

DMURS Statement of Consistency

Phase 2 of Proposed Residential Development at Southgreen, Co. Kildare

June 2026

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1. Introduction

1.1 Context

This Traffic and Transportation Assessment (TTA) has been prepared by Waterman Moylan as part of the planning documentation for the proposed Phase 2 Development at Southgreen, Kildare Town, Co. Kildare.

Pousterle Limited intend to apply for permission for development of a Large - Scale Residential Development (LRD) on a site of approx. 6.13 ha at Southgreen Road, Kildare, Co. Kildare. The site is generally bounded to the north by agricultural fields; to the south by the recently constructed Southern Internal Link Road; to the west by Southgreen Road and an existing Electricity Station; and to the east by Old Road and existing residential properties.

The proposed development will consist of:

- The construction of a new residential scheme of 146 no. residential units ranging in height from 1-3 storeys as follows:
    - 136 no. houses (7 no. 2 bed units; 102 no. 3 bed units; and 27 no. 4 bed units) in a mixture of bungalow, detached, semi-detached, and terrace style units ranging in height from 1 – 2 storeys.
    - 10 no. duplex apartment units (5 no. 1 beds, 3 no. 2 beds, and 2 no. 3 beds) in new Block A ranging in height from 2-3 storeys
- Each residential unit will be afforded with private open space in the form of a front/rear/side garden for houses or terrace / balconies for duplex apartment units.
- The provision of a new creche facility (approx. 161 sq m GFA) and associated areas of external open space (approx. 60 sq m) located at Block A.
- Public open space (approx. 6,992 sq m) is proposed in the form of 2 no. new large public open space areas within the site (approx. 3,046 sq m and 3,946 sq m respectively).
- Communal open space (approx. 82 sq m) is proposed adjacent to Block A.
- A total of 321 no. car parking spaces (305 no. for residential units and 16 no. for the creche facility) are provided. This provision includes 2 no. accessible spaces and 17 no. visitor spaces.
- A total of 527 no. cycle parking spaces (517 no. for residential units and 10 no. for the creche facility) are provided. This provision includes 75 no. visitor spaces. Resident cycle parking is proposed in the form of secure bicycle store enclosures to the front of terraced units; on curtilage spaces to the rear of units with side access; and a bicycle store for apartment units located within Block A. Visitor parking is proposed in the form of Sheffield stands.
- The development shall be served via 2 no. new vehicular access points from Southgreen Road. An additional private vehicular access point is proposed via Old Road to service 1 no. new bungalow (4 no. bed residential unit). Provision is also made for future vehicular access via Southgreen Road to serve the open space and amenity zoned lands to the north of the main development site.
- Pedestrian and Cyclist access is also proposed via Southgreen Road and via a new secondary access point from the Southern Internal Link Road to the south of the site and Old Road to the east of the site.
- Upgrades/widening to Southgreen Road including the provision of 2 no. directional single lane cycle tracks and pedestrian footpaths on either side of the Southgreen Road, together with amendments

to the existing cycle tracks and footpaths on Southgreen Road north of Southern Internal Link Road are proposed.

- A new pedestrian/cycle link is also delivered to the north of the main development site connecting South Green Road to Old Road.
- The associated site and infrastructural works include provision for an ESB Sub Station; water services; foul and surface water drainage and connections; attenuation proposals; permeable paving; all landscaping works; boundary treatment; PV/Solar Panels; internal roads and footpaths; waste storage areas, all electrical services and all associated site development works.

The detailed breakdown of the proposed residential scheme is shown in **Table 1** below.

Description	1-bed	2-bed	3-bed	4-bed	Total
Houses		7	102	27	136
Apartments	5	3	2		10
Total	**5**	**10**	**104**	**27**	**146**

Table 1 | *Schedule of Accommodation.*

1.2 Response to FI request (Pl. Apl. Reg. Ref. No. 26/60248)

A request for further information (RFI) in respect of the proposed Large-scale Residential Development (LRD) at Southgreen, Co. Kildare was issued by Kildare County Council on 30 April 2026.

Item 3 of the request for further information requests the following:

The Applicant is requested to re-examine the alignment of the long internal stretches of roadway running north-south through the development in order to align with the requirements of the Design Manual for Urban Roads and Streets (DMURS). The straight sections of road, particularly on the main distributor, will increase the need for ramps in the proposed development. The Applicant should note one of the purposes of the DMURS strategy is to provide alternatives to placing ramps in new housing estates and this problem should be avoided in a realigned or reconfigured access arrangement.

This DMURS document sets out to specific design features that have been incorporated within the proposed residential scheme with the intention of delivering a design that is consistent with both the principles and guidance outlined within the Design Manual for Urban Roads and Streets (DMURS). In particular, the alignment of the long internal site roadway running north-south through the development has been re-examined in response to the Further Information request. The road geometry has been revised to incorporate increased horizontal curvature, including a centreline radii of approximately 20 metres, resulting in a less linear road alignment. These amendments will assist in reducing vehicle speeds along this section of roadway and contribute toward a more self-regulating street environment in accordance with DMURS principles.

1.3 Standards

This Design Statement has been prepared in accordance with the Design Manual for Urban Roads and Streets (May 2019, Version 1.1).

1.4 Site Location and Description

The subject site of this application is situated in Kildare, Co. Kildare. The site is located approximately 1.0km from Kildare Town City to the north. The site is currently in greenfield condition and is used for agricultural purposes.

The location of the subject development is shown in the **Figure 1** below.



Figure 1 | *Site location Map*
(Source: Google Earth)

1.5 Contents of the DMURS Statement of Consistency

This document presents a review of the main section within both Chapters 3 'Street Networks' and 4 'Street Design' of the Design Manual Urban Roads and Streets. It examines how these chapters were implemented during the design phases, with the aim of providing a statement of the coherence of the Subject Development.

2. Street Networks

2.1 Integrate Street Network

Design Manual Urban Roads and Streets approach encourages the integration of land use and transportation, allowing the consolidation of development along strategic connections and around nodes. According to the Design Manual, the strategic connections represent the principal routes for public transport, whereas the nodes constitute the primary destinations. This results in improved accessibility to services and encourages more sustainable modes of transportation, which in turn reduces reliance on the automobile.

The subject site is situated in Kildare, Co. Kildare, approximately 1.0 km north of Kildare Town Centre. It is currently a greenfield site used for agricultural purposes. The site is within an area undergoing development, located to the north of the southwestern railway line, and benefits from good vehicular and pedestrian connectivity, as detailed in the following section.

Although the site is not directly served by public transport, Kildare Railway Station is located within a 10-minute walk, and several bus stops are accessible within a 15-minute walk.

The key roads within this network are shown in **Figure 2** and described below.

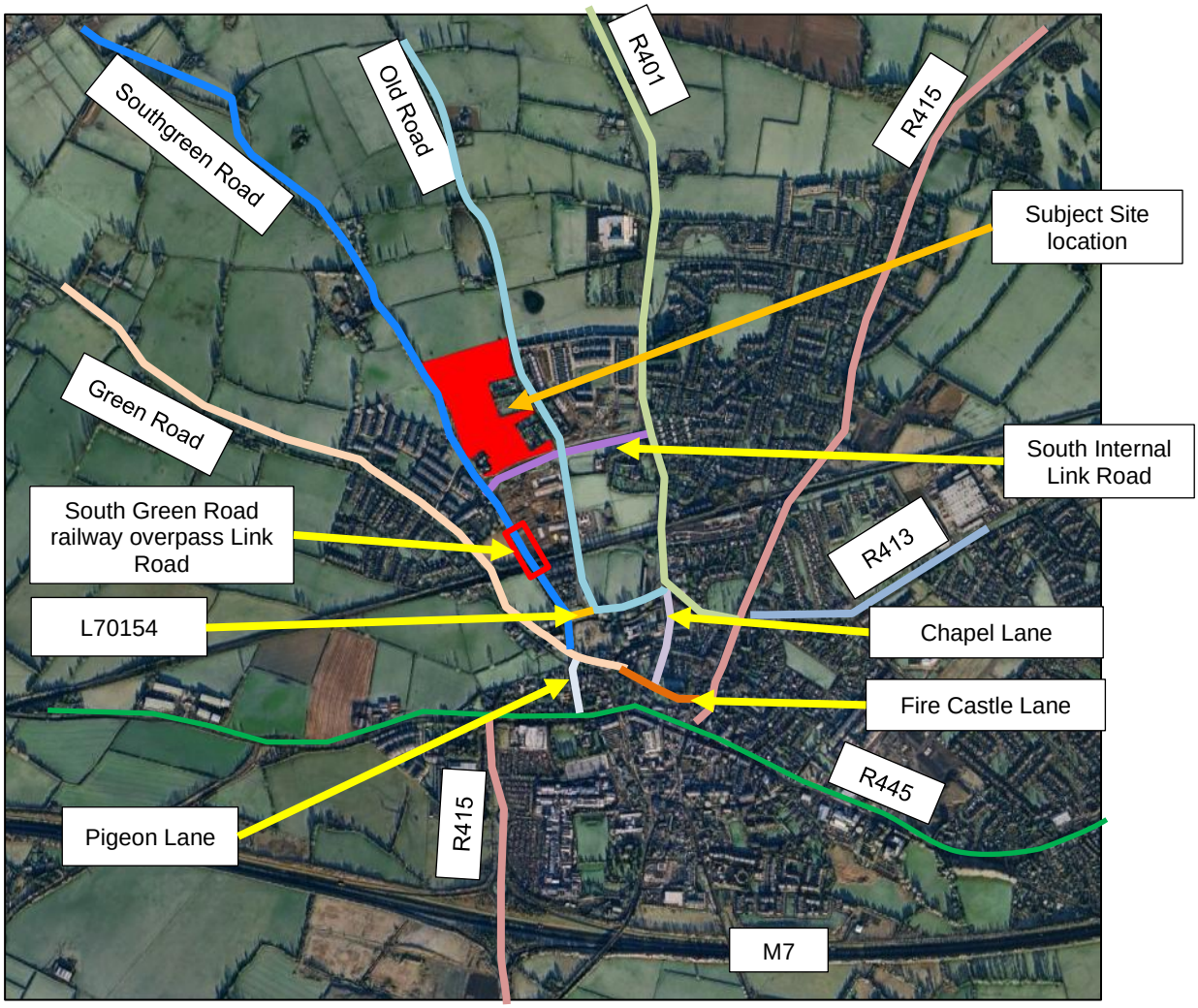


Figure 2 | *Existing Road Network*

Southgreen Road is a rural roadway that begins at its intersection with Green Road, Friary Road, and Pigeon Lane, situated to the south of the southwestern railway line. It runs in a northerly direction, crossing the railway via an overpass, and terminates at its junction with the R401. The road is a two-way carriageway with a typical width of approximately 5.5 metres. However, the overpass section is reduced to a one-way carriageway with a width of less than 4.0 metres and a 1.5-metre-wide footpath on the eastern side. Vehicular movement across the bridge is controlled by traffic signals positioned at either end.

According with the Kildare Town Local Area Plan, it is expected to upgrade the Southgreen Bridge to a two-way carriageway. The junction between Southgreen Road and the South Internal Link Road has recently been upgraded to a roundabout, which includes pedestrian crossings on all arms and integrated cycling infrastructure. Additionally, a dedicated cycle path and footpath have been provided on both sides of Southgreen Road, extending approximately 100 metres to the north and south of the roundabout.

Old Road is a rural roadway that begins at its intersection with the R401 and Chapel Lane, to the south of the southwestern railway line. It runs in a northerly direction, crossing the railway, and terminates at another junction with the R401. The road is a two-way carriageway with a width of approximately 4.6 metres, providing access to agricultural lands and a number of residential properties.

As outlined in **Section 2.3.1** above, Old Road is designated to become a priority route for active travel modes. The proposed closure of Old Road Bridge to vehicular traffic will eliminate through traffic along this route. Consequently, the bridge will be restricted to pedestrians and cyclists only. To the mentioned traffic light to its junction with the R401, Old Road is a 6-metre-wide road with footpaths on both sides.

Bohereenagower Road (L70154) is a road link between Southgreen Road and Old Road. The road is a two-way carriageway with a width of 6.0 metres, running in an east–west direction.

The South Internal Link Road is a recently constructed roadway developed between 2020 and 2021. It links the R401, Old Road, and Southgreen Road, significantly enhancing both vehicular and pedestrian permeability in the area. The road is a two-way carriageway with a width of 6.6 metres, running in an east–west direction. It provides dedicated cycle paths and footpaths on both sides. The junction between South Internal Link Road and Old Road is a priority-controlled right-left stagger with pedestrian pelican-pedestrian crossing. At the junction with the R401, it forms a priority-controlled T-junction, equipped with toucan crossings on all arms to accommodate both pedestrians and cyclists.

Chapel Lane and **Fire Castle Lane** and are local urban streets, each configured as a two-way carriageway with an approximate width of 6.3 metres. Both streets are provided with footpaths on one side of the carriageway. Fire Castle Lane has narrow sections with less than 4.0-metre-wide road and provides access to the centre of Kildare Town.

Pigeon Lane is a two-way carriageway that begins at its intersection with Southgreen Road and Green Road, and ends at its junction with the R445. It serves as an important local link within Kildare Town. The carriageway has a width of approximately 6.5 metres and is provided with a footpath on one side. Signalised traffic control is in place at both junctions to manage vehicular and pedestrian movements.

The **R401** extends from Kinnegad in County Westmeath to Kildare Town Centre, passing through Edenderry in County Offaly. The total length of the route is approximately 42.3 kilometres, traversing the counties of Kildare, Offaly, and Meath. The R401 crosses the southwestern railway line via a one-way carriageway underpass with a width of less than 4.0 metres. Vehicular movement through the underpass is controlled by traffic signals located at either end. Between Kildare Town Community School, situated to the north of the site, and Kildare Town Centre, a footpath is provided along the eastern side of the road. Additionally, in the vicinity of a recently developed area, both footpaths and cycle tracks are provided on both sides.

The **R413** runs in a west-east from Kildare to Ballymore Eustace. The total length of the route is approximately 23 kilometres, all in Kildare County. The road is a two-way carriageway with a width of 6.5 metres. In Kildare Town Centre area, the R413 is provided with footpaths on both sides.

The **R415** runs in a north–south direction from its junction with the R403 in Allenwood to the R448 (formerly the N9) at Crookstown. The route passes through Kildare Town and crosses the N78 between Kilcullen and Athy. The entirety of the R415 lies within County Kildare. South of the R445, the R415 provides access to the M7 motorway at Junction 13. Between the R445 and the M7, the carriageway is approximately 6.0 metres wide and is served by footpaths on both sides. This section also provides direct access to the Kildare Village Shopping Outlet, making it a key link for both local and visitor traffic.

The **R445** is a non-motorway alternative route to the N7/M7 motorway between Naas and Limerick, and at 170 km it is one of the longest regional roads in Ireland (longer than most national roads). Indeed, much of the route comprises roads that were formerly part of the N7 between the cities, prior to motorway and other bypasses. Some of the R445 route also comprises local link roads to new N7/M7 route sections. In Kildare Town, the R445 the carriageway has a width of approximately 8.5 metres and is provided with a footpath on both sides.

The **M7 motorway** runs from the outskirts of Naas in County Kildare to Rossbrien on the outskirts of Limerick city. The M7 forms part of the Dublin to Limerick N7 national primary road. The section of the motorway bypassing Naas, an 8 km stretch, was the first section of motorway to open in Ireland, in 1983. Following substantial works to extend the M7 to Limerick, by the end of 2010, the motorway replaced all of the old single-carriageway N7 route which is now designated as R445. At 166.5 km, the M7 is the longest motorway in Ireland.

2.2 Movement and place

2.2.1 Movement Function

DMURS establishes that a hierarchy of streets encourages residents to use sustainable modes of transport. The manual classifies streets into three categories: Arterial Streets, Link Streets and Local Streets. In accordance with the Design Manual, Arterial streets are the major routes via which major centres / nodes are connected. Arterial streets may include orbital or cross metropolitan routes within larger cities and larger towns. Link Streets provides the link to arterial streets or between centres, neighbourhoods, and/or suburbs. Finally, local streets are the streets that provide access within communities and to arterial and link streets.

As a reference, the Design Manual provides a table which shows the terminology used within this Manual compared with other key publications. The table is presented below.

DMURS Description	Roads Act/ DN-GEO-03031	Traffic Management Guidelines	National Cycle Manual
Arterial	National	Primary Distributor Roads	Distributor
Link	Regional (see note 1)	District Distributor Local Collector (see Notes 1 and 2)	Local Collector
Local	Local	Access	Access

Notes

Note 1: Larger Regional/District Distributors may fall into the category of *Arterial* where they are the main links between major centres (i.e. towns) or have an orbital function.

Note 2: Local Distributors may fall into the category of *Local* street where they are relatively short in length and simply link a neighbourhood to the broader street network.

Figure 3 | *Terminology used within DMURS compared with other key publications (sources: Table 3.1 - DMURS)*

Vehicular access to the Subject Development is proposed off Southgreen Road, as illustrated in **Figure 4** below.

All internal roads in the proposed development are designed for a speed limit of 30kph with typically 5.5-6.0m wide carriageways and footpaths along both sides. All intersections within the development itself will be priority junctions with raised tables where appropriate. The low design speeds and traffic calming measures will ensure the safe operation of these junctions and a safe/secure environment for pedestrians and cyclists.

In addition, the Proposed Development will benefit from several pedestrian and cycle access points, providing good permeability to the surrounding developments and roads, as shown in **Figure 4** below.

The design and layout of the proposal have been prepared to fully comply with the current relevant design standards and specifications applicable to this form of development.

Figure 4 below shows the access points for vehicles, pedestrian and cyclist to each site, the internal roads and the surrounding road network.

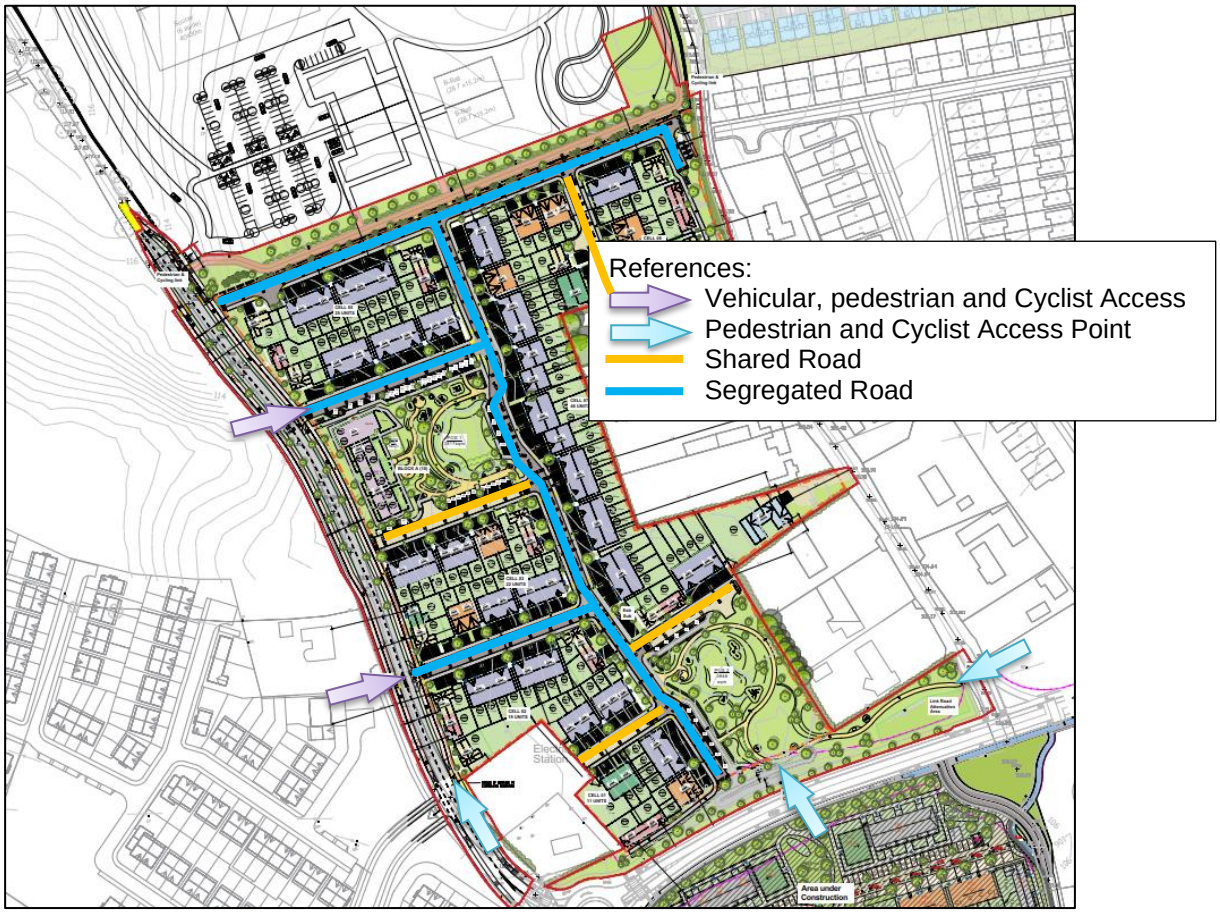


Figure 4 | *Proposed Development – Site Access Points*

All internal roads in the Subject Development are designed for a speed limit of 30kph with 5.5m wide carriageways and 2.0m wide footpaths along both sides.

To generate a safer environment, shared use surfaces (for both vehicles and pedestrians) have been generated with a differentiated rolling surface (in texture and level) so that it is easily identifiable by the driver. This was carried out in accordance with *section 4.3.4* of the *Design Manual for Urban Roads and Streets*, which indicate:

- *Use a variety of materials and finishes that indicate that the carriageway is an extension of the pedestrian domain.* A different finish to the rest of the pavement has been chosen to identify these areas.
- *Avoid raised kerb lines. Any Kerb line should be fully embedded within the street surface.* The shared areas have been raised from the remaining pavements using small ramps to start and end the shared areas.
- *Minimise the width of the vehicular carriageway and /or corner radii.* A reduction in the width of the carriageway has been implemented, from 5.50 m to 4.80 m.

All road intersections within the development itself will be priority junctions. The low design speeds and traffic calming measures will ensure the safe operation of these junctions.

2.2.2 Place Context

DMURS recognises that urban roads and streets pass through a variety of areas with different characteristics, requiring different design solutions in each of these different contexts. Consequently, based on the Irish urban landscape, the Design Manual has divided urban areas according to their collective similarities, defining the following categories: Centre, Neighbourhood, Suburb and Business Park/Industrial Estate.

Urban Centre areas include areas that are the focus of economic and cultural activity, where pedestrian activity is highest, and contain a concentration of retail and commercial frontages that open directly onto the street. Neighbourhoods include new and existing areas that are intensively developed with medium to high density housing and/or a broad mix of uses. Suburbs consist mainly of existing lower density housing developed over large areas. Business parks / industrial estates are areas primarily focused on providing areas of commercial and industrial activity outside of centres.

Land uses are defined in the Kildare Town Local Area Plan 2023-2029, which indicates that the subject site is located within an area designated as "C – New Residential Phase 2": "*To protect future development lands from inappropriate forms of development which would impede the sequential expansion and consolidation of the town in terms of providing for new residential development for future plans. The inclusion of these lands will not in any way infer a prior commitment regarding the nature of any future zoning. Such a decision will be considered within the framework of the need for additional zoned lands and the proper planning and sustainable development of the area*".

Figure 5 below is taken from Map 11.1 of the Kildare Town Local Area Plan 2023-2029.

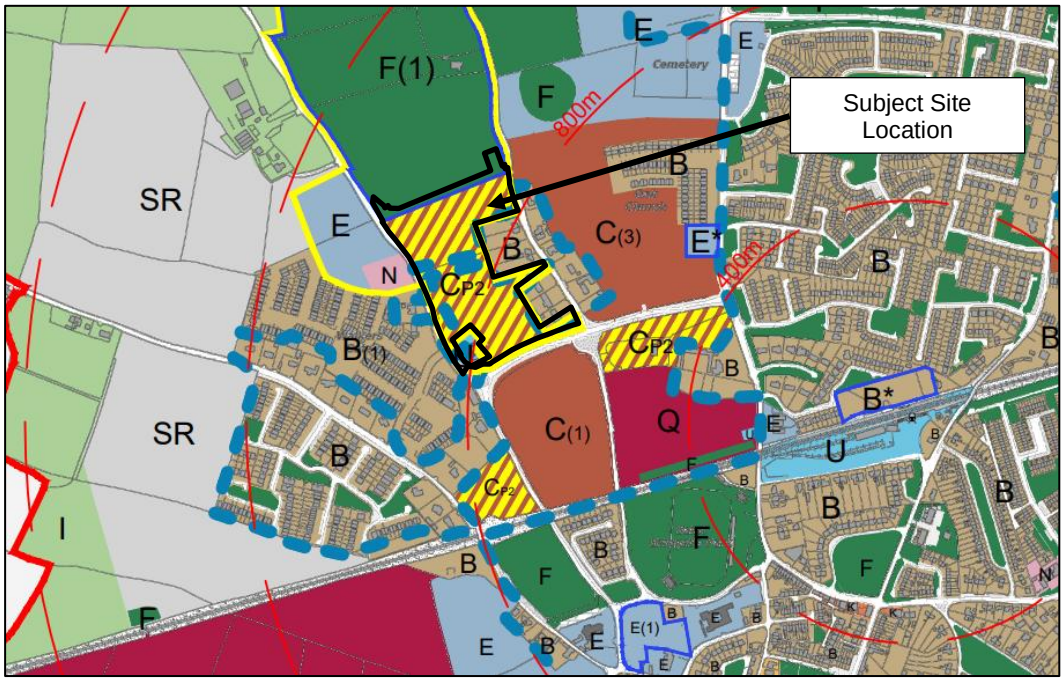


Figure 5 | *Site Location and Zoning*
(Source: Map 11.1 of the Kildare Town Local Area Plan 2023-2029)

2.3 Permeability and Legibility

2.3.1 Street Layouts

DMURS indicates that the design of new road networks should incorporate solutions that facilitate the development of sustainable communities. The networks should be based on layouts that facilitate connectivity between streets and maximise the number of walkable and cyclable routes between destinations. The use of cul-de-sacs, which provide no through access, should be limited to areas where mid-block penetration is desirable.

To provide a baseline, the DMURS set out three possible network typologies that can be adapted to the needs of the place, as shown in **Figure 6** below.



Figure 6 | *Permeable Street layouts (Source: Figure 3.8 – DMURS)*

DMURS highlight that an orthogonal layout is the most effective in terms of permeability. A curvilinear layout may also be highly effective, while streets with an organic layout have usually developed over time in a haphazard manner but can also offer high connectivity. Furthermore, it emphasises the importance of clearly defining the points of access to the development, which should be aligned with the major destinations and the hierarchy of the road network (refer to **Section 2.2.1**)

Figure 7 below illustrates the street layout of the Subject Development which, according to the classification above, corresponds to an "Orthogonal Layout".

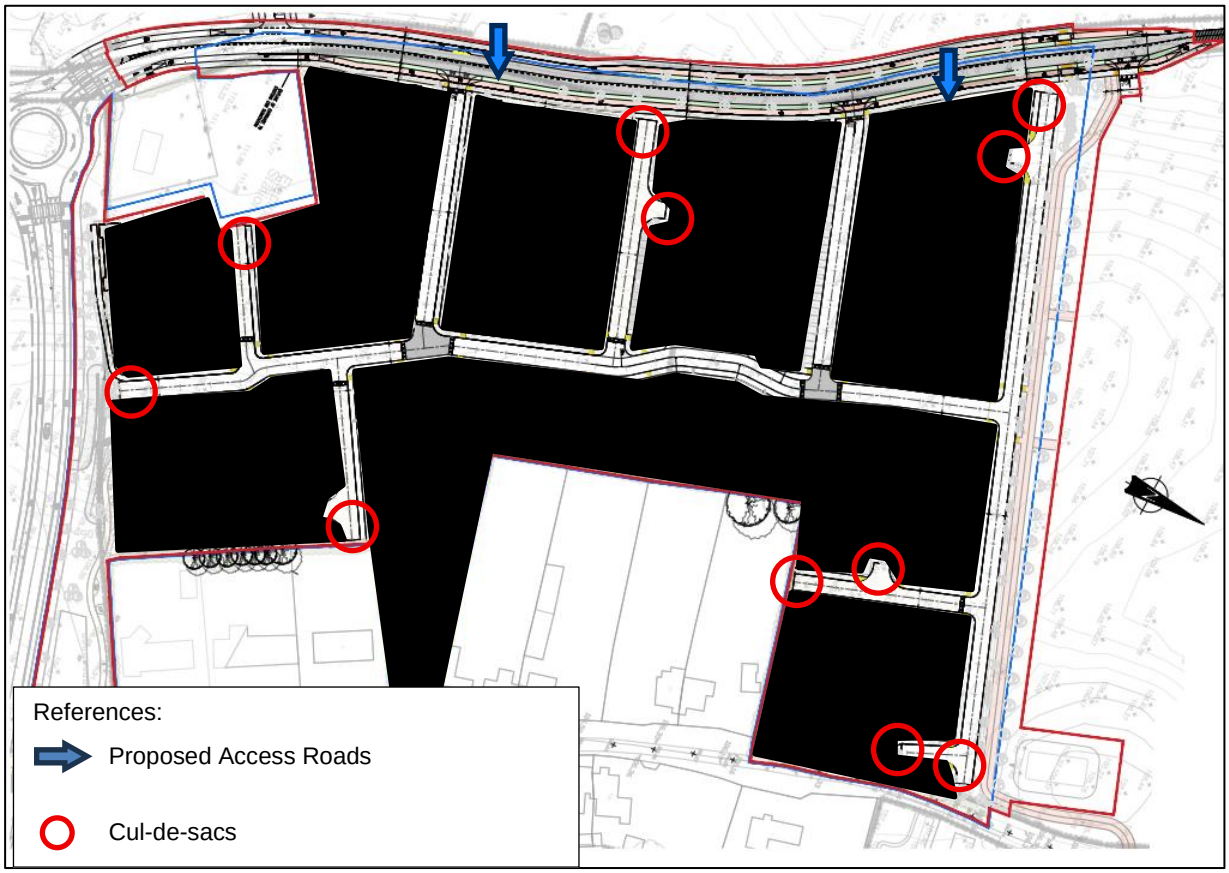


Figure 7 | *Subject Development – Street Layout*

2.4 Management

2.4.1 Vehicle Permeability

DMURS has classified the degree of permeability provided for different transport modes into four categories, as outlined below.

- Dendritic Networks, which severely restrict the movement of all users, should be avoided by the designer as they severely restrict movement.
- Open networks that allow full permeability for all users are the best accessibility. This is desirable for all users, such as within town centres and business park / industrial areas. The latter to allow more efficient access for commercial vehicles.
- 3-way offset networks, which comprise a significant number of 3-way junctions, permit through movement for all modes. However, this results in slower speeds for faster modes, as vehicles are required to decelerate, stop and/or change direction on numerous occasions when traversing local streets. This configuration presents a number of advantages and disadvantages with regard to its overall effectiveness. The use of multiple junctions can reduce legibility and discourage walking and cycling, as the network becomes challenging to navigate, and the route becomes unclear.
- Filter permeability network may be employed to permit full permeability to some users while imposing greater restrictions on others. This may be applied in instances where designers seek to prioritise the movements of more sustainable modes over private vehicles.

The figure below shows an elementary diagram of the types of road networks.

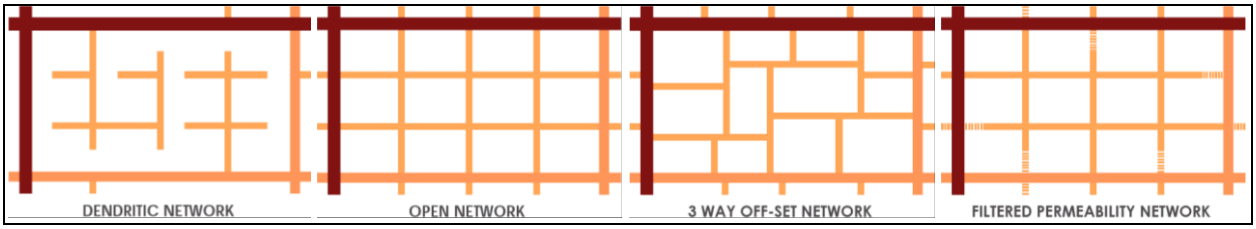


Figure 8 | *Type of Street Network (Source: Figure 3.22 – DMURS)*

The Design Manual outlines two final considerations regarding cul-de-sacs and one-way streets. For the former, DMURS considers that they should be used with caution to prevent the formation of dendritic networks. Regarding the one-way streets, the manual considers that the use of one-way streets can encourage faster car speeds and can be confusing for users if they divert people away from destinations. Nevertheless, the Design Manual also indicates that one-way streets may be beneficial in narrow carriageways in shared streets and where the implementation of this street type provides more space for pedestrian use.

The Subject Development is considered as filtered permeability network as can be seen in the figure below which highlight the main road within the development.

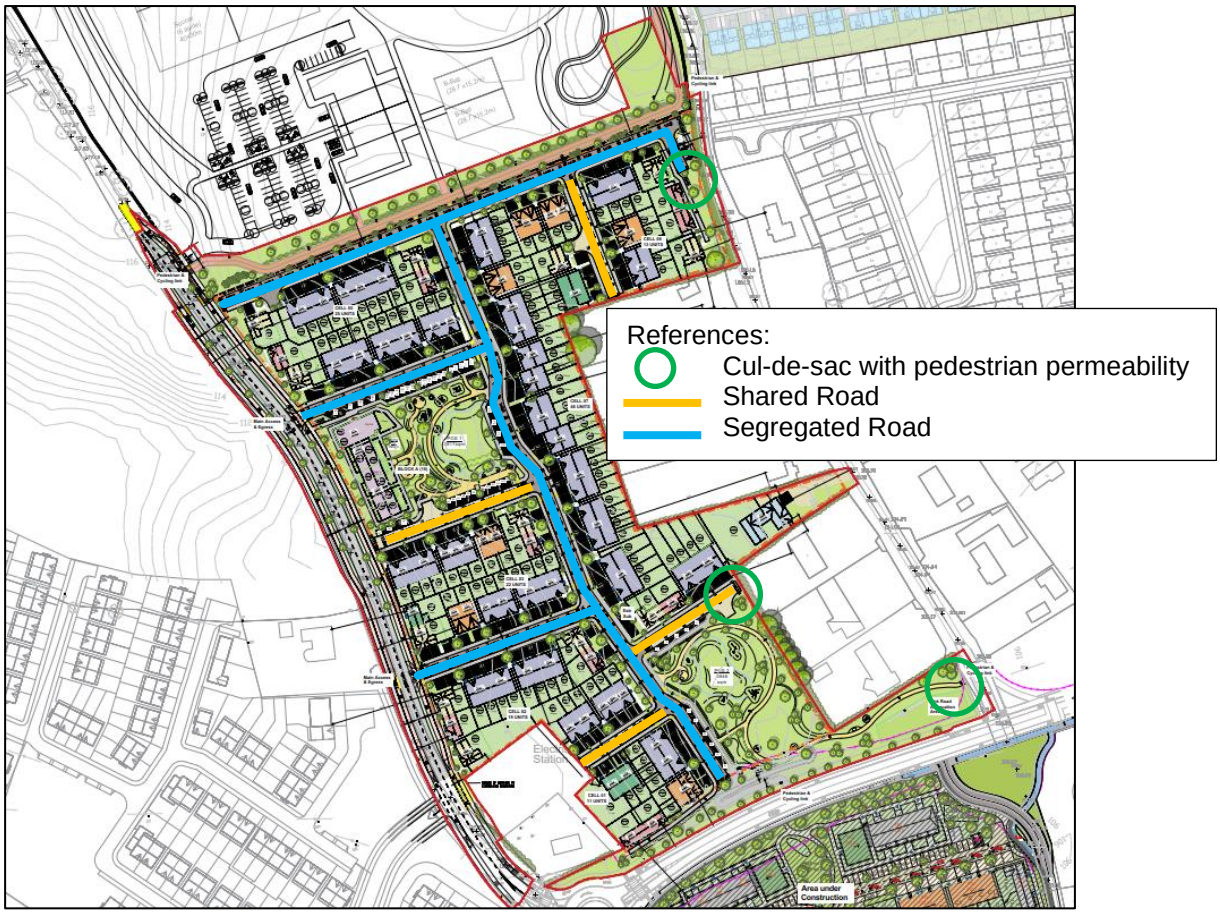


Figure 9 | *Subject Development – Street Network*

The developed has been designed with the following considerations:

- The subject site is located within an existing residential neighbourhood.

- The site is currently a greenfield site, bounded to the north by agricultural fields; to the south by the recently constructed Southern Internal Link Road; to the west by Southgreen Road and an existing Electricity Station; and to the east by Old Road and existing residential properties
- Most streets within the development are residential internal roads.

It is reasonable to conclude that the configuration is appropriate and that drivers will not be inclined to travel at high speeds or experience any significant disruption to their journey times as a result of driving on the network roads.

3. Street Design

3.1 Movement, Place and Speed

3.1.1 A balanced Approach to Speed

In order to achieve an effective and balanced design solution, DMURS advises the designer to consider the management of speed, the values of place and the reasonable expectations of appropriate speed in accordance with the context and functions in question. In order to facilitate this, DMURS has outlined a matrix which allows for the selection of an appropriate design speed on the basis of the links between place, movement and speed. The aforementioned matrix is presented in the figure below.

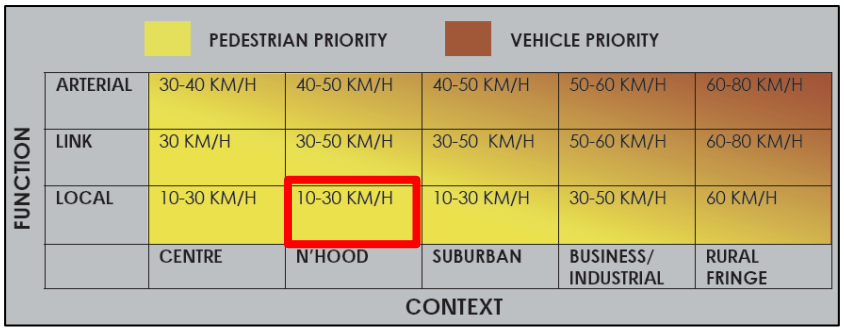


Figure 10 | *Design speed selection*
(Source: Table 4.1 – DMURS)

The roads within the Subject Development were designed with a maximum speed of 30 km/h.

As previously discussed in **Section 2.2.1**, the Subject Development is designed with low-speed internal roads to provide access to car parking areas and is located within a neighbourhood area, as outlined in **Section 2.2.2**.

Accordingly, the design speed is set at 30 km/h, in line with the maximum speed considered.

The Subject Site is proposed to be provided with road signage at each access road indicating a maximum permitted speed of 30 km/h. Further details are provided in Waterman Moylan Drawing No. *SOU-WMC-PH2-XX-DR-C-P0130 - Proposed Road Markings and Signage*.

3.1.2 Self-Regulation Streets

It is recognised by DMURS that the development itself can be used to manage movement as a response of an appropriate design response, which can balance the functional needs of different users, enhance the sense of place and manage speed in a manner that does not rely on extensive regulatory controls and physically intrusive measure for enforcement.

The Design Manual provides a several number of examples that can assist designers in the creation of a safe road, including the incorporation of a continuous street-tree walls, pedestrian activity zones, horizontal and vertical deflection, narrow carriageways, on-street parking, tighter corner radii, and shared surfaces, among others

The Subject Development use several strategies in its design to manage movements:

- Streets with horizontal deflections in place of straight roads (see **Figure 7** above)

- Raised crossings are proposed at road intersections, with ramps provided in line with each access road from Southgreen Road (refer to Drawing No. *SOU-WMC-PH2-XX-DR-C-P0100 - Proposed Road Markings and Signage*).
- Reduced radii on corner to access to the shared to improve pedestrian crossing and reduce vehicle speed (refer to **Section 3.3.2**).
- On-street parking (refer to Traffic and Transport Assessment, Waterman-Moylan report No. 25-003r.003 *Traffic and Transport Assessment*, Section 10, which is included in the documentation package)
- Shared surface designed with a higher road level and a reduced road width. (refer to **Section 3.3.3**).

As can be seen in the aforementioned strategies, the risks of high vehicle speeds developing within Subject Development is minimal.

3.2 Streetscape

3.2.1 Material and Finishes

DMURS emphasises that the use of materials and finishes is one of the most defining elements of a street, particularly where it is used to define the levels of segregation and integration within a street. The material range can define space, calm traffic and improve legibility, reducing the need for barriers, signage and line marking in favour of texture and colour. Materials can be used to enhance the value of place and produce more attractive and cost-effective streets.

The Subject Site comprises a variety of materials and finishes, which are used to delineate the different functional areas. The shared surface (see **Figure 4** above) is constructed with a different material than the surrounding road surface and is designed to have the same elevation as the footpath (no kerb).

The internal junctions as well as the external access junctions have been designed as courtesy crossings with different surface material treatments. The intention is to alert drivers to a new condition and influence their behaviour and vehicle speeds.

In order to facilitate the crossing for pedestrians with visual limitations, it is proposed that tactile paving be integrated into the design.

3.3 Pedestrian and Cyclist Environment

3.3.1 Footways, Verges and Strips

DMURS indicates that a strong sense of enclosure and active street edges contribute to pedestrians' and cyclists' sense of security and comfort. In addition, it suggests that the provision of wider and better-quality walking facilities may result in an increase in walking. Well-designed footpaths are free of obstacles and wider enough to allow pedestrians to pass each other comfortably. In this regard, the Design Manual presents a guideline for the design of each area thought of as the footpath:

- Footway: is the area along which people walk. The minimum width for a footway is 1.8 metres. In areas of high population density and along streets with high traffic volumes, additional width must be provided to facilitate the passage of people in larger groups. **Figure 11** below illustrates the requisite space for pedestrians to pass each other comfortably, with reference to the levels of activity within a street.
- Verges: serve to provide a buffer between pedestrians and the vehicle traffic. The verges wide depend on the function of the street and the presence of on-street parking. The Design Manual has established that on arterial and link streets without on-street parking, a verge of 1.5-2.0m should be provided. In contrast, there is no minimum verge requirement for local roads. Where on-street parking is provided, a

verge (and change of kerb line) may be needed on approaches to junctions to enforce the visibility splay. In addition, a verge of a minimum of 0.3m should be provided in areas of perpendicular parking a verge should be provided. Finally, where cycle tracks are located adjacent to parking spaces, a verge should be provided.

- Strips: are spaces provided directly to the front of a building that may be occupied by activities generally associated with retail/commercial uses and may be incorporated into the private spaces of a dwelling.

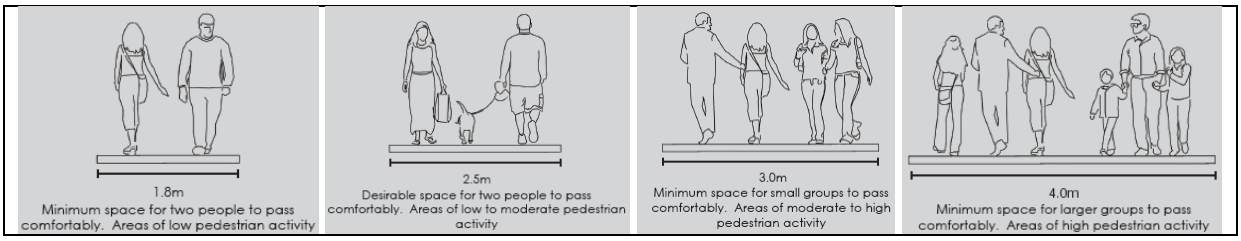


Figure 11 | *Spaces needed for pedestrian to pass each other*
(Source: Figure 4.34 – DMURS)

The Subject Development comprises a residential area, with no commercial uses proposed. In addition, it is proposed to be developed to the north of an existing residential area. The Subject Site also provides parking arrangements comprising both perpendicular and parallel on-street parking.

In light of the well-connected footpath network (see **Figure 12** below) and the characteristics of the surrounding area (refer to **Section 2.1** and see **Figure 5** above), the Subject Development is well positioned to support a safe, accessible, and convenient environment for both pedestrians and cyclists.

The proposed development features a network of interconnected footpaths, ensuring permeability throughout the site, as well as to the adjacent developments and the surrounding area.

All footpaths within the development are designed to be 2.0 metres wide, in accordance with Section 4.3.1 of the Design Manual for Urban Roads and Streets (DMURS), which recommends a minimum footpath width of 1.8 metres.

Additionally, the development offers well-connected pedestrian and cycle links to the surrounding area, including direct access to the existing school located to the east of the site through the provision of uni-directional cycle lanes either side of Southgreen Road and a 4.0m wide greenway from Southgreen Road to Old Road thus ensuring the vision of the local area plan is met.

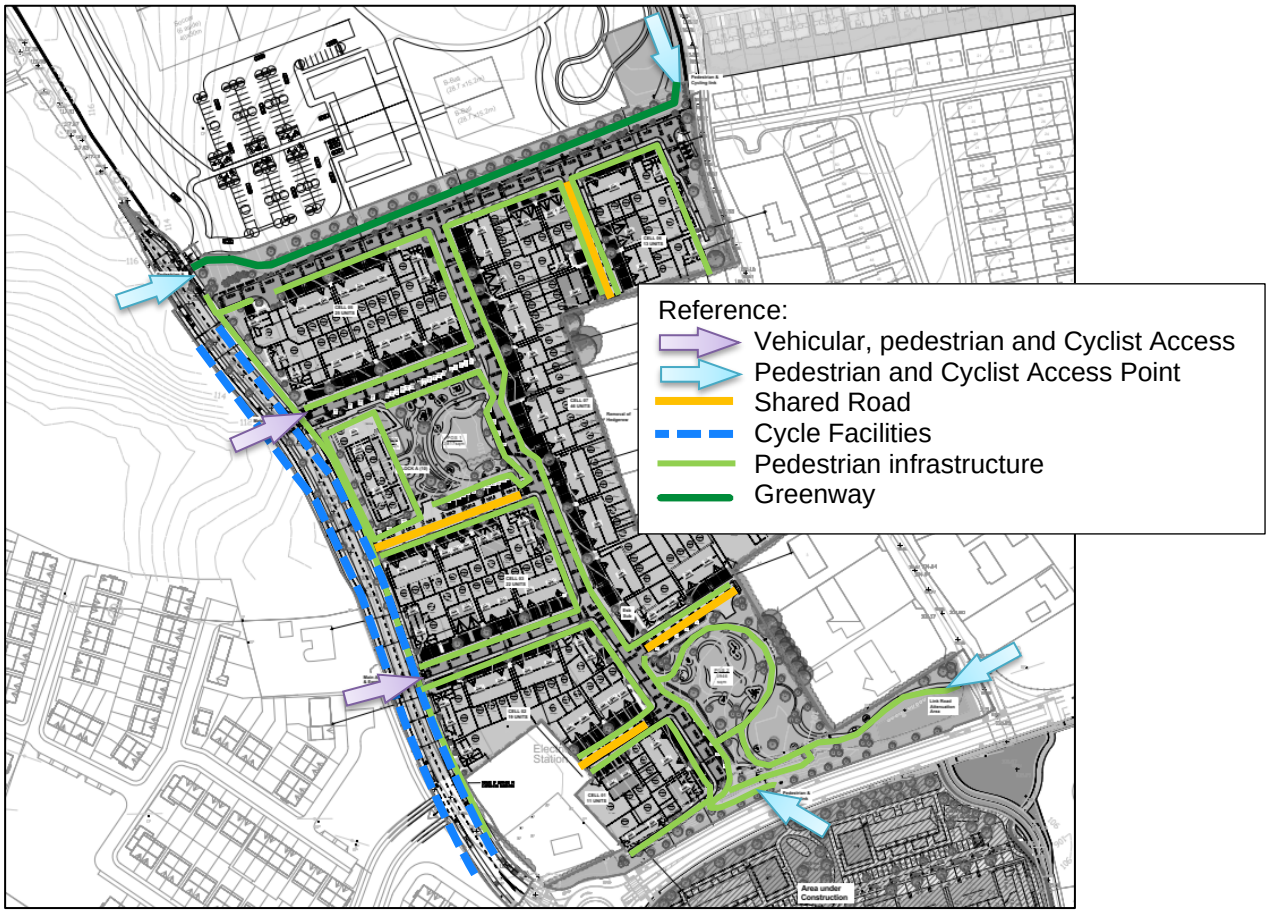


Figure 12 | *Pedestrian and Cycle Facility*

3.3.2 Corner Radii

DMURS indicates that the reduction of corner radii will markedly enhance the safety of pedestrians and cyclists at junctions. This is achieved by reducing the speed at which vehicles can turn corners and by increasing inter-visibility between users. Furthermore, it is essential to verify the swept path of the main vehicles that will utilise the streets. In this regard, designers must consider the following:

- On junctions between arterial and / or link streets, a maximum corner radius of 6m should be applied.
- Where turning movements occur from an arterial or link street into a local street, corner radii may be reduced to 4.5m.
- Where design speeds are low and movements by larger vehicles are infrequent, a maximum corner radius of 1-3m should be applied.
- In circumstances where there are regular turning movements by articulated vehicles, the corner radii may be increased to 9m.
- In instances where designers find difficulties in applying the aforementioned radii, they should consider the following: (i) the implementation of setback vehicular stop lines at signalised junctions, which would permit turning vehicles to traverse the enter line of the intersection street without conflicting with oncoming movements, and (ii) the removal of obstacles from corners to facilitate the passage of emergency vehicles.

Several self-regulating design features have been integrated into the Subject Development to promote traffic calming, including the implementation of 3.0–6.0 metre junction radii between link road and shared roads. Details are shown on the Waterman Moylan Consulting Engineer Drawings No. *SOU-WMC-PH2-XX-DR-C-P0110 Proposed Levels & Kerbing Layout Sheets* which is accompanying the documentation package

Furthermore, the Subject Site will be accessible for refuse vehicles. An AutoTrack analysis has been undertaken. Details of the AutoTrack layouts is shown on the Waterman Moylan Consulting Engineer Drawings No. *SOU-WMC-PH2-XX-DR-C-P0120 - Swept Path Analysis Refuse Vehicle*, which are accompanying the documentation package.

3.3.3 Pedestrianised and Shared Surfaces

DMURS has identified the implementation of pedestrianisation and shared space as an effective way of promoting place and providing a more enjoyable experience for pedestrians and cyclists. The pedestrianisation streets entail the segregation of pedestrians and cyclists from the flow of motorised traffic, whereas the shared surface streets represent an integrated space where pedestrians, cyclists and vehicles share the main carriageway.

The Subject Development comprises streets with footpaths on both side, streets with footpaths on one side and shared streets, as illustrated in **Figure 4** above. All shared roads have been designed with the objective of generating a safer environment, incorporating a differentiated rolling surface (in texture and level) that is easily identifiable by the drivers.

Drawing details can be found in the Waterman Moylan Drawing No. *SOU-WMC-PH2-XX-DR-C-P0111 - Typical Road Cross-Sections*, which are included in the documentation package.

3.3.4 Cycle Facilities

DMURS promotes cycling as a sustainable mode of transport and seeks to rebalance design priorities to promote a safer and more comfortable environment for cyclists. In this regard, the Design Manual follows the baseline described in the National Cycle Manual and refers to it in the design of cycle facilities.

DMURS highlights that on lightly trafficked / low speed streets, designers are generally directed to create shared streets where pedestrian, cyclist and motor vehicles share the carriageway. However, on busier / moderate speed streets, designers are generally directed to apply separate cycle lanes / cycle tracks.

The subject development included a total a total of 527 no. cycle parking spaces (517 no. for residential units and 10 no. for the creche facility) are provided. This provision includes 75 no. visitor spaces. Resident cycle parking is proposed in the form of secure bicycle store enclosures to the front of terraced units; on curtilage spaces to the rear of units with side access; and a bicycle store for apartment units. Visitor parking is proposed in the form of Sheffield stands.

Further information about the number of cycle parking spaces can be found in the Waterman Moylan Consulting Engineer Report No. *25-003r.003 Traffic and Transport Assessment*, which are accompanying the documentation package.

3.4 Carriageway Conditions

3.4.1 Carriageway Widths

As indicated by DMURS, narrow carriageways represent one of the most effective design measures for calming traffic. This is measured from the kerb to the kerb, from the outside line of a cycle lane, or from the edges of parking spaces.

The figure below, extracted from the design manual, illustrates various examples of width road.

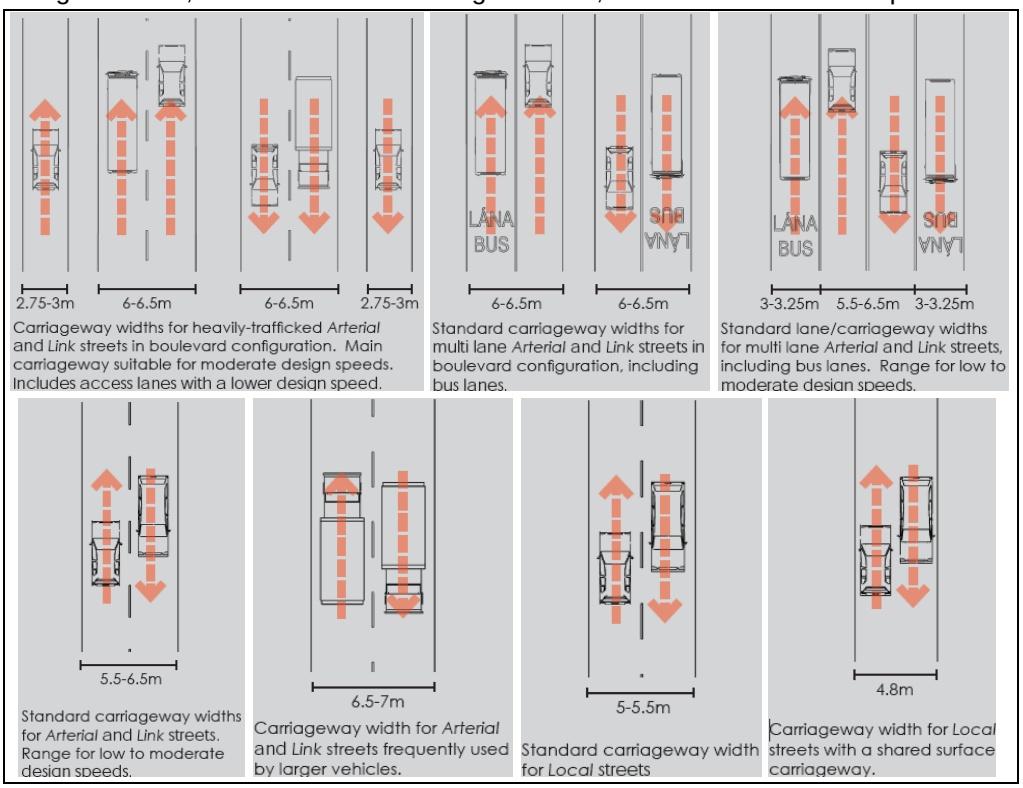


Figure 13 | *Carriageway widths*
(Source: Figure 4.55 – DMURS)

As described in **Section 2.2.1**, the Subject Development has been designed with low-speed internal roads providing access to car parking areas. These roads have been designed with carriageway widths of 6.0 metres. Shared roads are designed with a carriageway width of 5.5 metres. With the addition of all other traffic calming facilities, such as horizontal deflections, perpendicular and parallel parking and different material finishes throughout the road, it is expected that the proposed shared street will provide a safe and secure environment for pedestrians and cyclists.

The mentioned dimensions are consistent with the width of roads indicated in the DMURS. Furthermore, measurements are taken from the kerb to kerb or from the edges of parking spaces.

As indicated before, the subject site will be accessible for refuse vehicles. Details of the AutoTrack layout is shown on the Waterman Moylan Drawings No. *SOU-WMC-PH2-XX-DR-C-P0120 - Swept Path Analysis Refuse Vehicle*, which are accompanying the documentation package.

3.4.2 Forward Visibility

DMURS defines the term 'forward visibility' or 'forward sight distance' (FSD) as the distance along the street ahead which a driver of a vehicle can see. Furthermore, it is stated that the minimum level of forward visibility required for a driver to stop safely if an object enters their path is based on the Stopping Sight Distance (SSD), as illustrated in the figure below.

SSD STANDARDS

Design Speed (km/h)	SSD Standard (metres)
10	7
20	14
30	23
40	33
50	45
60	59

Forward Visibility

Design Speed (km/h)	SSD Standard (metres)
10	8
20	15
30	24
40	36
50	49
60	65

Forward Visibility on Bus Routes

Figure 14 | *Reduced SSD standards for application within cities towns and villages*
(Source: Table 4.2 – DMURS)

As described in **Section 2.2.1**, The internal roads within the Subject Development function as low-speed internal roads. The visibility design focuses primarily on the junctions connecting the development to the surrounding road network.

3.4.3 Visibility Splays

It is emphasised by DMURS that visibility splays are applicable to junctions of particular importance, where drivers are required to exercise their own discretion in determining the optimal moment to enter the junction.

The junction visibility splay is composed of two elements: the X distance, which is the distance along the minor arm, and the Y distance, which is the distance a driver exiting from the minor road can see to the left and right along the major arm. The former is gotten from the stop line, and a distance of 2.4 metres should be considered in the major case, while a distance of 2.0 metres may be used where vehicle speeds are slow and flows on the minor arm are low. The Y distance should correspond to the Stopping Sight Distances set out in **Figure 14** above. The methodology for measuring distances is illustrated in **Figure 15** below.

The Design Manual indicates that visibility splay should be kept clear of obstructions. However, objects that would not be large enough to wholly obscure a vehicle, pedestrian, or cyclist may be acceptable, provided that their impact on the overall visibility envelope is not significant.

Finally, the DMURS indicates that designers may have reservations about reducing visibility splay at junctions that experience higher traffic volumes at relatively moderate speeds.

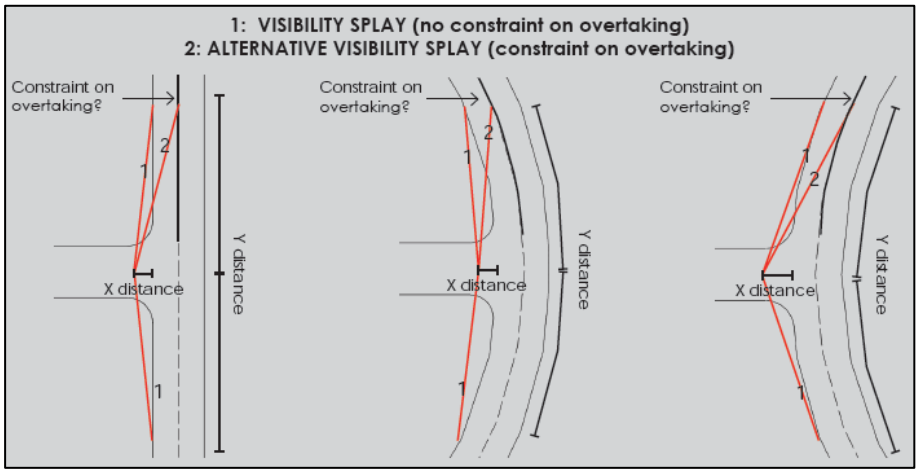


Figure 15 | *Visibility splay refers to an X and Y value*
(Source: Figure 4.63 – DMURS)

In order to facilitate pedestrian movements and enhance the safety of pedestrians at internal junctions, courtesy crossings have been designed with a change in the material surface of the street and vertical deflection.

It is anticipated that these uncontrolled junctions, situated in a low-speed street environment (as discussed in **Section 3.1.2** above), will function effectively without the need for further assessment.

Based on the information from **Figure 15**, and noting that the maximum speed within the internal road layout is 30 km/h, all internal roads require a visibility splay of 24 metres. Southgreen Road is identified as a link road with a posted speed limit of 60 km/h; therefore, the access road / Southgreen Road junctions have been assessed using a required sightline distance of 65 metres.

Details of the sightline's layouts are shown on the Waterman Moylan Drawings No's Details of the sightline's layouts are shown on the Waterman Moylan Drawings No. *SOU-WMC-PH2-XX-DR-C-P0115 - Proposed Visibility Splays*, which is included in the documentation package.

4. Conclusion

This Design Statement based on the Design Manual for Urban Roads and Streets (DMURS) has been prepared by Waterman Moylan as part of the planning documentation for a proposed residential development on lands at Southgreen, Co. Kildare.

The aforementioned statement illustrates how the proposals align with the objective outlined in DMURS, which aims to enhance street design in order to encourage individuals to opt for walking or public transportation over private vehicle use.

In light of the aforementioned considerations, it is our assessment that the proposed development is aligned with the standards set forth for the design of urban roads and streets as outlined in DMURS.

UK and Ireland Office Locations

