AtkinsRéalis

DMURS Statement

03/07/2024

0086174DG0034

KILTERNAN VILLAGE DEVELOPMENT

Notice

This document and its contents have been prepared and are intended solely as information for and use in relation to Kilternan Village Development

WS Atkins Ireland Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 21 pages including the cover.

Document history

Document title: DMURS Statement (New Template)

Document reference: 0086174DG0034

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
1.0	For Planning	JK	JK	PF	PF	07/06/2024
1.0	Issued	JK	JK	PF	PF	04/07/2024

Client signoff

Client	
Project	KILTERNAN VILLAGE DEVELOPMENT
Job number	0086174
Client signature/date	

Contents

Tables

Figures

1. Introduction

This statement should be read in conjunction with the architectural and engineering site layout drawings and the masterplan scheme incorporating the adjacent lands. This statement relates to the internal street network within the proposed development site.

2. The need for DMURS

DMURS is the appropriate design guidance to be applied to urban environments such as cities, towns villages and urban developments such as residential estates.

> *"The principles, approaches and standards set out in the Manual apply to the design of all urban roads and streets (that is streets and roads with a speed limit of 60km/h or less)..."*

DMURS requires a collaborative design process and a holistic design approach to the layout and design of urban streets; to this end the design team consisting of planners, architects, engineers, and the client have engaged in a consultative process to ensure that the proposed development incorporates the design principles espoused in DMURS.

The street layouts have been developed to deliver a high place function wherein the streets and open spaces form part of the social fabric and are used for congregation and play. Achievement of this function can be greatly facilitated by developing a self-regulating street environment wherein vehicular movement function should be limited, as much as is practicable, so that a desirable maximum design speed of 30kph is achieved.

The street layout accommodates high levels of permeability for pedestrians and cyclists along streets and through open spaces, into the adjacent lands and onto the Enniskerry Road and to the future Glenamuck District Roads Scheme (GDRS). Vehicular permeability has been predominantly limited to local access only, primarily for residents with appropriate access provision for emergency and service vehicles. The street layout provides for a connection to the proposed GDRS as required under the expired Kilternan/Glenamuck Local Area Plan. The scheme has been designed to incorporate the GDRS junction layout as submitted under Part 10 for approval.

All streets have been designed in the context of achieving a shared street provision in the street carriageway, per the Cycle Design Manual, wherein the road space is shared between cyclists and vehicles in a low speed and volume setting. Paramount to achieving this outcome is significantly limiting vehicle volumes and achieving, by design, a self-regulating desirable maximum speed of 30kph.

The design of the streetscape including the provision of car parking will significantly influence the achievement of lower traffic speeds and the required quality of street design.

2.1 Design Deliverables

The AtkinsRéalis drawings relevant to this report are listed in Table 2-1.

Table 2-1 – Relevant Drawings to the DMURS Statement

Sheet Number	Drawing Title	Revision
04 – 900000	COVER SHEET	P01
04 – 900001	SITE LOCATION MAP	P02
04 - 900002	CONSTRUCTION TRAFFIC ACCESS ROUTES	P01
04 - 900003	CONSTRUCTION COMPOUND LOCATIONS	P01
04 - 900004	ACCESS TO ROCKVILLE	P03
04 – 900004	MASTERPLAN JUNCTIONS	P01
04 – 900701	STREET TYPOLOGY PLAN	P03
04 – 900702	STREET TYPOLOGY PLAN SHEET 1 OF 3	P03
04 – 900703	STREET TYPOLOGY PLAN SHEET 2 OF 3	P03
04 – 900704	STREET TYPOLOGY PLAN SHEET 3 OF 3	P03
04 – 900705	GENERAL ROAD LAYOUT	P04
04 – 900706	GENERAL ROAD LAYOUT SHEET 1 OF 4	P04
04 – 900707	GENERAL ROAD LAYOUT SHEET 2 OF 4	P04
04 – 900708	GENERAL ROAD LAYOUT SHEET 3 OF 4	P04
04 – 900709	GENERAL ROAD LAYOUT SHEET 4 OF 4	P04
04 – 900710	PEDESTRIAN AND CYCLIST ROUTES	P03
04 – 900711	PEDESTRIAN AND CYCLIST ROUTES SHEET 1 OF 3	P03
04 – 900712	PEDESTRIAN AND CYCLIST ROUTES SHEET 2 OF 3	P03
04 – 900713	PEDESTRIAN AND CYCLIST ROUTES SHEET 3 OF 3	P03
04 – 900714	VEHICLE TRACKING – REFUSE VEHICLE	P03
04 – 900715	VEHICLE TRACKING – FIRE APPLIANCE	P01

04 – 900716	JUNCTION VISIBILITY SHEET 1 OF 2	P01
04 – 900717	JUNCTION VISIBILITY SHEET 2 OF 2	P01
04 – 900725	JUNCTION LAYOUT SHEET 1 OF 2	P02
04 – 900726	JUNCTION LAYOUT SHEET 2 OF 2	P02
04 – 900727	TYPICAL CROSS SECTION OVERALL	P01
04 – 900728	TYPICAL CROSS SECTION SHEET 1 OF 5	P01
04 – 900729	TYPICAL CROSS SECTION SHEET 2 OF 5	P01
04 – 900730	TYPICAL CROSS SECTION SHEET 3 OF 5	P01
04 – 900731	TYPICAL CROSS SECTION SHEET 4 OF 5	P01
04 – 900732	TYPICAL CROSS SECTION SHEET 5 OF 5	P01
04 – 900733	KILTERNAN AADT TRAFFIC FLOWS	P01

2.2 Related Documents

This DMURS Statement should be read in conjunction with the submitted Quality Audit which has been conducted on the proposed development. This accords with the requirements of the DLRCC Development Plan Section 12.4.1 Traffic Management and Road Safety. The Quality Audit was undertaken by NRB Consulting Engineering in accordance with Advice Note 4 of DMURS. The development has been modified to take into account the advice and recommendations of the audit where required. For more details of the Quality Audit and Road Safety Audit, please refer to NRB Kilternan LRD Quality Audit Report.

3. Proposed Development

Liscove Limited intend to apply for permission for a Large-Scale Residential Development on 2 No. sites which will be separated by the future Glenamuck Distributer Link Road (GLDR) with a total site area of c. 14.2 Ha. The western site principally comprises lands at Wayside, Enniskerry Road and Glenamuck Road, Kilternan, Dublin 18, which include a derelict dwelling known as 'Rockville' and associated derelict outbuildings, Enniskerry Road, Kilternan, Dublin 18, D18 Y199 and the former Kilternan Country Market, Enniskerry Road, Kilternan, Dublin 18, D18 PK09. The western site is generally bounded by the Glenamuck Road to the north; the Sancta Maria property to the north, west and south; a recently constructed residential development named "Rockville" to the north-east; the Enniskerry Road to the south-west; dwellings to the south; and the future GLDR to the east. The eastern site is generally bound by dwellings to the south; the future GLDR to the west; and greenfield land to the north and east. Road works and drainage works are also proposed along Enniskerry Road and Glenamuck Road and to the approved Glenamuck District Roads Scheme (GDRS) (ABP Ref. HA06D.303945) on the Glenamuck Link Distributor Road (GLDR).

The development will principally consist of: the demolition of c. 740 sq m of existing structures on site comprising a derelict dwelling known as 'Rockville' and associated derelict outbuildings (c. 573 sq m) and the former Kilternan Country Market (wooden structure) (c. 167 sq m); and the provision of a mixed-use development principally consisting of 487 No. residential units (196 No. houses, 201 No. duplex units and 90 No. apartments) and a Neighbourhood Centre, including an anchor retail store, retail/commercial, a restaurant, a creche, café, and a community facility. The proposed development will range in height from 2 No. to 4 No. storeys (including podium/undercroft level in Apartment Blocks 1, 2 and 3 and Duplex Block T and U on the eastern site).

The development also provides: multi-modal access points from Enniskerry Road and Glenamuck Road, and to the neighbouring "Rockville" development and the future Glenamuck Link Distributor Road; pedestrian links from Enniskerry Road and within the site to the neighbouring "Rockville" developments to the north-east and a pedestrian/cycle route through the Dingle Way from Enniskerry Road to the future Glenamuck Link Distributor Road, 854 No. car parking spaces, motorcycle parking and bicycle parking.

The proposed layout is shown in Figure 3-1

Figure 3-1 - Kilternan LRD Proposed Layout

4. Compliance with DMURS

DMURS sets out four core principles that should be considered in the development of street and road layouts. These principles are set out in Table 4-1 along with a description of how the proposed development complies.

Table 4-1 - Compliance with DMURS Core Principles

Core Principle	Development Approach
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."	The proposed development has been carefully designed to ensure that the focus on connectivity is centred on pedestrians and cyclists. The provision of high levels of connectivity for pedestrians and cyclists are intended to promote walking and cycling by making them a more attractive option to the private car. Streets are set out in a legible pattern, are overlooked providing appropriate levels of pedestrian and cycle paths to meet the needs of users. The "Dingle Way" provides a central pedestrian and cycle only connection through the site linking the Enniskerry Road to the GLDR. Links to the external transport network have also been considered with convenient access to bus stops along the Enniskerry Road that provide onward connections toward Ballyogan Wood Luas Stop. Connections to GLDR and to Rockville are also provided to maximise connectivity.
Multi-Functional streets - "The promotion of multi-functional, place based streets that balance the needs of all users within a self-regulating environment."	The proposed development contains a number of new streets that have been designed to a high quality to ensure that the users of the streets and those that live there are facilitated with an attractive, comfortable, and safe environment. Numerous measures have been introduced to create self -regulating streets including, appropriate road geometries and alignments, vertical and horizontal elements and landscaping and public realm features to create a balanced in line with the movement hierarchy.
Pedestrian Focus - "The quality of the street is measured by the quality of the pedestrian environment."	The design of the proposed scheme has placed a significant emphasis on the movement of people, both within the proposed development and between the internal and external areas. Footpath widths are generous with crossing points located on key desire routes ensuring good permeability throughout the site to key destinations such as the open space provision, the creche and the retail and convenience store locations.
Multi-Disciplinary Approach - "Greater communication and co-operation between design professionals through promotion plan led multidisciplinary approach to design."	The design of the proposed development has been developed through a collaborative effort between all members of the design team and the client team. The design has been further checked through a Quality Audit process undertaken by an external party to the design team with recommendations incorporated into the final layout.

This process began with conceptual development during the design development stage right through to the current proposed plan subject of this planning application.

The proposed development design is led by MCORM Architects working together with AtkinsRéalis Consulting Engineers, NMP Landscape Architects, Roger Mullarkey & Associates Engineering and TOC Planning Consultants.

The developer and promoter of the scheme, Liscove Ltd, are committed to delivering a high-quality development which complies with the principles of DMURS.

The proposal has been developed to take account of the following elements of DMURS as shown in Table 4-2.

Table 4-2 - DMURS Compliance Criteria

Section Title	DMURS Reference
Street networks	Chapter 3
Integrated Street Networks	Section 3.1
Movement and Place	Section 3.2
Permeability & Legibility	Section 3.3
Street Design	Chapter 4
Movement, Place and Speed	Section 4.1
Streetscape	Section 4.2
Pedestrian and Cyclists Environment	Section 4.3
Carriageway Conditions	Section 4.4

4.1 Design Speed Principles

DMURS recommends that the Street Design should be reflective of the road hierarchy and movement and functionality of the street network. One of the most successful ways of managing this is by designing self-regulating streets *that balance the functional needs of different users, enhance the sense of place and manage speed in a manner that does not rely on excessive regulation controls of physically intrusive measures for enforcement (DMURS 4.1.2)*.

Some of the critical elements of achieving self-regulating streets and compliance with DMURS Street Design are:

- Horizontal radius / curvature (DMURS 4.4.6);
- Gradients (DMURS 4.4.6);
- Carriageway widths (DMURS 4.4.1) and
- Junction radii (DMURS 4.3.3).

A 30km/h zone as required on residential streets is promoted via the combination of the design elements below.

- Horizontal and vertical alignment designed to 20km/h;
- Carriageway widths in line with DMURS requirement for street type;
- Constrained junction radii in line with DMURS requirement; and
- Provision of Raised Tables at Junctions.

Landscaping has been proposed so as not to create 'blind spots' and ensure that inter-visibility is maintained between pedestrians, cyclists, and motorists.

The design of the streetscape, including the provision of car parking, narrow road widths, tight horizontal geometry, compact junctions, and vertical speed management features, will significantly influence the achievement of lower traffic speeds and the required quality of street design.

4.2 Internal Street Layout

Best practice in relation to the design was referenced from the following current design documents and guidelines:

- Design Manual for Urban Roads and Streets (DMURS);
- TII Design Manual for Roads and Bridges (DMRB) where relevant; and
- The Cycle Design Manual (CDM).

These streets are designed in accordance with the following principles.

- *Connectivity: Creation of vibrant and active places via walkable and well-connected streets.*
- *Permeability: Creation of routes for access and circulation ensuring the site are accessible from several directions.*
- *Sustainability: Priority should be given to the needs of walking, cycling and public transport, and the need for car-borne trips should be minimised.*
- *Safety: Streets, paths and cycle routes should provide for safe access by users of all ages and degrees of personal mobility.*
- *Legibility: It should be easy for both residents and visitors to find their way in the area, and*
- *Sense of Place: Streets should contribute to the creation of attractive and lively mixed-use places.*

The movement function as per Section 3.2.1 of the DMURS 2019 which designers have considered are as follows:

- *Should optimise the movement of public transport.*
- *Should cater for greater numbers of pedestrians and cyclists.*
- *May need to cater for higher volumes of traffic.*

The proposed layout shown in Figure 3-1 shows that the layout is highly permeable for active travel with legible routes provided along desire lines to key destinations such as the neighbourhood centre, external community services, such as schools and public transport connections. The layout follows 10-minute Neighbourhood principles in facilitating active and sustainable travel connectivity to a range of social, community and essential services. The development therefore helps create a vibrant, interconnected community that fosters sustainability, accessibility, and well-being for all residents. The main link street connects Enniskerry Road to the GLDR and is the main spine route for the proposed development with secondary streets including local streets and homezone streets providing access to residential cells. Residential streets are generally short and provide local connections to a small number of units that limits the number of vehicles likely to require access. Landscaping and vertical and horizontal deflections are used along these streets that reinforces that these are quieter streets where pedestrian and cyclists have priority in a shared street environment in compliance with DMURS self-regulating street principles.

The street layout for the development essentially consists of three types of street typology, Avenues, Local Street and Home Zone Street.

- **Local Link Street**-. This is the main traffic distributor road through the development connecting Enniskerry Road to the GLDR.
- **Local Street:** These are the streets that provide access within communities and to the Link street. These streets carry low volumes of traffic than the local link street.
- **Home-zone Street:** The Home Zones are designed as shared space streets environments wherein the shared space will become central to the social fabric of the area as an informal space wherein children can play and the community can congregate, directly adjacent their residence. Landscaping extrudes into the street to create local pinch points that reinforces low speed environment and adds to the attractiveness of the street.

An extract of the street typology is shown in Figure 4-1, with full details shown in AtkinsRéalis drawing (ref: 04 – 900701 to 04 – 900704)

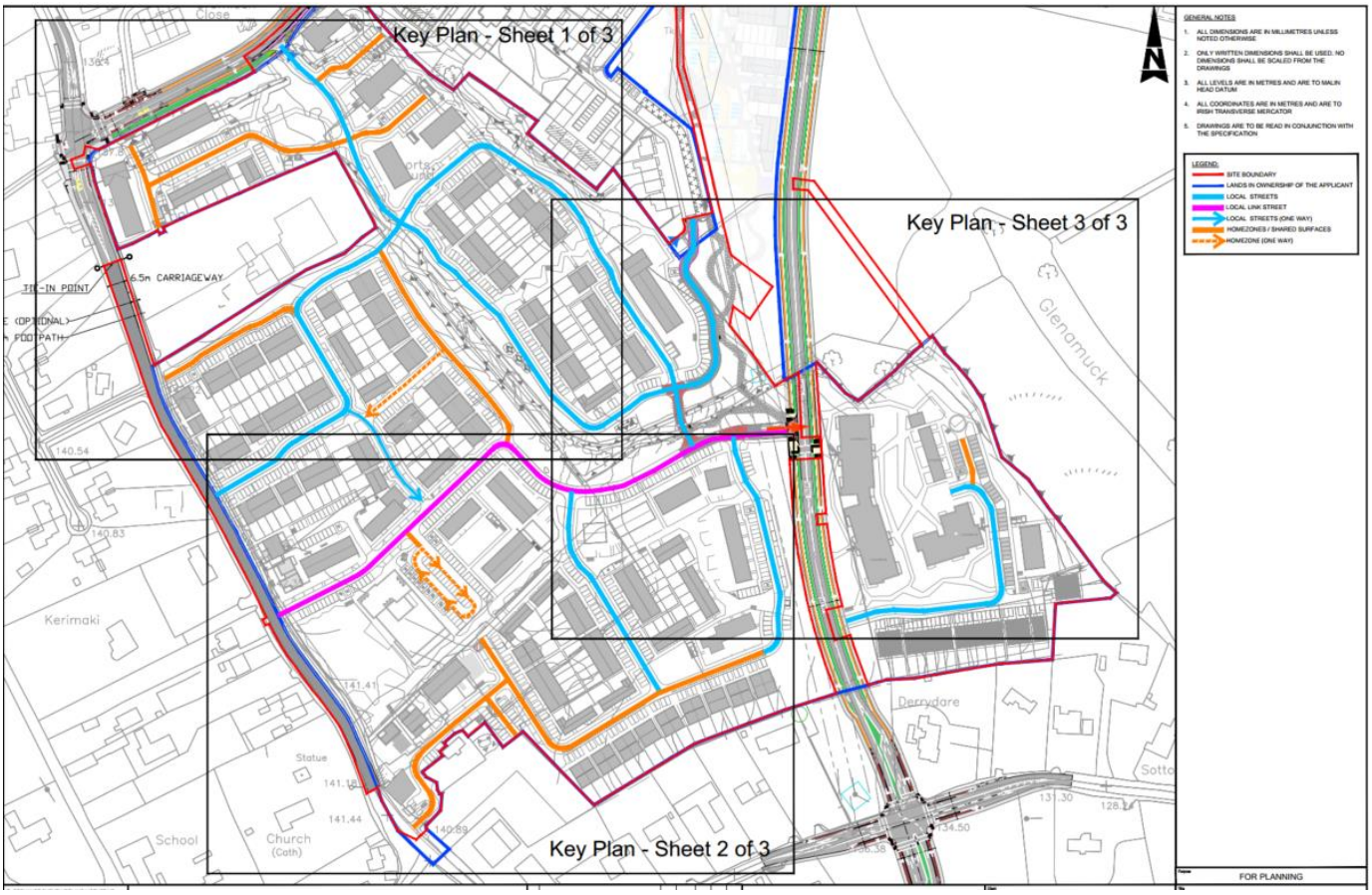

Figure 4-1 - Development and Masterplan Sheet Typology

4.3 Street Typology

The design criteria for the street types are detailed in Table 4-3.

Table 4-3 - Design Criteria

Design Criteria	Local Street	Home Zone Street
DMURS Recommended Design Speed	10-30km/h	10-30km/h
Adopted Design Speed	30km/h	20km/h
Minimum Horizontal Radius	11m	11m
Maximum Gradient	5%	5%
Minimum Gradient	0.5%	0.5%
Carriageway Width	5.5m – 6.0m (two way) 3.25m (one-way)	4.8m
Footway Width	2.0m	Shared space with 1.2m comfort strip
Junction Radii	6m between Local Street and Enniskerry Road 3.0m-4.5m between Local Street and Local Street	3m between Home Zone Streets and Local Street
Junction Approach Gradient	2%	2%

4.4 Junction Design

The design of junctions throughout the development are designed to prioritise active travel movements while allowing all necessary vehicles to enter and leave at low vehicle speeds. This has been achieved thorough the provision of raised entry treatments with priority provided to pedestrian and cyclists across the junction mouth. Tight junction radii have been used as follows:

- Local Street junction to external roads such as Enniskerry Road are designed are designed in accordance with DMURS guidance (section 4.3.3) with a 6m radii.
- Internal junctions between local link and local streets are generally 4.5m in accordance with DMURS (section 4.3.3)
- Internal junctions between Home Zone Streets and Local Street are designed in accordance with DMURS (section 4.3.3) generally with 2 to 3m junction radii. Sight lines are to provide a visibility splay of 14m commensurate with a design speed of 20km/h at a setback of 2.0m.

Figure 4-1 shows a typical junction layout, in this case a local street connection to the local link. Tight junction radii and raised entry ensures that vehicle approach speed is modified and slow.

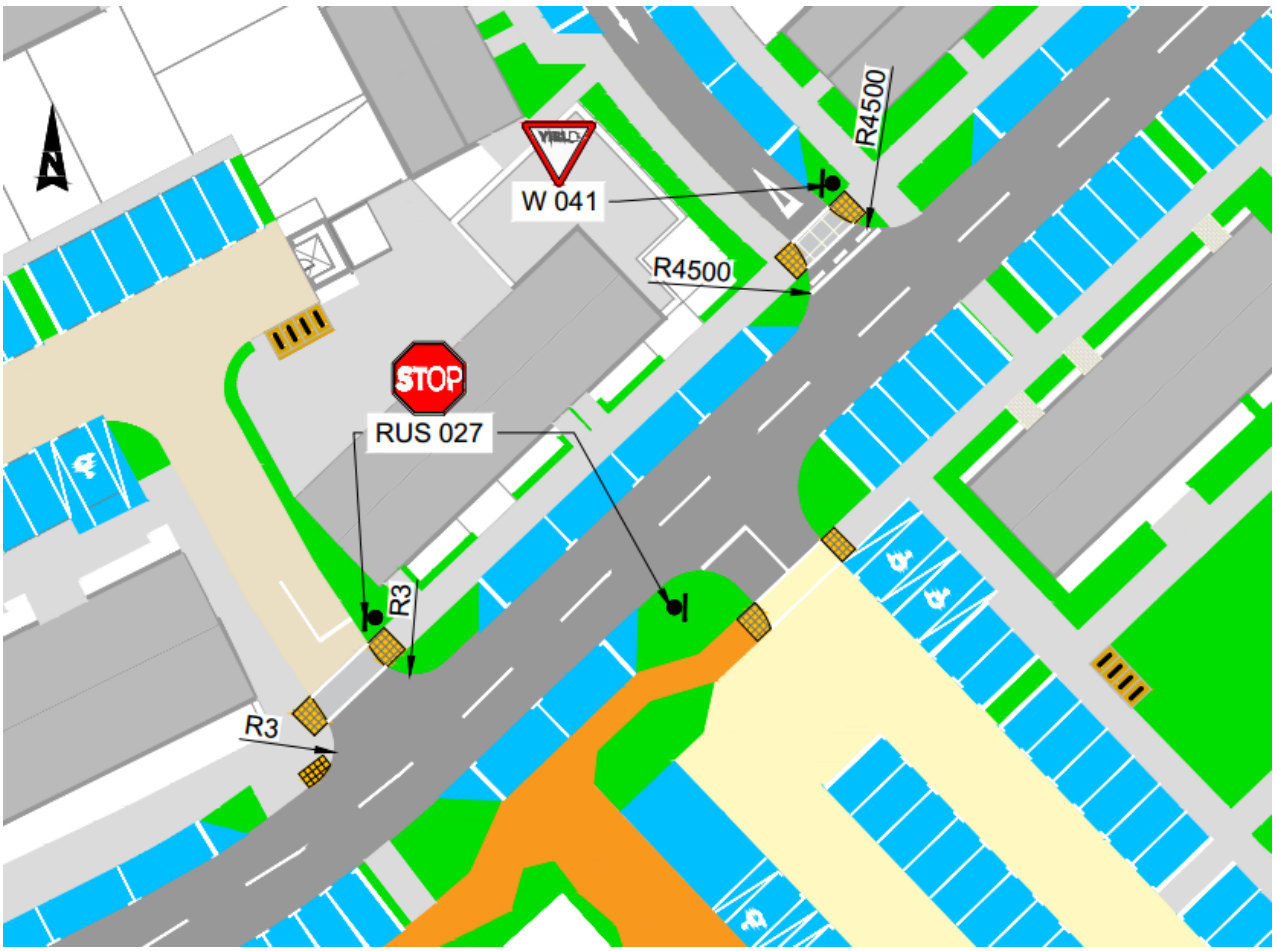

Figure 4-2 - Example of Junction Layout

4.5 Facilities for Pedestrians and Cyclists

The provision of high-quality pedestrian and cyclist facilities within the development is central to the design principles adopted in relation to the development proposals. Pedestrian linkages through and around the proposed development have been considered in the context of desire lines and onwards towards existing and proposed amenities. The masterplan layout has been developed to accommodate these desire lines and linkages. The use of raised pedestrian table crossing points will have the benefit of providing both a convenient crossing point and a traffic calming effect. The raised table pedestrian crossing design is based on the recommendations in DMURS and the Traffic Management Guidelines. Raised pedestrian crossing are provided at junctions and along desire lines to reinforce pedestrian priority and slow vehicle speeds. Figure 4-3 shows the range of active travel provisions provided for the LRD application. Facilities provided include:

- **Major Pedestrian and Cycle Routes:** the development provides connections to external pedestrian footpaths and segregated cycle facilities provided as part of the GRDS scheme. .
- **Pedestrian and Cycle Only Routes:** These supplement Major Routes by providing direct short cuts, and or alternative routes away from traffic. These routes will largely be provided though areas of open space and will be of a more recreational nature. This includes the “Dingle Way” route.
- **Shared Routes:** These supplementary routes provide a number of links between nodes and/or other routes. The routes integrate vehicular and cyclist movement (and in some cases pedestrian movement) in a clearly marked and purpose designed shared surface environment. Accordingly, these streets will be highly traffic calmed with very low speeds of 30 km/h or less. Examples include local street and homezones.

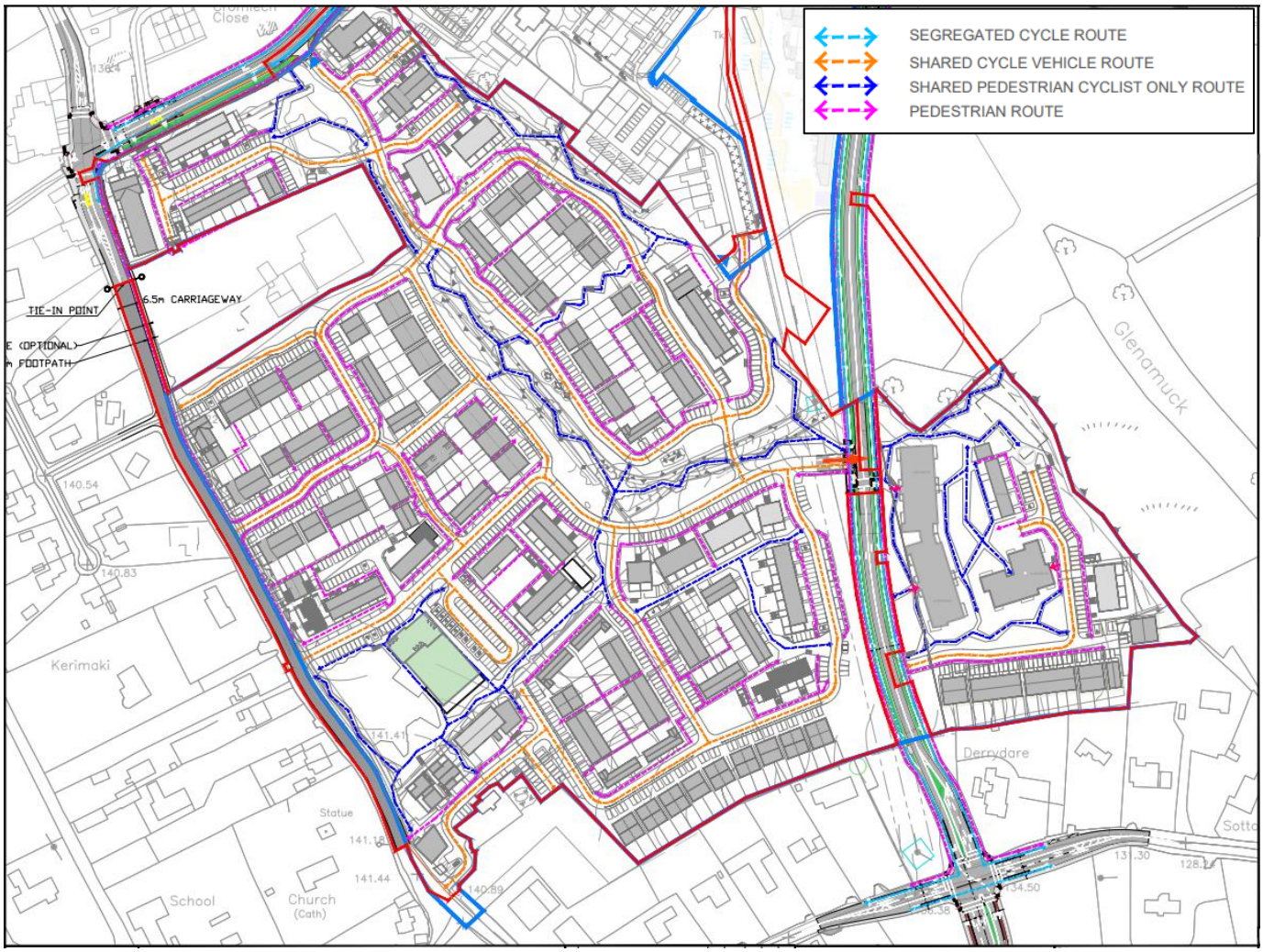

Figure 4-3 - Phase 2 and Masterplan Active Travel Provision

4.6 Streetscape

The development accords with DMURS 4.2 Streetscape through the design approach outlined in Table 4-4.

Table 4-4 - Compliance with DMURS Streetscape Guidance

DMURS Section	DMURS Details	Compliance
4.2.1	Building Height and Street Width	Streets are defined and fronted by buildings that provides a sense of enclosure and overlooking
4.2.2	Street Trees	Street trees form an integral part of the street design approach with (appropriate) trees located on all streets on the scheme layout
4.2.3	Active Street Edges	All streets have active frontages appropriate to the land uses. Residential dwellings overlook residential streets including buildings that turn corners.
4.2.4	Signage and Line Markings	Signage in the development will be in accordance with required regulations ((*Traffic Signs Manual – (TSM)*)) for mandatory signage. In accordance with Section 1.1.10 of the TSM *Signs should only be erected where there is a demonstrable need, because unnecessary, incorrect or inconsistent signs detract from the effectiveness of those that are required and tends to lead to disrespect for all signage*
4.2.5	Street Furniture	A wide range of street furniture will be provided throughout the development including appropriate levels of lighting and seating
4.2.6	Material and Finishes	The material palette for the development is robust, easily maintained and appropriate to its locations and intended use and will enhance legibility.
4.2.7	Planting	Planting is provided throughout the development lands appropriate to the location context.

4.7 Cycle Parking

Both DMURS and CDM recommended that a range of cycle parking types and appropriate locations close to destinations are provided in order to cater for and maximise cycle usage.

The cycle parking facilities provided for the residential and non-residential uses consists of the following mix of equipment's.

- **Stands or Hoops** – where the cycle is leaned against a metal structure and locked (this may include hi/low arrangements where alternate sides are ramped to avoid handlebars clashing);
- **Cycle Lockers** – where individual cycles are secured in a metal box;
- **Cycle Hangers** – where several cycles are secured in a metal box, and
- **Semi-Vertical or Vertical Racks** - where cycles are lifted into a vertical position.

This approach of mixed cycle parking equipment's/facilities are in accordance with Section 6.5 (Types of Equipment and Layout) of the Cycle Design Manual published in September 2023. P

The range of cycle parking facilities are shown in Figure 4-4. Please refer to MCORM drawings PL608 – PL611 for further details of cycle storage facilities

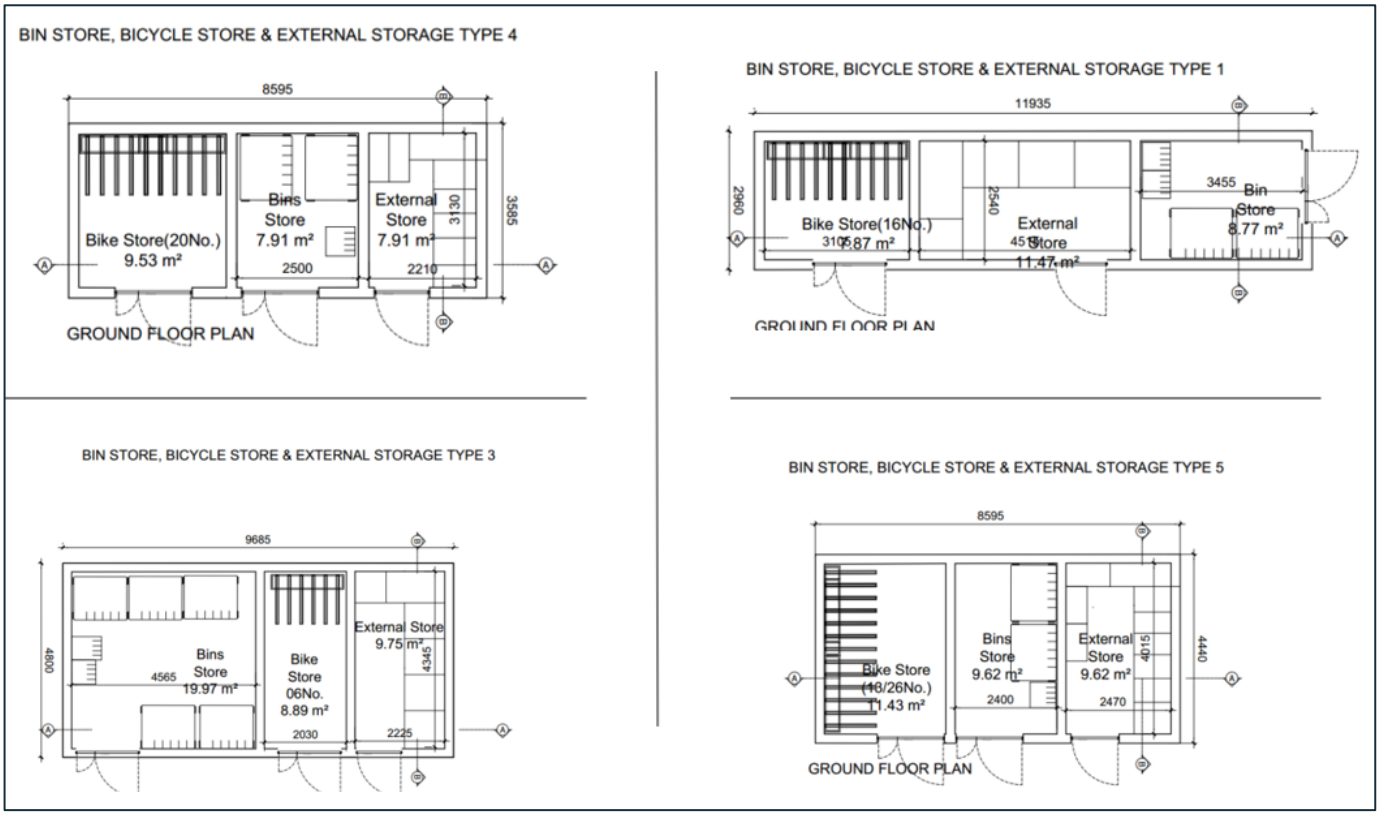

Figure 4-4 - Cycle Parking facilities

These cycle parking facilities have been designed and located in accordance with the Section 6.2. Design Principles of the Cycle Design Manual published in September 2023. The five core principles for designing cycle infrastructure mentioned within the Cycle Design Manual are as follows:

1. ***Safe*** *– cycle parking should be secure for the cycle and users should feel safe from the risk of personal crime;*
2. ***Direct*** *– cycle parking should be near to the cycle route and/or as close as possible to the final destination;*
3. ***Coherent*** *– cycle parking should be well-connected to routes and buildings, well-signed and easy to find;*
4. ***Attractive*** *– cycle parking areas should be of good quality design and well-maintained; and*
5. ***Comfortable*** *– cycle parking should be easy to use and accessible to all.*

The design and location of both long stay and short stay cycle parking for the proposed developments are based on the following considerations which are also in accordance with the above stated design principles and the SPPR 4 – Cycle Parking and Storage section of the Sustainable residential Development and Compact Settlements Guidelines for Planning Authorities.

- All long stay cycle parking will be located in accessible safe, secure, well light and sheltered locations.
- Short stay cycle parking is located in highly visible areas with good passive surveillance, which are easy to access and well light and in close proximity to their destination entry points.
- Where required, end of trip facilities including shower and change facilities are provided.
- A range of cycle parking solutions are provided including Sheffield stand type facilities and stacked cycle solutions.
- The cycle parking layouts cater for oversized cycles including cargo bike and accessible bike formats.

4.8 Car Parking

As noted in DMURS 4.4.9 *On-Street Parking and Loading* the location, design and quantum of car parking has an important role in street design and the promotion of sustainable transport. Well designed car parking can enhance a street, act as a traffic calming measure and provide passive surveillance. Car parking is broken up by landscaping to soften the impact. All cars have a minimum of 6m drop back to ensure cars can manoeuvre safely into and out of spaces. Where the carriageway width if 5.5m then the additional spaces is provided within the car parking bay length. An extract of a typical car parking layout is shown in Figure 4-5

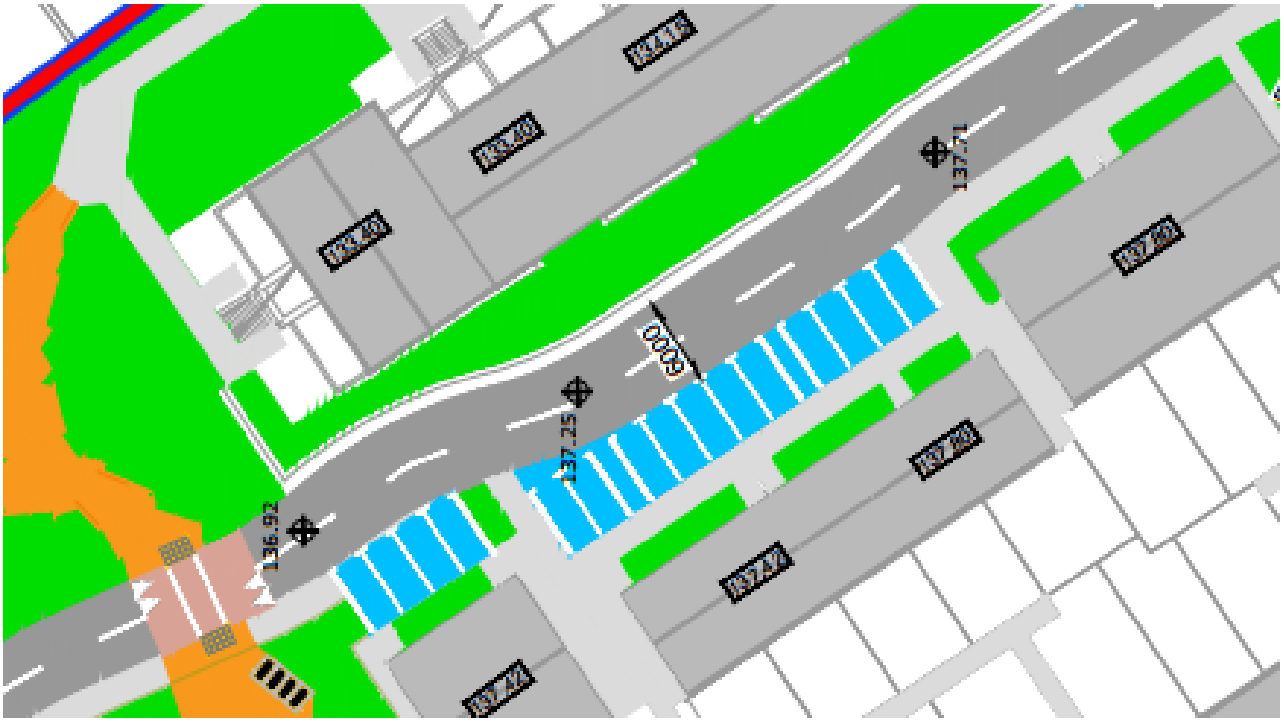

Figure 4-5 - Car Parking Layout

4.9 Access Arrangements for Larger Vehicles

The site layout has been designed taking cognisance of the access requirements for refuse vehicles and emergency services within the site. Swept path analysis has been undertaken to show that occasional larger vehicles can manoeuvre safety through the street network. Drawing(s) ref:04 - 900714 to 04 - 900715 provide details of vehicle tracking for large vehicles. The access arrangements for refuse vehicles can be seen in Figure 4-6.

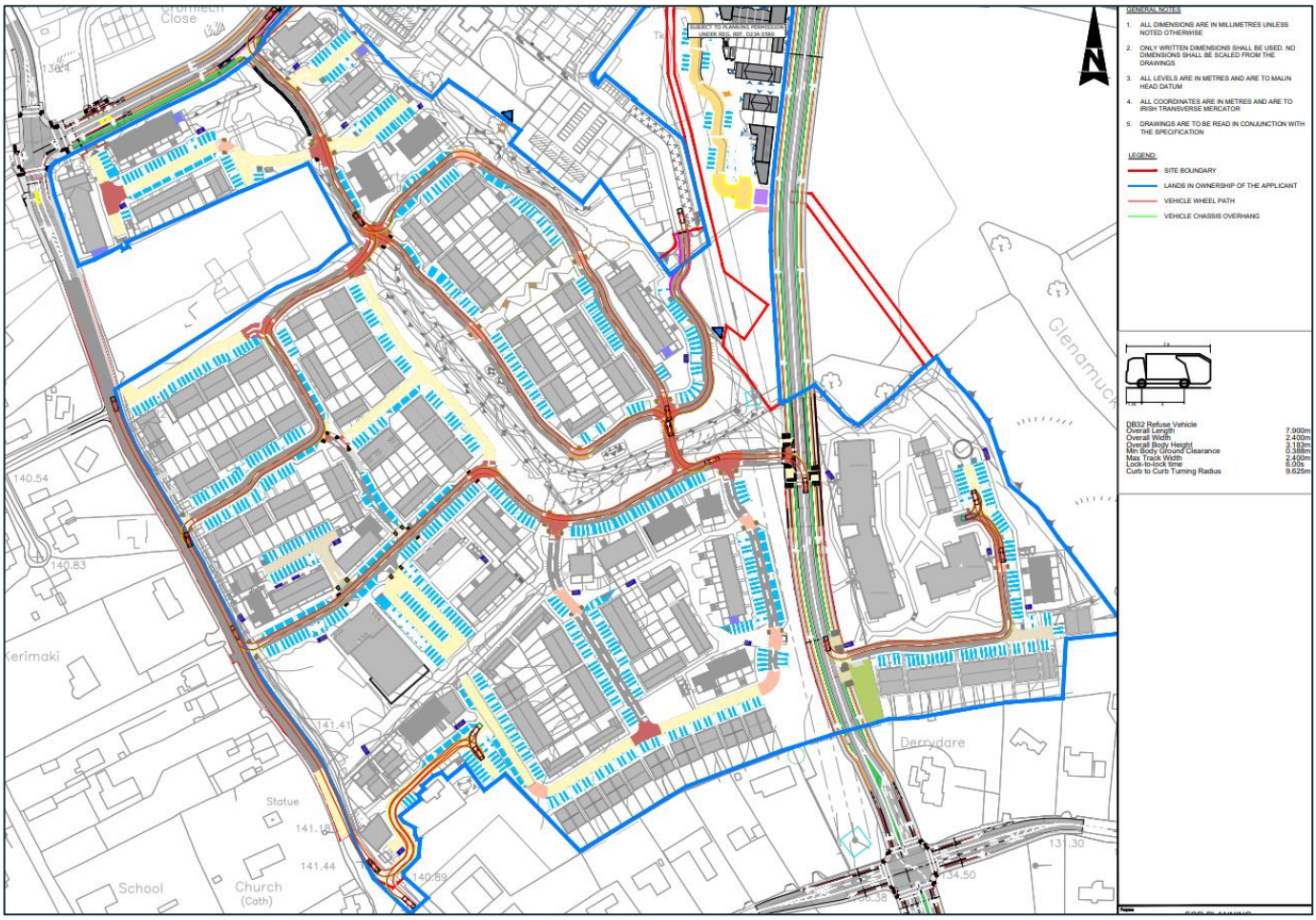

Figure 4-6 - Auto-tracking for refuse vehicle

4.10 Traffic Signs and Road Markings

All traffic signs, including information, regulatory and warning signs will be designed in accordance with the Traffic Signs Manual TSM & Slow Zones Advice Note. The location of traffic signs, mounting heights and orientation will be designed in accordance with the Traffic Signs Manual. Road markings shall be designed in accordance with Chapter 7 of the Traffic Signs Manual. As recommend by DMURS 4.2.4 Signage and Line Markings, the use of signage on local streets has been minimised as part of low traffic self-regulating street approach. Further details can be found in AtkinsRéalis Drawings (ref: 04 – 900705 to 04 – 900709).

5. Conclusion

This statement of consistency sets out how the proposed development has been designed to align with the principles and achieve the recommendations as set out in the Design Manual for Urban Roads and Streets (DMURs).

With regards to the information provided within this statement it is considered that the proposed development is consistent with the requirements for the design of urban roads and streets as set out in DMURS.

AtkinsRéalis

John Kavanagh
WS Atkins Ireland Limited
150-155 Airside Business Park
Swords
Co. Dublin
K67 K5W4

<contact info>