findings of a Stage 1 Road Safety Audit carried out on a proposed residential development at Ladywell, Thomastown, County Kilkenny. This Audit was requested by David Kelly and Partners, on behalf of Kilkenny County Council.

1.2 Hegsons Design Consultancy Ltd' and Malachy Walsh and Partners' Road Safety Auditors carried out the Audit.

1.3 The Audit Team members were as follows:-

Ken Hegarty, BE MEngSc CEng MIEI MCIHT	Hegsons Design Consultancy Ltd
Sean Doyle, BE CEng MIEI	Malachy Walsh and Partners

1.4 Ken Hegarty inspected the site on the 25th September 2019, between 09.20a.m. and 09.45 a.m., in daylight, by foot and in a car, during fine weather conditions. Record photographs were taken.

1.5 The proposed site is located along the R700 Kilkenny Road to the north of Thomastown, Co. Kilkenny. The site is approximately 0.927 hectares in size.

1.6 Access to the proposed upper section of the site is via an access off the L-8300 Lady's Well Street. The proposed access would be a priority-controlled junction. The L-8300 Lady's Well Street is within the 80kph speed limit, approximately 70 metres west of the 50 kph urban speed limit zone. Street lighting is provided along the L-8300 adjacent the site, extending to the proposed access junction location.

1.7 A second access to the lower site is situated off the R700 road just north of the end of the one-way section of the road. The access takes the form of a priority junction and this section of R700 is subject to a 50kph speed limit.

- 1.8 Collision details from the Road Safety Authority (RSA) online collision database, for the local road network in the vicinity of the proposed scheme, indicate that there was 1 no. recorded collision. This was recorded on the R700, in the 50kph speed limit area, approximately 170m south of the existing mini-roundabout junction. The collision circumstances were “Angle, both straight” and resulted in a single minor injury. This occurred between 0300 and 0700 hours on a Wednesday morning during 2006.
- 1.9 This Audit includes the proposed internal layout and access to the R700 Regional road and L-8300 Local road, including the proposed local realignment of the L-8300. The layout and suitability of the existing mini-roundabout has not been the subject of this audit. It is understood that there are no proposals in relation to the mini-roundabout, with the exception of widening its western arm.
- 1.10 The drawings and other documents provided to carry out the Audit are listed in Appendix A.
- 1.11 This Audit has been carried out in the context of the relevant sections of the TII GE-STY-01024 Road Safety Audit December 2017 and TII Road Safety Audit Guidelines December 2017; and in accordance with the DTTAS 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.
- 1.12 Section 2 of this report presents the findings of the Stage 1 Road Safety Audit of the proposed residential development. The Designer’s Feedback is provided in Appendix B.

2 Findings of the Stage 1 Road Safety Audit

General

Internal Layout – Four Units from R700 (Lower Site)

2.1 Problem – Unclear Access Details

The proposed access details at the R700 are unclear. This could result in a kerbed access, with steps or a trip hazard for pedestrians travelling along the east side of the R700. This could result in potential injury for pedestrians.

Recommendation:

It is recommended that pedestrian priority should be retained, with a continuous footway across the access, with minimal gradients on the footway, to provide for vehicle access.

2.2 Problem – Risk of Pedestrian Impact

The proposed access to the communal amenity space (lower site) for the four units would be via steps to the north of the storage area. The likely pedestrian route would be adjacent to parking spaces and not defined or protected. The risk is that vehicles reversing to the spaces could impact pedestrians, walking between the spaces and the storage area boundary. This could result in potential injury for pedestrians.

Recommendation:

It is recommended that a safe pedestrian route should be defined along the likely pedestrian desire-line.

2.3 Problem – Risk of Pedestrian Impact

It is unclear whether disabled users can access the building from proposed spaces provided for the four units. Poor access provision could result in disabled users using a circuitous route within the car park to access the dwelling, putting them at increased risk of vehicle impact. This could result in potential injury for pedestrians.

Recommendation:

It is recommended that a direct access should be provided for disabled users to an appropriate number of spaces.

Internal Layout – Twenty-One Units from L-8300 (Upper Site)

2.4 Comment – Potential Pedestrian Impact

The access detail for the proposed development, including the internal crossing close to the L-8300, may not be consistent with DMURS. The risk is that higher vehicle speeds and vehicle priority would increase the risk and severity of pedestrian impacts. It is recommended that the proposed access layout should be provided with reference to DMURS. Note: Section 4.3 of DMURS provides examples of entry treatment layouts, with priority for pedestrians across access junctions.

2.5 Problem – Potential Pedestrian Impact

The kerb details for vehicle access to properties is not provided. The final detail could result in increased use of carriageways for vulnerable users, putting them at increased risk of vehicle impact.

Recommendation:

It is recommended that vehicle access to dwellings should provide priority to pedestrians travelling along the footway, with suitable gradients.

2.6 Problem – Difficult Vehicle Access to Dwelling

The access to dwelling number 11 is at an acute angle with the main access road and is non-standard. This could result in difficulty for accessing the driveway, whether reversing in or out. This increases the risk of pedestrian impact and injury, or impact with other vehicles.

Recommendation:

It is recommended that a more standard layout should be provided, with easier vehicle access and driver visibility. Note: it is preferable for drivers to drive out in a forward direction.

2.7 Problem – Potential Pedestrian Impact

The south end of the pedestrian footway along the east side of the proposed access road terminates abruptly adjacent to the rear of a parking space adjacent to house number 19. No tactile warning is proposed, and the wall of the dwelling may block visibility between drivers leaving the parking space and pedestrians. The footway appears to be narrowed by the location of the dwelling at this location. The risk is that pedestrians, including children and visually impaired users, may enter the shared area as a driver reverses from the space resulting in impact and pedestrian injury.

Recommendation:

It is recommended that hazard warning tactile paving should be provided and sufficient inter-visibility should be provided between pedestrians and drivers. This may include re-orientating the dwelling block to maintain the footway width and provide a set-back to enhance visibility.

2.8 Problem – Risk of Pedestrian Impact

The proposed access to the communal amenity space (upper site) for the twenty-one units would be via steps to the east side at the end of the cul de sac. It appears that pedestrians may enter the shared surface area at a location on the swept path of vehicles as drivers may reverse from dwelling number 1. This puts pedestrians at risk of vehicle impact and injury.

Recommendation:

It is recommended that the point of egress from the communal amenity area (upper site) should be relocated to provide a safe route for pedestrians.

2.9 Problem – Risk of Pedestrian Impact

The proposed disabled user parking spaces are located at the north end of the proposed development. This location may not be sufficient to serve the overall development, including visitors. Inadequate provision could result in inappropriate parking, such as within the turning area, or longer walking distances for vulnerable users. Parking within the turning head could result in longer reversing of vehicles and increased risk of pedestrian impact and injury.

Recommendation:

It is recommended that the appropriate number of disabled users should be provided at optimum locations within the development.

2.10 Comment – Proposed Internal Pedestrian Crossing

The proposed internal pedestrian crossing is somewhat inconsistent with DMURS by the use of Zebra Crossing control. It is recommended that a more informal crossing should be provided, with the use of materials to contrast with the road surface. Note: See DMURS Figure 4.38 for example.

Layout and Visibility

2.11 Problem –Tie-In with Existing Access Road

It is proposed to widen the L-8300 to 6.0 metres along the site's northern boundary, adjacent to the proposed access. There is a risk that the set-back area to the west of the access may be used for parking, on occasion, during busy periods within the development. Parked vehicles adjacent to the access could restrict visibility for outbound vehicles from the development, resulting in potential side-impact type collisions and injury to vehicle occupants.

Recommendation:

Provide appropriate taper to provide a suitable tie-in commensurate with the design speed, and parking restrictions.

2.12 Problem –Tie-In with Existing Access Road

It is proposed to widen the L-8300 to 6.0 metres along the site, as far as the existing mini-roundabout to the east. The proposed edge detail results in a sharp taper back to the existing alignment at the west side of the proposed works. This could result in potential impact with the existing boundary for westbound vehicles and consequent injury for occupants.

Recommendation:

Provide gradual taper to provide a suitable tie-in, commensurate with the design speed.

2.13 Problem – Potential Side-On Impact

It is proposed to widen the L-8300 to 6.0 metres along the site, as far as the existing mini-roundabout to the east. As a result, the approach lane from the west would be located further north. Drivers' visibility may increase through the junction to the eastern arm as a result. This could result in potential over-run through the junction, particularly during snow, or poor visibility, as the junction's island has no vertical definition. This could result in potential side-on vehicle impacts within the junction and consequent injury for occupants.

Recommendation:

Ensure that appropriate measures are in place to advise drivers of the revised junction layout.

2.14 Comment – Tie-In with Existing Mini-Roundabout

It is proposed to widen the L-8300 to 6.0 metres along the site, as far as the existing mini-roundabout to the east. It is recommended that the approach to the existing mini-roundabout should be reviewed to assess the likely swept path of vehicles from the upgraded approach to each arm. Vehicles should follow an appropriate route through the junction, with appropriate visibility distances to each other approach.

Non-Motorised Users

2.15 Problem – Potential Pedestrian Impact

There is an existing pedestrian path to the north of the L-8300, immediately west of the existing external mini-roundabout. The existing wall along the northside of the L-8300 restricts existing visibility to the right for southbound pedestrians across the L-8300. It appears that it is proposed to construct a wall along the realigned edge with a 500 mm grass verge. The proposed wall details are not provided and may restrict visibility for pedestrian crossing the L-8300 from the north. The proposed development is likely to increase eastbound traffic at this location. There may be a risk of pedestrian impact from vehicles, and consequent injury.

Recommendation:

It is recommended appropriate inter-visibility is provided between pedestrians and drivers.

2.16 Comment – Speed Limit Sign Location

The existing 80 kph speed limit zone on the L-8300 terminates to the east of the proposed development access junction and includes a section of the proposed urban works on the L-8300. It is recommended that the urban speed limit on the L-8300 should be relocated to commence to the west and include the proposed works area.

Drainage

2.17 Problem – Potential Ponding

The drawings provided for audit do not appear to indicate gulleys for drainage with the proposed development. Lack of drainage could result in ponding and potential skidding hazards, particularly for two-wheel vehicles in icy conditions. This could result in injury for pedestrians or vehicle occupants.

Recommendation

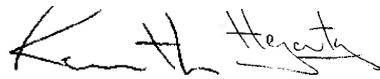
It is recommended that appropriately located drainage should be provided throughout the development, as required with suitable crossfalls.

2.18 Comment – Potential Skid Hazard

There is a risk that final location of iron-work may be located on the swept path of vehicles. This could result in a potential skidding hazard, particularly for two-wheel vehicles, as the covers wear. This could result in increased risk of impact with pedestrians or increase severity of injuries. It is recommended that iron-work is located off swept path, as far as is practical.

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.

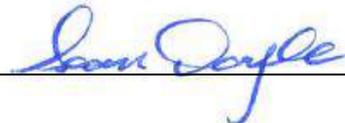


31st October 2019

Signed: _____

Date: _____

Kenneth Hegarty, BE CEng MIEI MCIHT
Audit Team Member
For and on behalf of Hegsons Design Consultancy Ltd
Pembroke Hall, 38/39 Fitzwilliam Square, Dublin 2.



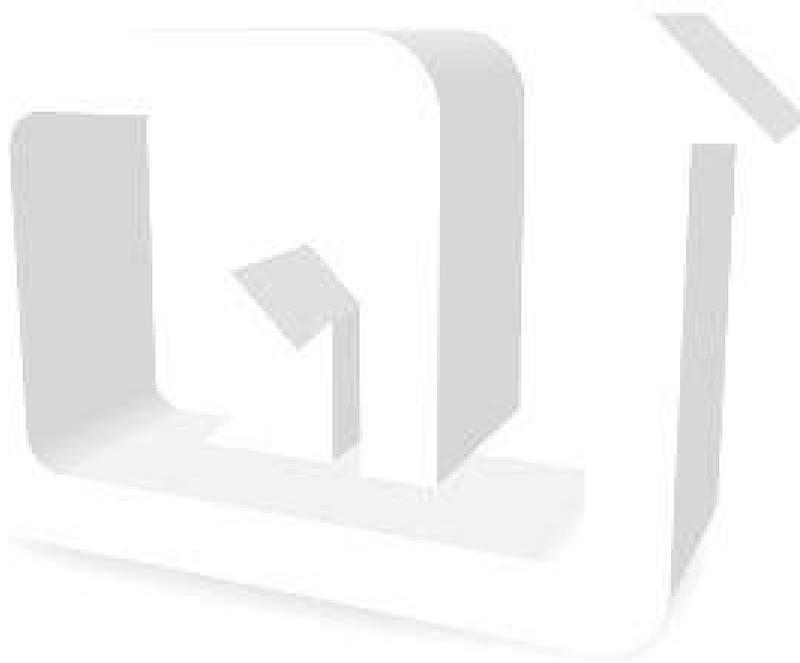
31st October 2019

Signed: _____

Date: _____

Sean Doyle, BE CEng MIEI
Audit Team Member
For and on behalf of Malachy Walsh and Partners
Engineering and Environmental Consultants
Reen Point, Blennerville, Tralee
County Kerry

Appendix A – List of Documents Provided for this Audit



Drawings:-

C.J. Falconer + Associates Architects

Drawing: Site Layout Plan

Drawing Number: 2012018 PL-105

Date: July 2019

David Kelly Partnership Chartered Engineers

Drawing: Drainage Layout

Drawing Number: 19018-101 Rev: D1

Date: 14 Oct. 2019

David Kelly Partnership Chartered Engineers

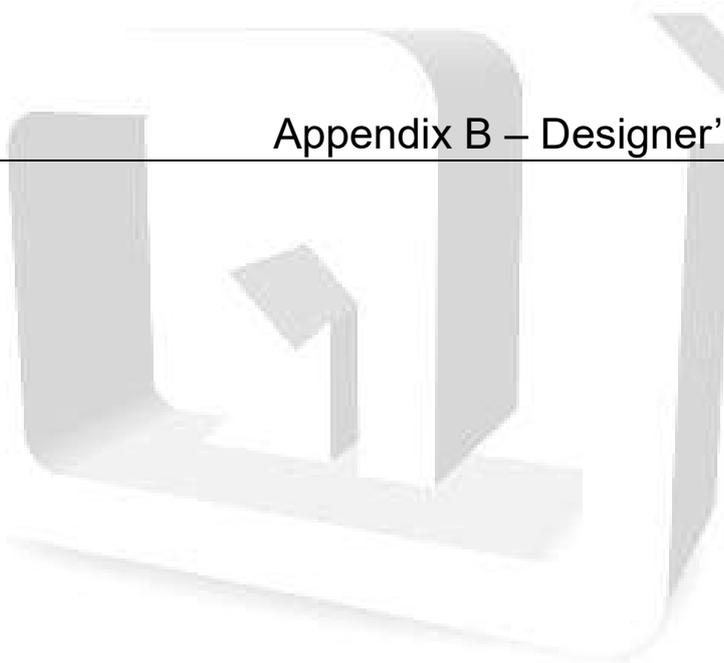
Drawing: Road Widening

Drawing Number: 19018-105 Rev: D1

Date: 14 Oct. 2019

Other Documents:-

Appendix B – Designer’s Feedback



ROAD SAFETY AUDIT FEEDBACK FORM

SCHEME: PROPOSED RESIDENTIAL DEVELOPMENT AT LADYWELL, THOMASTOWN, CO KILKENNY

ROUTE(S): LADYWELL, THOMASTOWN, CO. KILKENNY

AUDIT STAGE: STAGE 1 **DATE AUDIT COMPLETED:** 31ST OCTOBER 2019

	To Be Completed By Designer			To Be Completed by Audit Team Leader
Paragraph No. in Safety Audit	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			Comment Noted	
2.5	Yes	Yes		
2.6	Yes	Yes		
2.7	Yes	Yes		
2.8	Yes	Yes		
2.9	Yes	Yes		
2.10			Comment Noted	
2.11	Yes	Yes		
2.12	Yes	Yes		
2.13	Yes	Yes		
2.14			Comment Noted	
2.15	Yes	Yes		
2.16			Comment Noted	
2.17	Yes	Yes		
2.18			Comment Noted	

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