Waterman Moylan
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DMURS Statement of Design Consistency

Proposed Strategic Housing Development at Auburn, Malahide Road

April 2022

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Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015 and BS EN ISO 14001: 2015)

Issue	Date	Prepared by	Checked by	Approved by
1	7 April 2022	Stephen Dent-Neville	Mark Duignan	Mark Duignan

Comments

Waterman Moylan
Engineering Consultants

Disclaimer

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1. Introduction

1.1 Background of Report

This DMURS Statement of Design Consistency has been prepared by Waterman Moylan with input from other members of the Design Team as part of the planning documentation for a proposed residential development in lands around Auburn House in Malahide, Co. Dublin.

This report assesses the proposed road and transportation network throughout site in relation to the standards set out in the Design Manual for Urban Roads and Streets (DMURS).

1.2 Planning History

A previous planning submission to develop the site was made by the Applicant in 2021 under An Bord Pleanála reference no. ABP-309907-21. A decision to refuse planning permission was made by An Bord Pleanála on 14 July 2021.

The primary reasons for refusal are summarised below:

1. The proposed development, including the proposed entrance road, would negatively impact Auburn House, a Protected Structure (RPS No. 448).
2. The proposed development would result in the loss of a significant number of trees; and
3. The submission did not include a comprehensive assessment of daylight and sunlight.

The subject application seeks to address the previous reasons for refusal.

1.3 Site Location and Description

The site is located between the existing Abington residential development and the Malahide Road. The site entrance is from the Malahide Road, adjacent to the Malahide Road/Back Road junction.

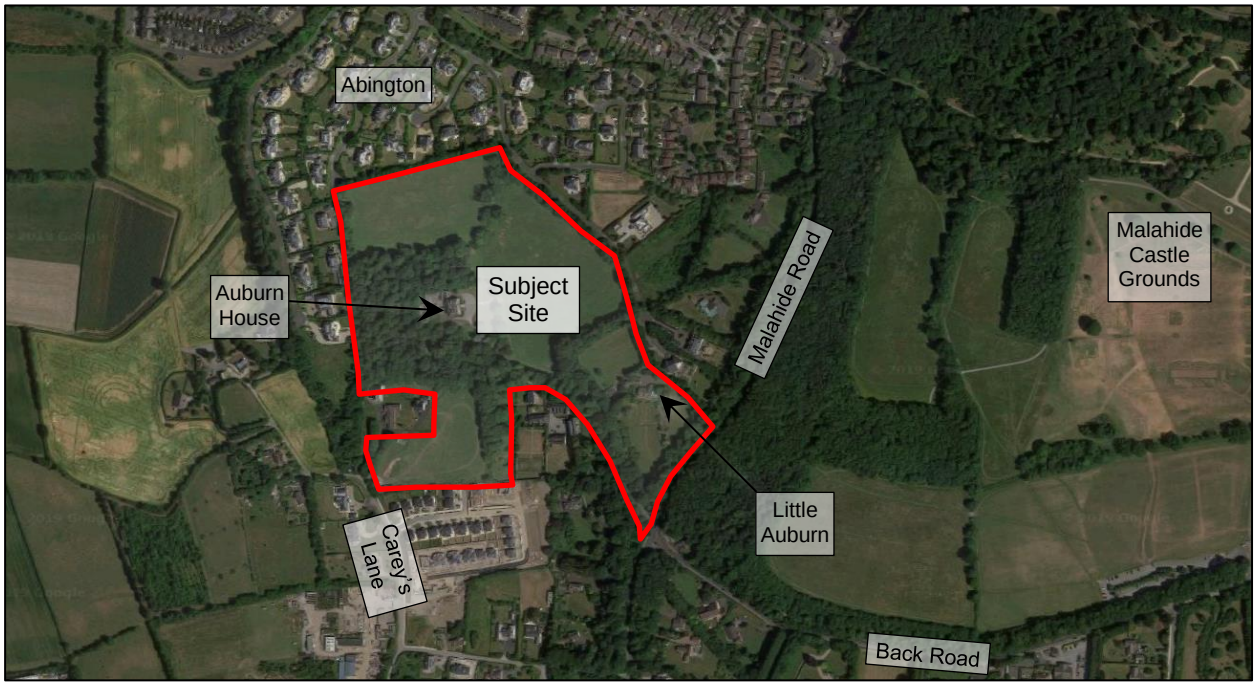

Figure 1 | *Site Location (Source: Google Maps)*

The subject lands form the western, northern and eastern boundaries of Auburn House, an eighteenth century three-storey mansion located within a wooded demesne. Malahide Castle is approximately 900m north-east of the site.

A topographic survey of the area indicated that the site is very flat with only local high points. The site lies generally at a level of between 9m and 11m OD Malin, with a local high point near the north-east of the site of 12.45m OD Malin.

1.4 Proposed Development

The proposed development will consist of the preservation and protection of the existing Protected Structure of Auburn House and its stables as 1 no. residential dwelling; the conversion of the existing stables of Auburn House to provide for storage space for the main Auburn House and the construction of 368 no. new residential dwelling units (comprising 87 no. houses, 239 no. apartments & 42 no. duplex units) for an overall total of 369 no. residential units, including Auburn House.

The development shall consist of 135 no. 1-bedroom apartments and duplex apartments, 138 no. 2-bedroom apartments and duplex apartments, 8 no. 3-bedroom apartments and duplex apartments, 47 no. 3-bedroom houses, 34 no. 4-bedroom houses, 6 no. 5-bedroom houses and the existing 11-bedroom Auburn House along with 1 no. childcare facility and 1 no. ancillary resident facility.

The breakdown of the proposed development is set out in the Schedule of Accommodation below:

Description		1-Bed	2-Bed	3-Bed	4-Bed	5-Bed or more	Total	
Houses *(including Auburn House)*		-	-	47	34	7	88 Houses	
Apartments	Block 1	26	20	-	-	-	46	239 Apartments
	Block 2	26	21	2	-	-	49	
	Block 3	22	20	-	-	-	42	
	Block 4	10	17	1	-	-	28	
	Block 5	6	22	-	-	-	28	
	Block 6	5	14	2	-	-	21	
	Block 7	14	10	1	-	-	25	
Duplexes	Block 1	1	3	2	-	-	6	42 Duplexes
	Block 2A	6	2	-	-	-	8	
	Block 2B	8	3	-	-	-	11	
	Block 2C	7	2	-	-	-	9	
	Block 2D	4	4	-	-	-	8	
Total		**135**	**138**	**55**	**34**	**7**	**369 Units**	

Table 1 | *Schedule of Accommodation*

The proposed development shall also provide landscaped public open space, car parking and all associated ancillary site development infrastructure including foul and surface water drainage, internal roads, cycle paths and footpaths, and boundary walls and fences.

Vehicular access to the proposed development is to be via a new entrance at the R107 Malahide Road/Dublin Road entrance, with the existing entrance to Auburn House acting as a pedestrian/cyclist entrance and access to existing properties outside the application site, there will be a secondary entrance

comprising modifications of the existing vehicular entrance off Carey's Lane to the south-west of the development, the closure of the existing vehicular entrance to Little Auburn, the provision of 4 no. ESB substations, 1 no. new foul pumping station, public lighting; proposed foul sewer works along Back Road and Kinsealy Lane and all associated engineering and site works necessary to facilitate the development. The building heights range from 2 storey to 5 storey buildings with balconies or terraces being provided to the apartments and duplex units.

1.5 DMURS Background

The stated objective of DMURS is to achieve better street design in urban areas. This will encourage more people to choose to walk, cycle or use public transport by making the experience safer and more pleasant. It will lower traffic speeds, reduce unnecessary car use and create a built environment that promotes healthy lifestyles and responds more sympathetically to the distinctive nature of individual communities and places. The implementation of DMURS is intended to enhance how we go about our business, enhance how we interact with each other, and have a positive impact on our enjoyment of the places to and through which we travel.

Section 2, below, outlines the existing and proposed road and transportation network within the site and in the local area. Section 3 outlines the specific design features that have been incorporated within the proposed scheme with the objective of delivering a design that is in compliance with DMURS.

2. Road and Transport Network

2.1 Existing Road Layout

The existing site entrance is from the Malahide Road, approximately 20m north of the Malahide Road/Back Road junction. The Malahide Road has a posted speed limit of 60km/hr and extends from Malahide to Dublin City Centre.

The Swords Road is approximately 500m north of the subject site and can be accessed from the Malahide Road. This road continues in a westerly direction to Swords, crossing the M1 motorway approximately 1.6km west of the site. The Feltrim Road, approximately 1km south of the site, can also be accessed from the Malahide Road, and provides a connection in a north-westerly direction towards Swords.

2.2 Proposed Road Layout

Various access options for the site have been assessed by the multi-disciplinary design team. Of particular concern was the retention of as many trees as possible while providing a safe and suitably sized access to the development. The full assessment of these options accompanies this submission under separate cover by Downey Planning. The main options assessed were:

- Option 1: Providing a new access adjacent to Back Road, to form a new 4-arm signalised junction.
- Option 2: Utilising the existing access to Auburn House as the primary site access, to form a new staggered signalised T-junction.
- Option 3: Utilising both the existing access to Auburn House and the existing access to Little Auburn, with one serving as the vehicular entrance and the other as the exit from the site, forming a staggered priority crossroads with Back Road and the Auburn House entrance, and a priority T-junction at the Little Auburn exit.
- Option 4: Utilising the existing access to Little Auburn as the primary site access in the form of a new priority T-junction.

The assessment determined that Option 1, a new 4-arm signalised junction adjacent to Back Road, is preferable from a roads and transportation viewpoint. During the pre-planning process Fingal County Council Roads and Transportation department noted that is was their preferred option and the only feasible option.

Refer to the Proposed Malahide Road Junction Upgrade Layout drawing 19-020-P110. This proposed junction drawing was discussed and agreed in principle with Fingal County Council Roads and Transportation Department in February 2022.

A secondary site entrance is proposed from Carey's Lane, at the south-west of the site.

The internal road network includes local access roads and "home-zone" / shared surfaces, as shown on Waterman Moylan's site layout drawings 19-020-P002, 19-020-P100 to P103 and road cross sections drawing 19-020-P130. The location and design of the Home-zone in the northwest of the site has been agreed in principle with Fingal County Council Roads and Transportation Department in February 2022.

2.3 Related Reports

A comprehensive Traffic and Transport Assessment and a Travel Plan have also been prepared by Waterman Moylan and accompany this submission under separate cover.

3. Design Manual for Urban Roads and Streets

3.1 Background

The stated objective of DMURS is to achieve better street design in urban areas. This will encourage more people to choose to walk, cycle or use public transport by making the experience safer and more pleasant. It will lower traffic speeds, reduce unnecessary car use and create a built environment that promotes healthy lifestyles and responds more sympathetically to the distinctive nature of individual communities and places. The implementation of DMURS is intended to enhance how we go about our business, enhance how we interact with each other, and have a positive impact on our enjoyment of the places to and through which we travel.

Outlined below are some of the specific design features that have been incorporated within the proposed scheme with the objective of delivering a design that is in compliance with DMURS.

3.2 Creating a Sense of Place

Four characteristics represent the basic measures that should be established in order to create people friendly streets that facilitate more sustainable neighbourhoods. These characteristics are connectivity, enclosure, active edge and pedestrian activities/facilities.

3.2.1 Connectivity

"The creation of vibrant and active places requires pedestrian activity. This in turn requires walkable street networks that can be easily navigated and are well connected."

In order of importance, DMURS prioritises pedestrians, cyclists, public transport and private cars.

The proposed development has been designed with pedestrians and cyclists taking precedence over other modes of transport. In this regard, footpaths are provided throughout the development with regular pedestrian crossings along anticipated desire lines including routes through open spaces. Pedestrian crossings have been designed to allow pedestrians to cross the street at grade. Vehicular access is provided via the main entrance onto Malahide Road and a secondary entrance to Carey's Lane. There is an additional pedestrian/cyclist only access from Malahide Road, and there is a proposed pedestrian access at the west of the site connecting to Auburn Grove/Carey's Lane. Refer to Drawing No. 19-020-P002, which shows the extent of pedestrian routes throughout the site.

DMURS notes that the number of walkable/cyclable routes between destinations should be maximised. In order to comply with this objective, pedestrian and cyclist connectivity are provided even in those locations where connectivity is limited for road vehicles. This ensures that the number of walkable/cyclable routes between destinations has been maximised. Maximising the pedestrian and cyclist permeability while providing some limits to vehicular connectivity is in line with the objectives of DMURS.

3.2.2 Enclosure

"A sense of enclosure spatially defines streets and creates a more intimate and supervised environment. A sense of enclosure is achieved by orientating buildings towards the street and placing them along its edge. The use of street trees can also enhance the feeling of enclosure."

The proposed development has been designed with residential units overlooking streets and pedestrian routes. High quality landscaping and significant tree planting are proposed throughout the scheme which creates a definitive sense of place. Road widths of generally 5.5m throughout the development ensure that a strong sense of enclosure is achieved on residential roads.

3.2.3 Active Edge

"An active frontage enlivens the edge of the street creating a more interesting and engaging environment. An active frontage is achieved with frequent entrances and openings that ensure the street is overlooked and generate pedestrian activity as people come and go from buildings."

As stated in Section 2.2.1 of DMURS, an active frontage enlivens the edge of the street, creating a more interesting and engaging environment. An active frontage is achieved with frequent entrances and openings. Section 3.4.1 of DMURS further notes that designers should avoid the creation of Dendritic networks, which place heavy restrictions on movement.

The roads throughout the development have regular junctions and driveways in accordance with this recommendation. On-street parking is proposed at several locations. On-street parking separates pedestrians from the vehicle carriageway and, as per DMURS Section 4.4.9, can calm traffic by increasing driver caution, contribute to pedestrian comfort by providing a buffer between the vehicular carriageway and footpath and provide good levels of passive security. The provision of pedestrian crossings will encourage and facilitate pedestrian and cyclist activity. The proposal includes strategically placed pedestrian crossings.

Suitable sightlines have been provided throughout the development, ensuring that localised planting does not obscure visibility as cars make turning manoeuvres, improving the pedestrian safety at crossing points. Turning radii throughout the site are generally 4.5m, with kerb radii of 6m at each of the site entrances.

3.2.4 Pedestrian Activities/Facilities

"The sense of intimacy, interest and overlooking that is created by a street that is enclosed and lined with active frontages enhances a pedestrian's feeling of security and well-being. Good pedestrian facilities (such as wide footpaths and well-designed crossings) also makes walking a more convenient and pleasurable experience that will further encourage pedestrian activity."

As outlined in the items above, the proposed development has been designed to provide excellent pedestrian connectivity, with a network of inter-connecting footpaths providing permeability throughout the site and to the surrounding area.

Throughout the site, pedestrian routes are generally 2m wide or greater which provides adequate space for two wheelchairs to pass one another. DMURS identifies a 1.8m wide footpath as being suitable for areas of low pedestrian activity and a 2.5m footpath as being suitable for low to moderate pedestrian activity. It is considered that a 2m wide footpath is appropriate for the majority of the proposed development.

3.3 Key Design Principles

DMURS sets out four core design principles which designers must have regard to when designing roads and streets. These four core principles are set out below together with a commentary establishing how these design principles have been incorporated into the design of the proposed development.

3.3.1 Design Principle 1: Pedestrian Activity/Facilities

"To support the creation of integrated street networks which promote higher levels of permeability and legibility for all users and in particular more sustainable forms of transport."

Streets have been designed in accordance with the alignment and curvature recommendations set out in DMURS Section 4.4.6. The road layout is generally curvilinear. Horizontal curvature will promote lower vehicle speeds in accordance with DMURS Section 4.4.7.

3.3.2 Design Principle 2: Multi-Functional Streets

"The promotion of multi-functional, place-based streets that balance the needs of all users within a self-regulating environment."

The road hierarchy comprises a primary residential street, a secondary residential street and several "home-zones" / shared surfaces. The residential roads comprise of 5.5m wide carriageways (i.e. 2.75m wide vehicle lanes) with 2m footpaths.

The proposed "home-zones" are designed primarily to meet the needs of pedestrians, cyclists, children and residents and where the speed and dominance of cars will be reduced. The home-zone comprises of a shared-surface carriageway. Entry treatment to the home-zones is provided in the form of a ramp up, which helps announce that a driver is entering into a home-zone, and it is proposed to utilise a buff coloured chipping / macadam at the home-zones, subject to Fingal County Council Roads and Transportation approval. The ramp up and narrowing of the road width is to be in accordance with Figure 4.44 in Section 4.3.3 of DMURS.

It is stated in Section 4.3.4 of DMURS that shared surface streets and junctions are highly desirable where movement priorities are low and there is a high place value in promoting more liveable streets (i.e. home-zones), such as on Local streets within Neighbourhood and Suburbs.

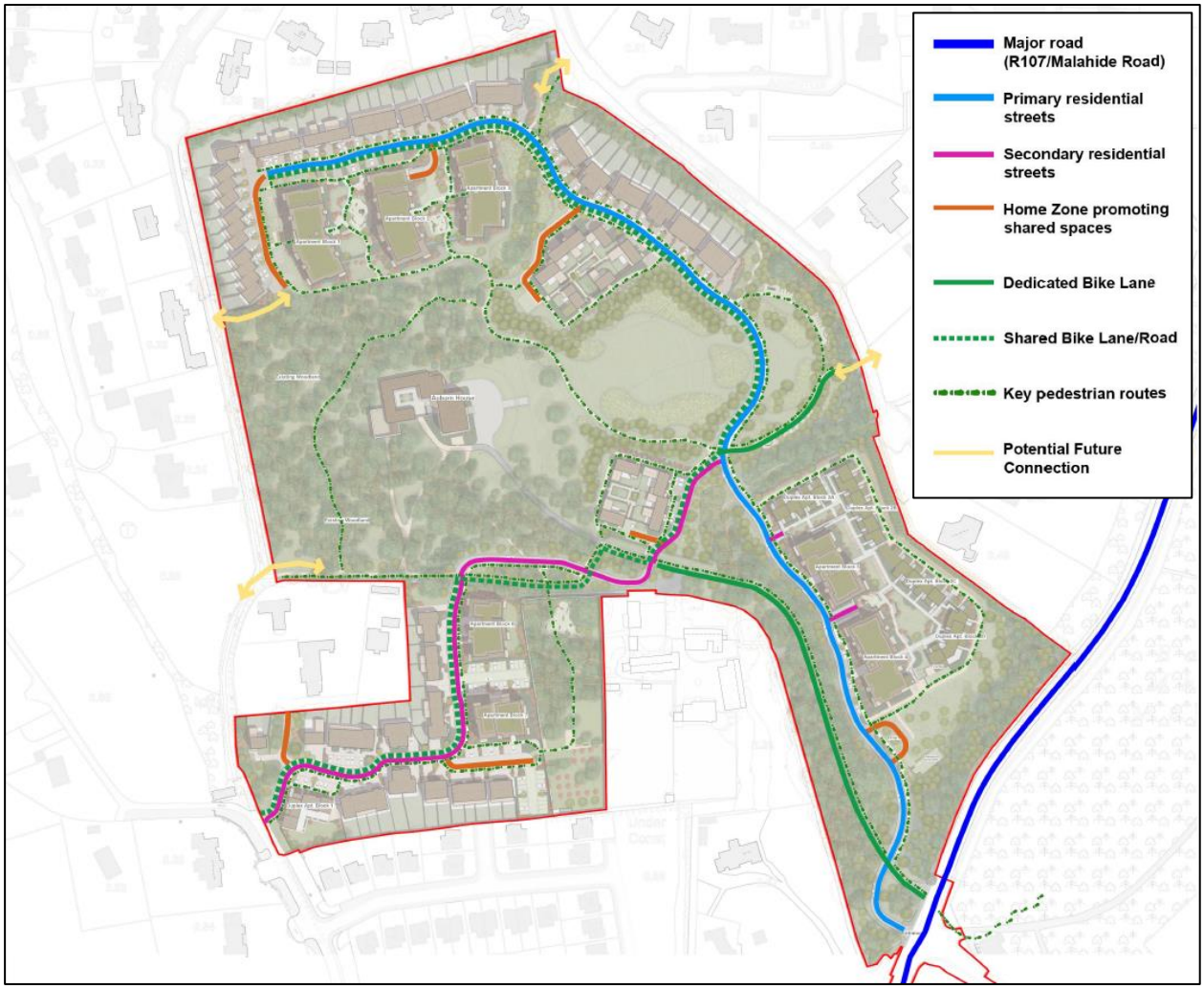

Figure 2 | *Road Hierarchy*

3.3.3 Design Principle 3: Pedestrian Focus

"The quality of the street is measured by the quality of the pedestrian environment."

The design of the scheme has placed a particular focus on the pedestrian. Connectivity throughout the scheme is heavily weighted towards the pedestrian. There are excellent pedestrian links to the surrounding road networks, public transport services and amenities for residents of the development.

New pedestrian crossings are to be provided at the upgraded Malahide Road junction, providing a safe route for pedestrians to surrounding areas.

3.3.4 Design Principle 4: Multi-Disciplinary Approach

"Greater communication and co-operation between design professionals through promotion plan led multidisciplinary approach to design."

The design of the proposed scheme has been developed through the design team working closely together. The proposed development design is led by Conroy Crowe Kelly Architects working together with multiple disciplines including Waterman Moylan Consulting Engineers, Downey Planning and The Big Space Landscape Architects.

Public areas fronting and within the proposed development have been designed by the multidisciplinary design team to accommodate pedestrians and cyclists in accordance with the appropriate principles and guidelines set out in DMURS. In particular the vehicular access and public footways within the remit of the development incorporate the relevant DMURS requirements and guidelines as set out above.

The design team has engaged with various relevant sections of Fingal County Council as part of Section 247 consultations prior to the pre-application consultation with An Bord Pleanála, including consultations with FCC Transport Division.

3.4 External Quality Audit

Section 5.4.2 of DMURS states that A Quality Audit should be undertaken to demonstrate that appropriate consideration has been given to all of the relevant aspects of the design.

A Quality Audit, including a Stage 1 Road Safety Audit, has been carried out by Bruton Consulting Engineers. The issues identified by the Quality Audit are set out in the table below, alongside the remedial measures taken to address each of the issues identified. The full report is included in Appendix A.

No.	Issue Identified	Measure Proposed
1	*It is unclear if the existing Auburn access is to be closed to vehicular traffic. If the existing access is to remain open to vehicular traffic if could lead to rear end shunts as drivers would not expect other vehicles ahead to slow and enter this access so close to the signalised junction.*	*The existing Auburn access to remain open to pedestrians/cyclists, but will be closed to vehicular traffic as part of the proposed development.* *The access will still be used as a private vehicular driveway for Auburn House. Access will be controlled with electric bollards, and a raised table with stop signs and road markings is provided along the access road.*
2	*At the R107 signalised junction pedestrian crossings are shown on two of the arms only. This could lead to collisions with pedestrians on the other two arms if pedestrians cross and drivers do not anticipate it.*	*Pedestrian crossings are included at the junction only where there are anticipated desire lines. There is no footpath on the eastern side of the Malahide Road to the south of the site entrance, so no pedestrian crossing is provided*

No.	Issue Identified	Measure Proposed
		here. The junction layout has now been discussed & agreed with FCC.
3	*There are bus stops on both sides of the R107 immediately North of the proposed signalised junction. There is a risk that the existing hard standing facilities for these bus stops will not be adequate to cater for the additional usage that may come from the proposed development. It was observed during the site visit that there are open drains behind the bus stops and that the footpaths are narrow.*	*We have now provided footpaths and crossings to the bus stops.*
4	*The main access road to the development is proposed to be 5.0m wide. It has however some low radius bends which aid with traffic calming. There is a risk of side-swipe collisions if larger vehicles meet at the tight bends.*	*Swept path analysis has been carried out at the access road to ensure large vehicles can pass along the route.*
5	*There is a yield road marking symbol shown on the main access road at chainage 300. The horizontal alignment and junction layout suggests that drivers travelling northbound would have priority. There is a risk that the road markings and associated signage would not be observed by drivers and this could lead to side-impact collisions.*	*All three arms of the junction are now Stop control junctions, and the intersection includes a raised table to ensure the road markings and associated signage are observed by drivers.*
6	*It is proposed to provide granite setts or similar at the start of the shared use area. There is a risk that pedestrians entering at this start of the shared use area might not be expected by drivers and they may not have adjusted their speed at that point.*	*This is no longer proposed as a shared use area.*
7	*A footpath crosses the access road at a skew angle and without warning for pedestrians or drivers. This could result in conflict.*	*The crossing now incorporates dropped kerbs and tactile paving. However, this is an existing historic pathway that is to be maintained and cannot be realigned. There is an adjacent crossing provided that is perpendicular to the road and is appropriate for vulnerable users.*
8	*There is a discontinuity in the footpath provision at the car parking space at Duplex Block 1 at Chainage 40 approximately. Pedestrians may use this area and slip in the landscaping or step onto the carriageway when drivers do not expect.*	*The footway has been made continuous to reflect the desire line.*
9	*It is unclear if disabled parking bays have been provided. Without dedicated disabled parking bays those users may not be able to access their vehicles or get from their vehicles to the main access of the building they wish to enter.*	*Sufficient accessible parking spaces are being provided. At the Back Field Basement for Blocks 1 - 3 there are 8 accessible spaces (5% of spaces) and at the podium car parking serving Blocks 4, 5 and Duplex Blocks 2A-D there are 3 accessible spaces (3% of spaces).*
10	*The swept paths for emergency vehicles and refuse vehicles have not been provided to the Audit Team.*	*Swept path analysis has been carried out for emergency vehicles and is now included in the planning drawing set.*

***Table 2** | Quality Audit Issues Identified and Remedial Actions*

3.5 Statement of Design Consistency

The multidisciplinary design team considers that the proposed road and street design is consistent with the principles and guidance outlined in the Design Manual for Urban Roads and Streets (DMURS), as set out in the sections above.

Appendices

A. External Quality Audit

Title: **QUALITY AUDIT**

INCLUDING

Road Safety Audit, Access Audit, Cycle Audit and Walking Audit.

For;

Proposed Strategic Housing Development at Auburn, Malahide, Co. Dublin

Client: **Water Moylan/Kinwest Ltd.**

Date: **October 2021**

Report reference: **1196R01**

VERSION: **FINAL (March 2022)**

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1.0 Introduction

This report was prepared in response to a request from Mr. Stephen Dent Neville, Waterman Moylan Consulting Engineers, for a Quality Audit of the proposed strategic housing development (SHD) at Auburn, Malahide, Co. Dublin.

The Quality Audit has been carried out in accordance with the guidance in the Design Manual for Urban Roads and Streets (DMURS), produced by Department of Transport Tourism and Sport in March 2013 and as updated in June 2019.

This portion of the Quality Audit is a design stage audit and includes a Stage 1 Road Safety Audit (in accordance with TII Publication GE-DTY-01024, dated December 2017), an access audit, a walking audit and a cycling audit. (i.e. aspects of a quality Audit carried out independent of the Design Team and generally included as appendices to the overall Audit)

The Road Safety and Quality Audit Team comprised of;

Team Leader:	**Norman Bruton,** BE CEng FIEI, Cert Comp RSA.
	TII Road safety Auditor approval number: NB 168446
Team Member:	**Owen O'Reilly**, B.SC. Eng Dip Struct. Eng NCEA Civil Dip Civil. Eng CEng MIEI
	TII Auditor Approval no. OO 1291756

This portion of the Quality Audit involved the examination of drawings and other material and a site visit by the Audit Team, on the 21st of October 2021. The weather at the time of the site visit was dry and the road surface was also dry.

The problems raised in this Quality Audit may belong to more than one of the categories of Audit named above. A table has been provided at the start of Section 3 of this report detailing which category of audit each problem is associated with.

Recommendations have been provided to help improve the quality of the design with regard to the areas described above. A feedback form has also been provided for the designer to complete indicating whether or not he/she will accept those recommendations or provide alternative recommendations for implementation.

The information supplied to the Audit Team is listed in **Appendix A.**

A feedback form for the Designer to complete is contained in **Appendix B.**

A plan drawing showing the problem locations is contained in **Appendix C**.

2.0 Background

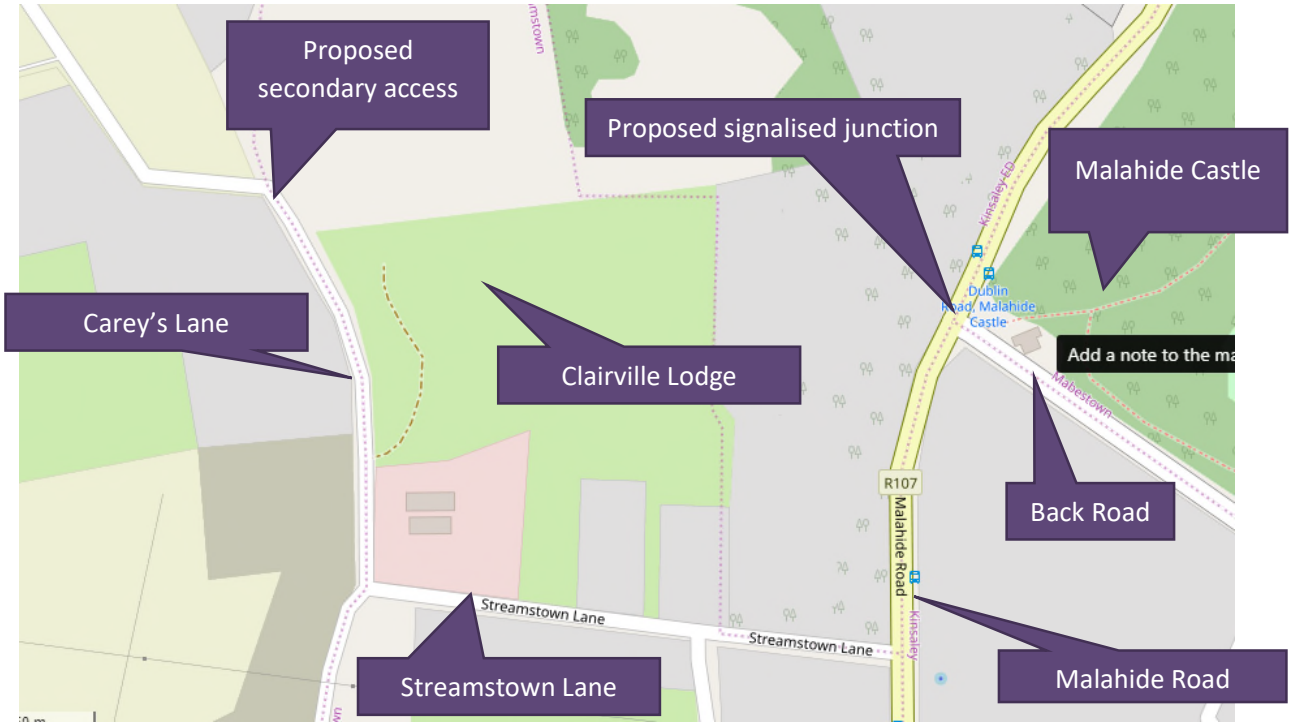
The proposed development subject to this SHD application provides for the preservation and protection of the existing Protected Structure of Auburn House and its stables as 1 no. residential dwelling; the conversion of the existing stables of Auburn House to provide for storage space for the main Auburn House and the construction of 368 no. new residential dwelling units (comprising 87 no. houses, 238 no. apartments & 43 no. duplex units) for an overall total of 369 no. residential units. The development shall consist of 127 no. 1-bedroom apartments and duplex apartments, 145 no. 2-bedroom apartments and duplex apartments, 9 no. 3-bedroom apartments and duplex apartments, 45 no. 3-bedroom houses, 36 no. 4-bedroom houses, 6 no. 5-bedroom houses and the existing 11-bedroom Auburn House. The proposed development shall also provide 1 no. childcare facility, landscaped public open space, car parking and all associated ancillary site development infrastructure including foul and surface water drainage, internal roads, cycle paths and footpaths, and boundary walls and fences. Vehicular access to the proposed development is to be via a new entrance at the R107 Malahide Road/Dublin Road entrance, with the existing entrance to Auburn House acting as a pedestrian/cyclist entrance and access to existing properties outside the application site, there will be a secondary entrance comprising modifications of the existing vehicular entrance off Carey's Lane to the south west of the development, the closure of the existing vehicular entrance to Little Auburn, the provision of ESB substations, 1 no. new foul pumping station, public lighting; proposed foul sewer works along Back Road and Kinsealy Lane and all associated engineering and site works necessary to facilitate the development. The building heights range from 2 storey to 5 storey buildings with balconies or terraces being provided to the apartments and duplex units.

The R107 Malahide road is a single carriageway road with a footpath on the development side. It is a bus route and is lit.

The junction from the proposed development is approximately 2km from Malahide train station which is served by both DART and interurban trains and is located on the Dublin (Connolly)-Belfast line.

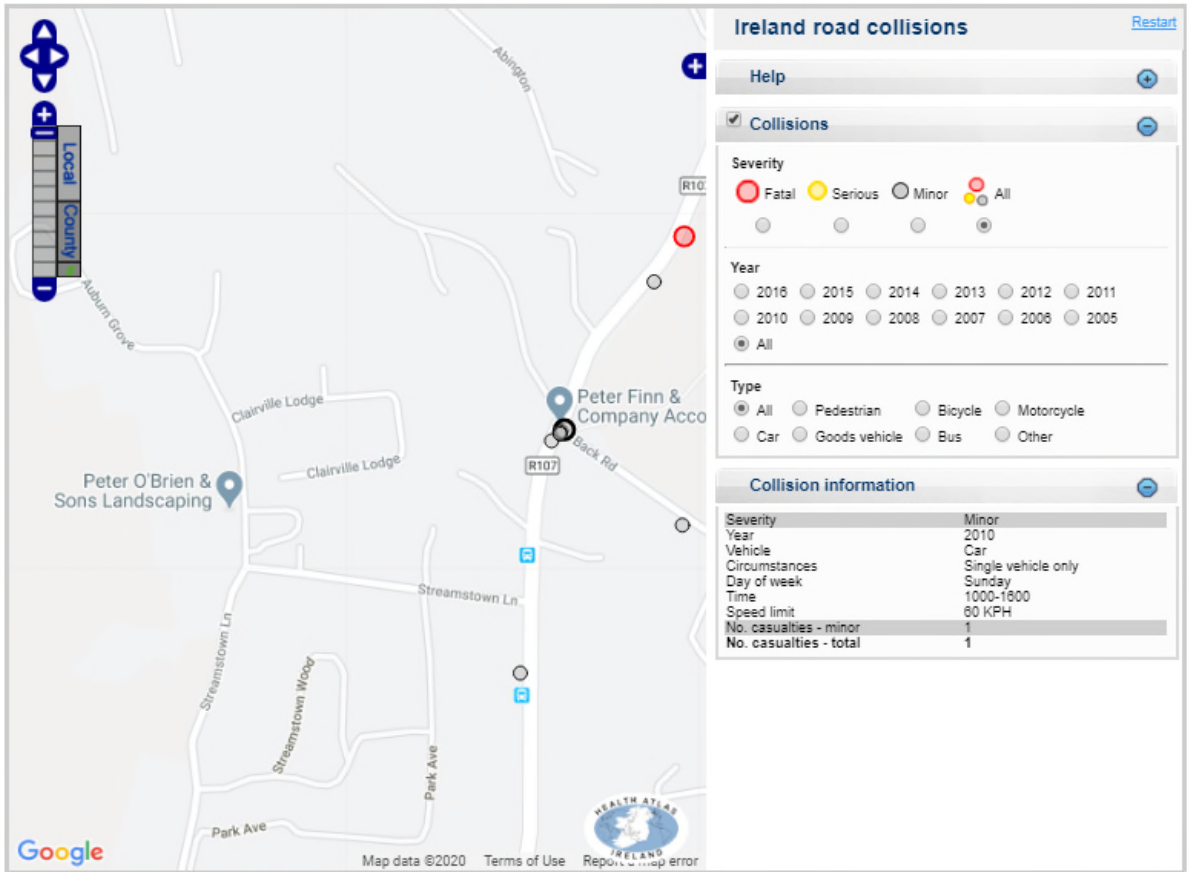
Malahide castle and gardens are located on the opposite side of the R107 to the proposed development

The site location map is shown below.



Site Location Map (image courtesy of openstreetmap.org

The Road Safety Authority's website (www.rsa.ie) shows that there were a number of minor injury vehicular collisions recorded at the R107/Back Road Junction between the years 2005 and 2016.



3.0 Issues Identified in the Stage 1 Quality Audit

Summary Table of Problem Categories

Problem Reference	Access Audit	Walking Audit	Cycling Audit	Road Safety Audit	Quality Audit
3.1				✓	✓
3.2		✓		✓	✓
3.3	✓				✓
3.4				✓	✓
3.5				✓	✓
3.6		✓		✓	✓
3.7		✓		✓	✓
3.8		✓			✓
3.9	✓				✓
3.10	✓			✓	✓

3.1 Problem

LOCATION

Drawing 19-020 P103 Rev A

ISSUE

It is unclear if the existing Auburn access is to be closed to vehicular traffic. If the existing access is to remain open to vehicular traffic if could lead to rear end shunts as drivers would not expect other vehicles ahead to slow and enter this access so close to the signalised junction.

RECOMMENDATION

It is recommended that the existing access be closed to all vehicles.

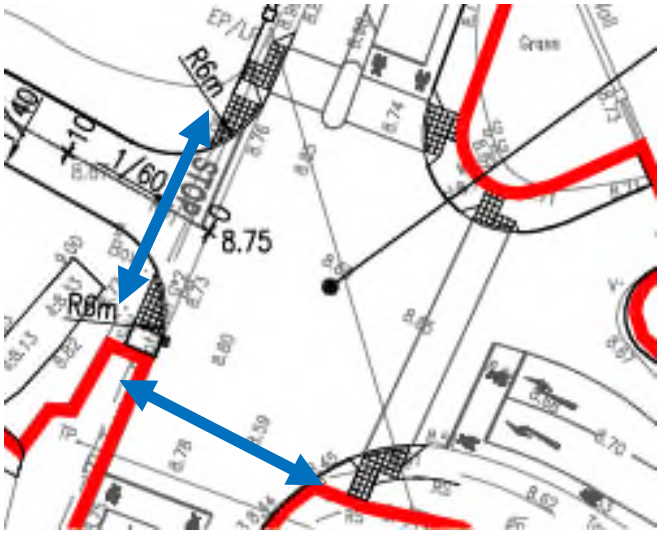
3.2 Problem

LOCATION

Drawing 19-020 P103 Rev A

ISSUE

At the R107 signalised junction pedestrian crossings are shown on two of the arms only. This could lead to collisions with pedestrians on the other two arms if pedestrians cross and drivers do not anticipate it.



RECOMMENDATION

It is recommended that pedestrian crossings be provided on all arms of the junction.

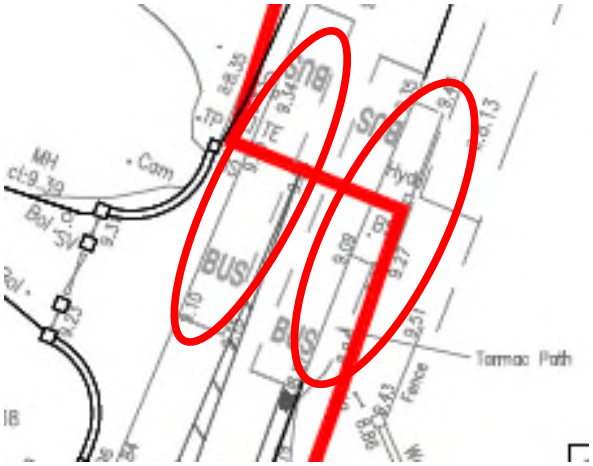
3.3 Problem

LOCATION

Drawing 19-020 P103 Rev A

PROBLEM

There are bus stops on both sides of the R107 immediately North of the proposed signalised junction. There is a risk that the existing hard standing facilities for these bus stops will not be adequate to cater for the additional usage that may come from the proposed development. It was observed during the site visit that there are open drains behind the bus stops and that the footpaths are narrow.



RECOMMENDATION

It is recommended that the bus stops and paths to the bus stops from the signalised pedestrian crossing be included in the design.

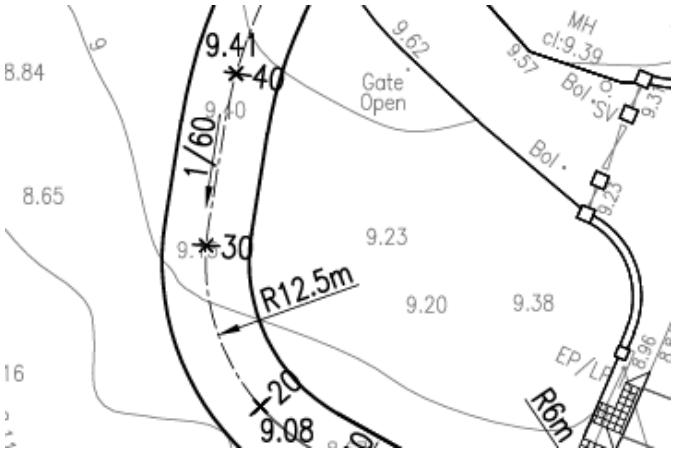
3.4 Problem

LOCATION

Drawing 19-020 P103 Rev A

ISSUE

The main access road to the development is proposed to be 5.0m wide. It has however some low radius bends which aid with traffic calming. There is a risk of side-swipe collisions if larger vehicles meet at the tight bends.



RECOMMENDATION

It is recommended that a swept path analysis be carried out at a suitable travelling speed to ensure that regular vehicles using the access road such as light vans, SUVs etc. can easily pass all along the route. If this cannot be achieved some local curve widening may be required.

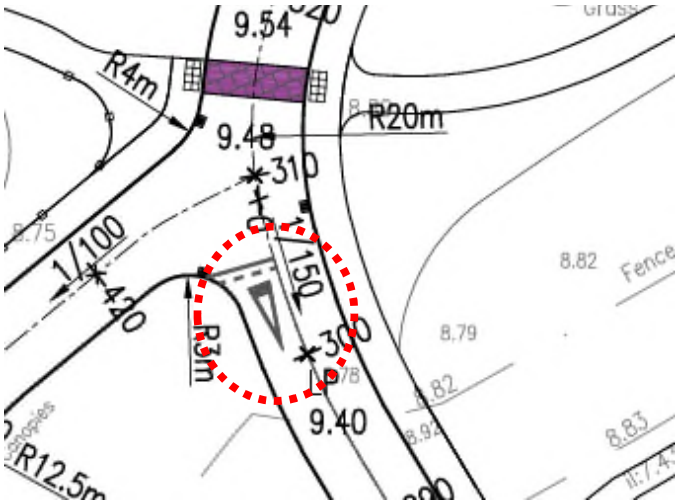
3.5 Problem

LOCATION

Drawing 19-020 P103 Rev A, Main access Road Chainage 300.

ISSUE

There is a yield road marking symbol shown on the main access road at chainage 300. The horizontal alignment and junction layout suggests that drivers travelling northbound would have priority. There is a risk that the road markings and associated signage would not be observed by drivers and this could lead to side-impact collisions.



RECOMMENDATION

It is recommended that the priority be changed. It is also recommended that the yield control be changed to a stop control to promote lower turning speeds.

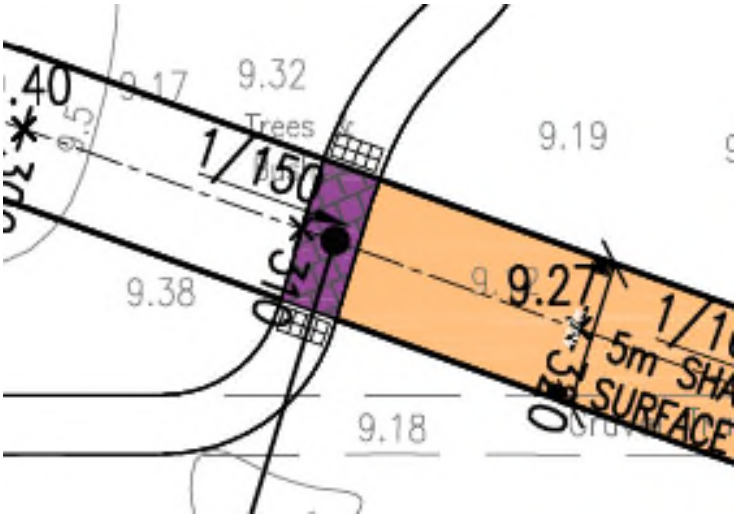
3.6 Problem

LOCATION

Drawing 19-020 P103 Rev A, Carey's Lane Access Road, Chainage 310.

ISSUE

It is proposed to provide granite setts or similar at the start of the shared use area. There is a risk that pedestrians entering at this start of the shared use area might not be expected by drivers and they may not have adjusted their speed at that point.



RECOMMENDATION

It is recommended that the start of the shared use area be moved westwards and that the shared use area be raised to highlight to all users the different type/nature of street that they are entering.

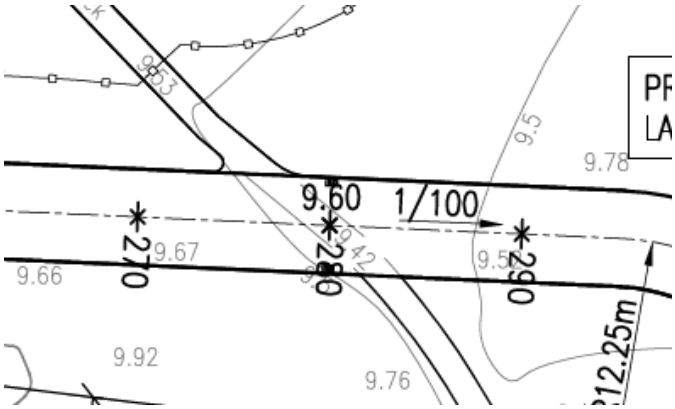
3.7 Problem

LOCATION

Drawing 19-020 P103 Rev A, Carey's Lane Access Road, Chainage 280.

ISSUE

A footpath crosses the access road at a skew angle and without warning for pedestrians or drivers. This could result in conflict



RECOMMENDATION

It is recommended that the crossing be treated similar to other crossings with dropped kerbs and tactile paving. The path should be realigned locally to have a perpendicular and hence the shortest crossing for pedestrians which could be easily navigated by partially sighted or blind pedestrians.

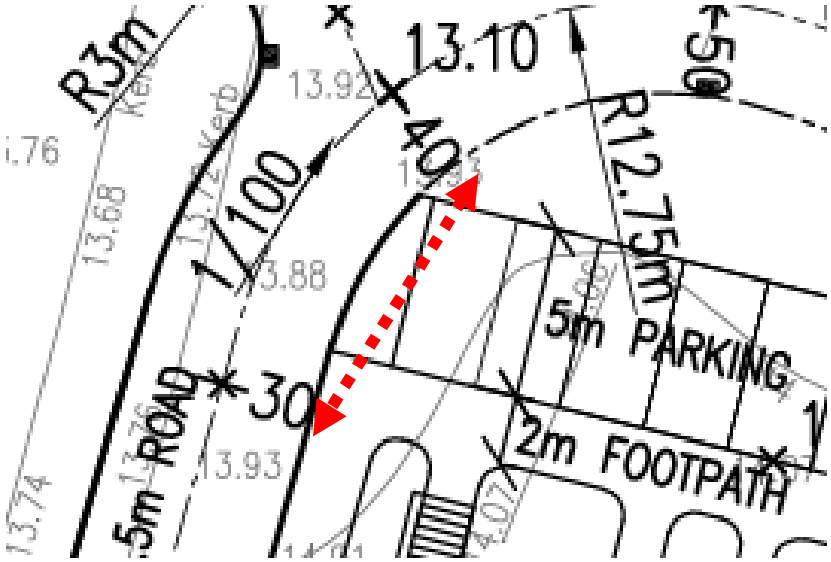
3.8 Problem

LOCATION

Drawing 19-020 P103 Rev A, Carey's Lane Access Road, Chainage 40.

ISSUE

There is a discontinuity in the footpath provision at the car parking space at Duplex Block 1 at Chainage 40 approximately. Pedestrians may use this area and slip in the landscaping or step onto the carriageway when drivers do not expect.



RECOMMENDATION

It is recommended that the footway be made continuous to reflect the desire line.

3.9 Problem

LOCATION

General, disabled parking bays.

ISSUE

It is unclear if disabled parking bays have been provided. Without dedicated disabled parking bays those users may not be able to access their vehicles or get from their vehicles to the main access of the building they wish to enter.

RECOMMENDATION

Ensure sufficient disabled parking spaces and of sufficient size are provided. If disabled parking bays are being provided in the basement car parks ensure there is sufficient height clearance.

3.10 Problem

LOCATION

General, swept paths for emergency and refuse vehicles.

ISSUE

The swept paths for emergency vehicles and refuse vehicles have not been provided to the Audit Team.

RECOMMENDATION

Ensure that these vehicles can access all required areas within the development without having to undertake several point turning manoeuvres or excessive reversing manoeuvres.

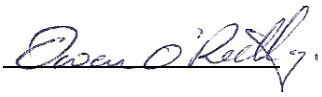
4 Quality Audit Statement

This portion of the Quality Audit has been carried out in accordance with the guidance given in DMURS and takes into consideration the principles approaches and standards of that Manual.

The quality 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:** 

(Quality Audit Team Leader) **Dated: 29/3/2022**

Owen O'Reilly **Signed:** 

(Quality Audit Team Member) **Dated: 29/3/2022**

Appendix A

List of Material Supplied for this Quality Audit;

- Drawing 19-020-P101 Road Layout Sheet 1 of 3
- Drawing 19-020-P102 Road Layout Sheet 2 of 3
- Drawing 19-020-P103 Road Layout Sheet 3 of 3
- Drawing 1902 P 007 Site Layout - 1-1000 A1
- Drawing 19-020-P100 Road Layout General Arrangement
- Drawing 19-020-P110 Proposed Malahide Road Junction Layout.

Appendix B

Feedback Form

QUALITY AUDIT FORM – FEEDBACK ON QUALITY AUDIT REPORT

Scheme: SHD Auburn, Malahide
Quality Audit- Stage 1
Date Audit (site visit) Completed 21-10-2021

Paragraph No. in Quality 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 existing Auburn access to remain open to pedestrians/cyclists, but will be closed to vehicular traffic as part of the proposed development. The access will still be used as a private vehicular driveway for Auburn House. Access will be controlled with electric bollards, and a raised table with stop signs and road markings is provided along the access road.	Yes
3.2	Yes	Yes	Pedestrian crossings are included at the junction only where there are anticipated desire lines. There is no footpath on the eastern side of the Malahide Road to the south of the site entrance, so no pedestrian crossing is provided here. The junction layout has now been discussed & agreed with FCC.	Yes
3.3	Yes	Yes	We have now provided footpaths and crossings to the bus stops.	Yes
3.4	Yes	Yes	Swept path analysis has been carried out at the access road to ensure large vehicles can pass along the route.	Yes
3.5	Yes	Yes	All three arms of the junction are now Stop control junctions, and the intersection includes a raised table to ensure the road markings and associated signage are observed by drivers.	Yes

3.6	Yes	No	This is no longer proposed as a shared use area.	Yes
3.7	Yes	Yes	The crossing now incorporates dropped kerbs and tactile paving. However, this is an existing historic pathway that is to be maintained and cannot be realigned. There is an adjacent crossing provided that is perpendicular to the road and is appropriate for vulnerable users.	Yes
3.8	Yes	Yes	The footway has been made continuous to reflect the desire line.	Yes
3.9	Yes	Yes	Sufficient accessible parking spaces are being provided. At the Back Field Basement for Blocks 1 - 3 there are 8 accessible spaces (5% of spaces) and at the podium car parking serving Blocks 4, 5 and Duplex Blocks 2A-D there are 3 accessible spaces (3% of spaces).	Yes
3.10	Yes	Yes	Swept path analysis has been carried out for emergency vehicles and is now included in the planning drawing set.	Yes

Signed.....Mark Duignan..... **Date** .....28/03/2022.....
Design Team Leader

Signed.....Norman Bruton..... **Date**: ...28-3-2022.....
Audit Team Leader

Appendix C

Problem Location Plan.

P101

P102

P103

3.1

3.2

3.2

3.3

3.4

3.5

3.6

3.6

3.7

3.8

NOTES:

1. DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS.

12 October 2021 15:29
-- DRAFT --
Paul Donoghue

1:1000 0 20.0 40.0 60.0 80.0 100.0m
1:1 0 10 20 30 40 50 60 70 80 90 100

REV.	DATE	AMENDMENT	DRN	APPD
A	01/04/21	REVISED FOR FINAL SUBMISSION	PJD	MD

STATUS **PLANNING**

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Engineering Consultants
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CLIENT KINWEST LTD.

ARCHITECT CONROY CROWE KELLY ARCHITECTS

PROJECT
AUBURN,
MALAHIDE,
CO. DUBLIN

TITLE
ROAD GENERAL ARRANGEMENT

DRAWN	DESIGNED	APPROVED	DATE
PJD	MD	MD	APR '20
SCALE	JOB NO.	DRG. NO.	REVISION
1:1000 @ A1	19-020	P100	A

Oct 12, 2021 - 3:29pm Drawing Location: M:\Projects\19\19-020 - Malahide Road\Drawings\Waterman Moylan\Civil\Planning\Autocad Drawings\19-020-P100 Road Layout General Arrangement.dwg

UK and Ireland Office Locations