DMURS Statement of Consistency

Proposed Large-scale Residential Development Planning Application-no. 1 at Flemington Lane, Balbriggan, Co. Dublin.

August 2026

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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, BS EN ISO 14001: 2015)

Issue	Date	Prepared by	Checked by	Approved by
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Comments

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1. Introduction

1.1 Context

This Design Statement based on the Design Manual for Urban Roads and Streets (DMURS) has been prepared by Waterman Moylan on behalf of the Client, Lagan Homes, as part of a planning submission for a proposed Large-scale Residential Development at Flemington Lane, Balbriggan, Fingal, Co. Dublin.

The proposed large scale residential development (LRD) consists of 144no. dwellings in the form of 118no. houses and 26no. apartments in the following mix – 13no. 1-bed, 29no. 2-bed, 91no. 3-bed and 13no. 4-bed dwellings, and a single-storey childcare facility with play space, car parking and drop off area on Flemington Lane. All housing will be one or two-storey in height. The apartment buildings will be three-storey in height.

Three new vehicular accesses off Flemington Lane are proposed to serve the development. The proposal also provides for public open space including a Multi-Use Games Area (MUGA), communal open space associated with apartments, landscaping, boundary treatments, public lighting, car parking, motorcycle parking and bicycle parking and structures including an active travel hub and cycle route, bin storage structures, works to Flemington Lane itself including two pedestrian crossing points, undergrounding of ESB overhead lines, 2no. ESB substations, infrastructure services and all other associated site development works.

The schedule of accommodation is shown in the table below:

Typology	1 Bed	2 Bed	3 Bed	4 Bed	Total	GFA
House		16	91	13	**120**	
Duplex	13	13			**26**	
Crèche						**382**
Total	**13**	**29**	**91**	**13**	**146**	**382**

Table 1 | *Schedule of Accommodation*

The proposed development is part of the Flemington LAP lands which is divided in 4 areas, as detailed in **Section 2.3.2** below. To ensure a comprehensive and robust evaluation, this report will assess the traffic impact of the entire Flemington LAP lands.

1.2 Scope

The scope of this report is to identify the 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).

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 is bounded to the south by Flemington Lane, to the east by Flemington LAP lands, and to the north and west by open greenfield lands.

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

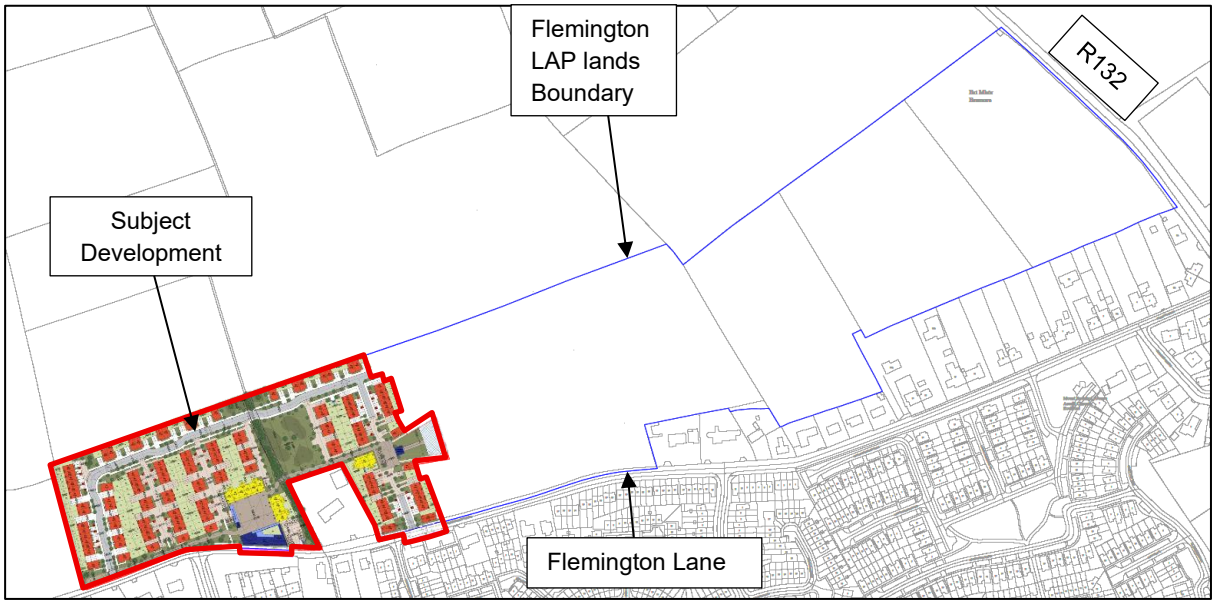

Figure 1 | *Site Location*

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.

In addition, an independent Quality Audit has been undertaken by a Roadplan, and the recommendations arising from that audit have been incorporated into the design of the proposed development where appropriate.

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 Development is located to the north of Flemington Lane and to the west of the R132. The Proposed Site has been developed with consideration given to both the existing and future road network (refer to **Section 2.3.1** below).

The strategic location allows access to the M1 motorway at Junction 6, within a journey time of less than a 5-minute drive via the existing road network, avoiding Balbriggan Town centre.

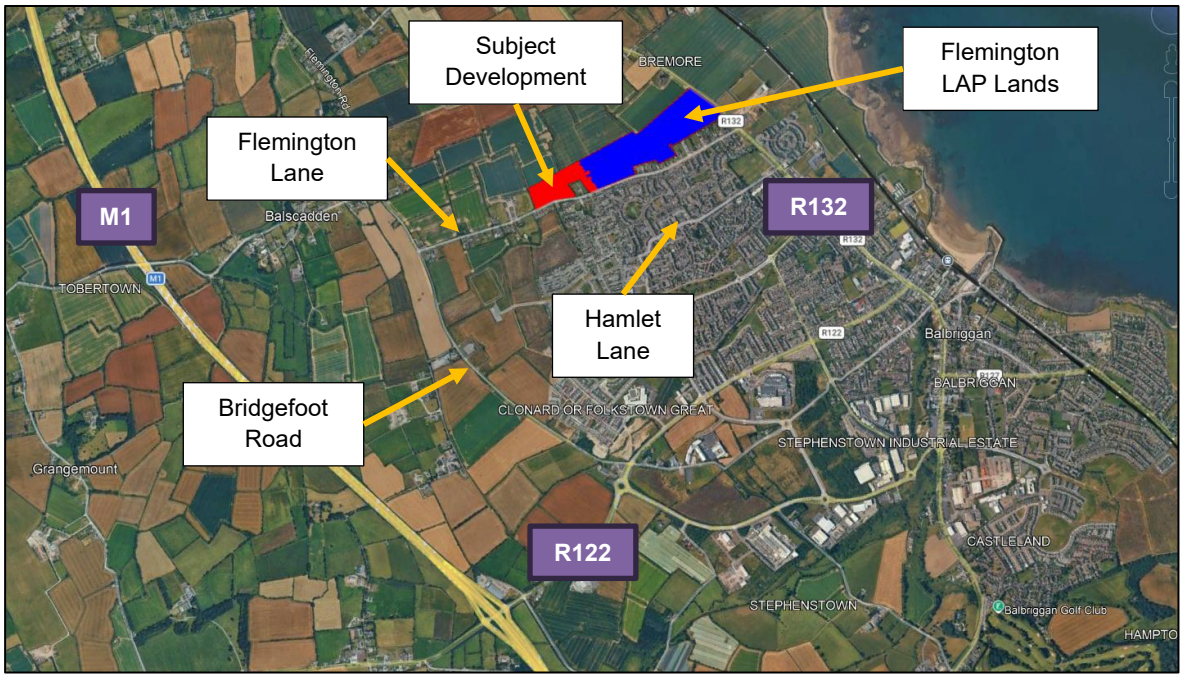

Figure 2 | *Existing Road Network*
(Source: Google Earth)

The Subject Site has road access off Flemington Lane to the south of the development.

Flemington Lane is a single carriageway road that runs in an east-west direction and forming a part of the southern boundary of the subject site. Pedestrian facilities are located along the southern side of the road between Flemington Park and the R132. There is pedestrian facility along the northern side along 400 metres from the R132. Flemington Lane is subject to a speed limit of 50 km/h between the R132 and Flemington Park.

Clonard Rd. / Bridgefoot Road (L1130) is characterised as a rural access road. It extends from its junction with the R122 Regional Road (Harry Reynolds Road) and runs through the Flemington residential area, serving local housing developments and connecting with a network of internal estate roads.

The R132 is situated east of the Subject Site. The R132 is a regional distributor road and forms the spine of Balbriggan Town Centre. It travels from Dundalk in the north to Dublin City in the south. The R132 is subject to a speed limit of 50 km/h in Balbriggan Twon Centre area.

The R122 is a regional Road in Balbriggan serving the western and southern parts of the town. It facilitates connectivity towards Naul to the south and links with other strategic routes, including access towards the M1 Motorway. The road is typically characterised by a two-lane carriageway with footpaths and, in places, cycle facilities.

Hamlet Lane is a two-way road that runs in an east-west alignment from the R132 through a residential neighbourhood. It runs for ca. 1.6 kilometres in length and connects to the R132 via a priority-controlled junction. Its carriageway width is c.6 metres. Footpaths and cycle tracks are provided on both sides of the carriageway. A 50 km/ h speed limit is in operation on this road and public street lighting is present.

The M1 Motorway provides key road access to Dublin City and Belfast, as well as several other large settlements located along Dublin – Belfast Economic Corridor.

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)*

The development will be served by the existing road infrastructure with three access points from Flemington Lane, a link road. The access roads are shown in detail in **Figure 4** below.

The internal road layout consists of local streets designed to provide access to residents. In addition, a tie-in is proposed to the east to facilitate access to the balance of the LAP lands.

The internal link street is designed as a low-speed route with a posted speed limit of 30 km/h.

The access roads are shown in detail in **Figure 4** below.

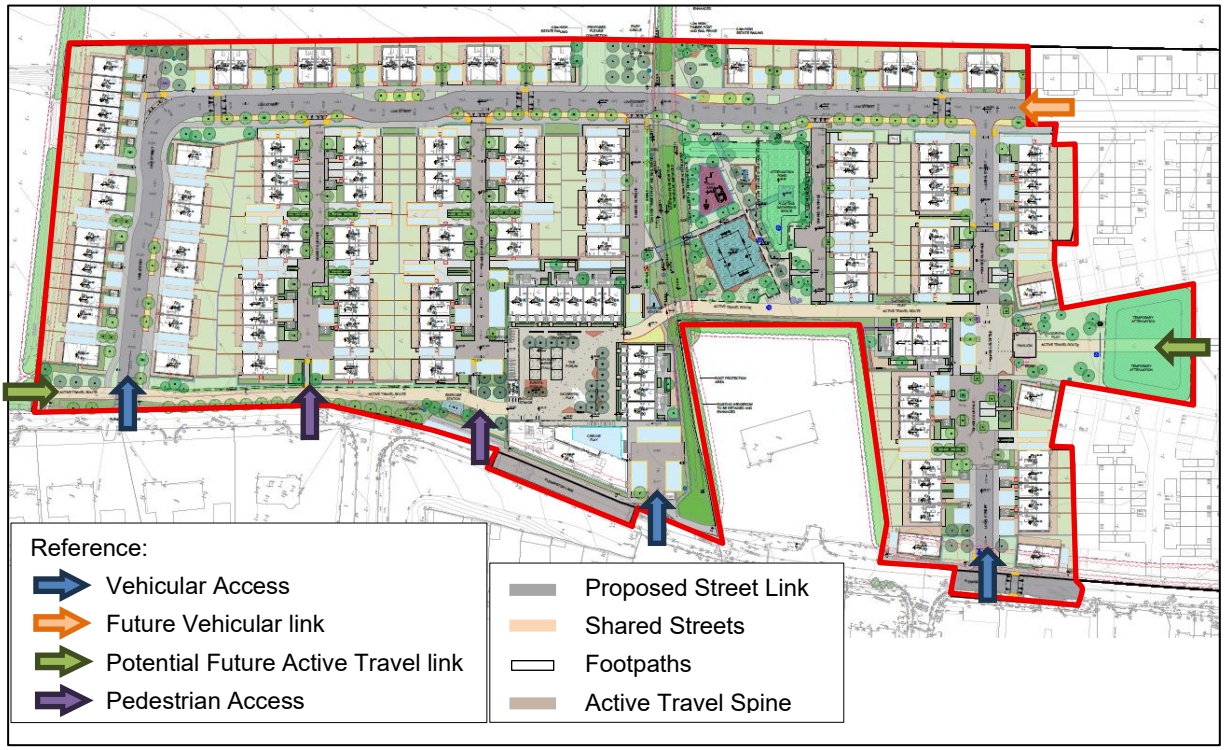

Figure 4 | *Subject Development – Road Hierarchy and street layout*

The figure above shows the internal roads of the Subject Development. In general, the internal roads are designated as local streets.

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.

According to the Fingal Development Plan 2023–2029 (FDP), the subject development is located within an area zoned with the objective “RA – Residential Area: to provide for new residential communities, subject to the provision of the necessary social and physical infrastructure”. In addition, the Plan indicates that

further detail should be obtained from the relevant Local Area Plan. **Figure 5** below is taken from Balbriggan - Sheet No. 4 of the Fingal Development Plan 2023 - 2029.

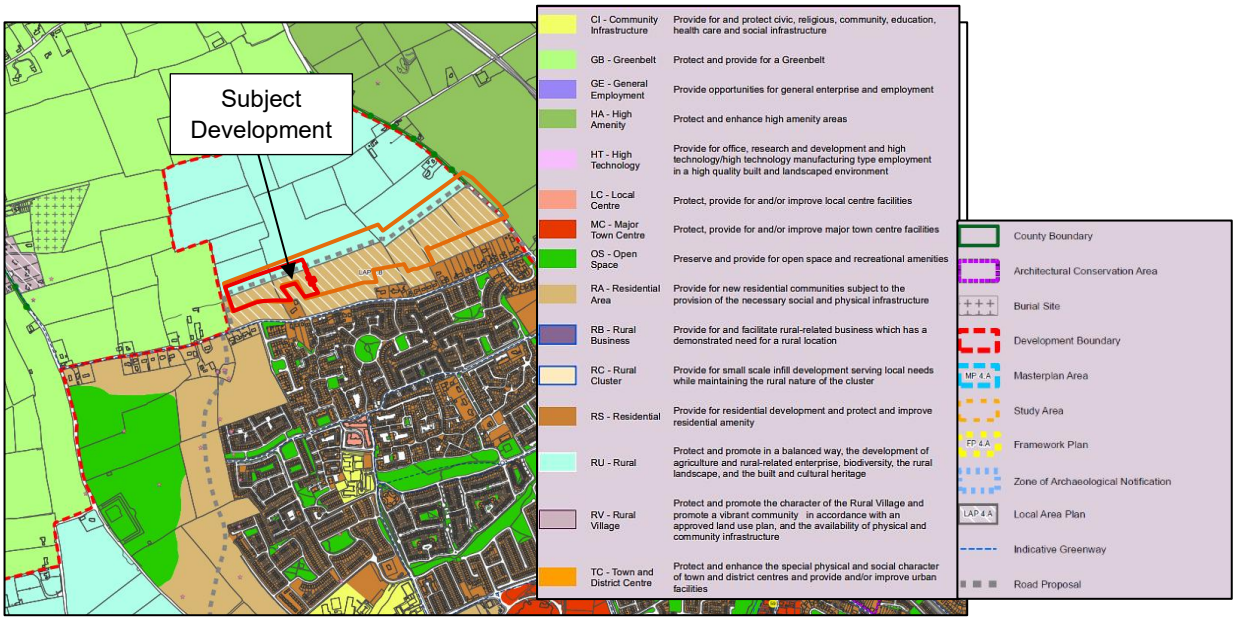

Figure 5 | *Site Location and Zoning*
(Source: Sheet No. 4 of the FDP 2023-2029)

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.

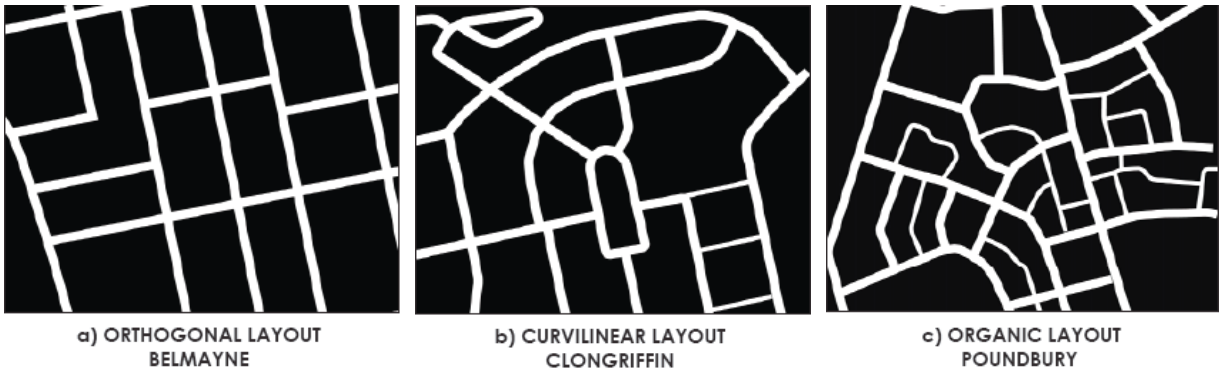

Figure 6 | *Permeable Street layouts (Source: Figure 3.8 – DMURS)*

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".

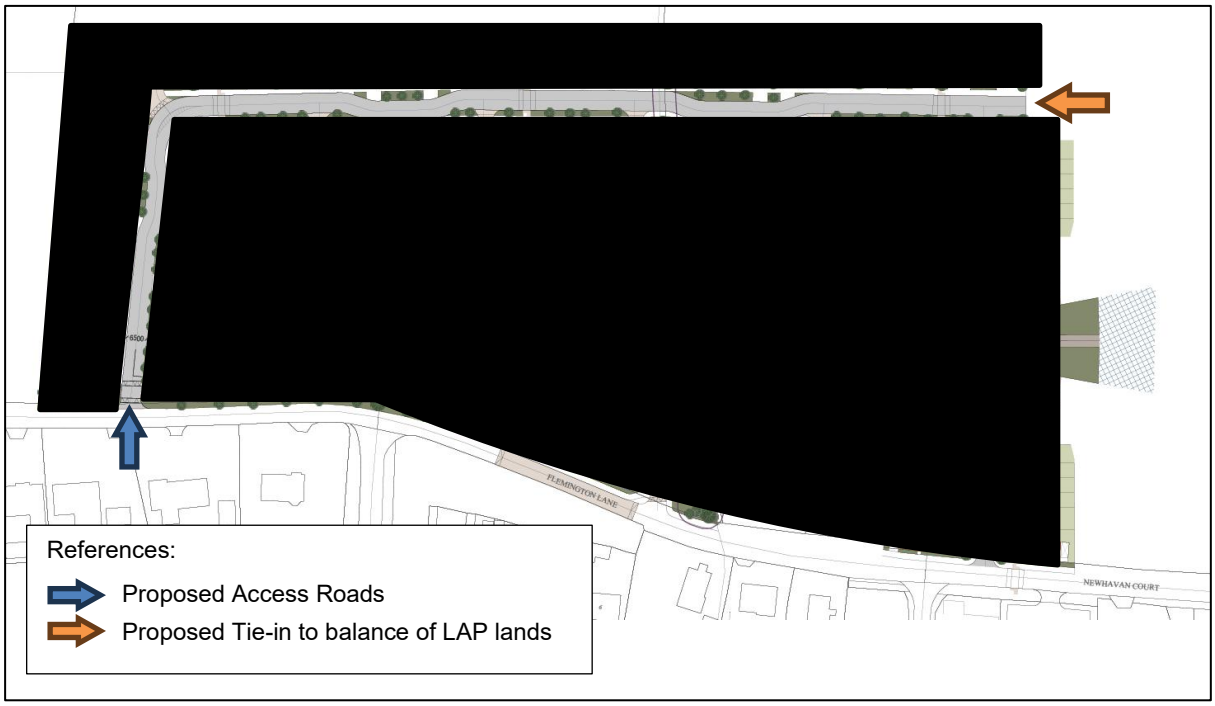

Figure 7 | *Subject Development – Street Layout*

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.

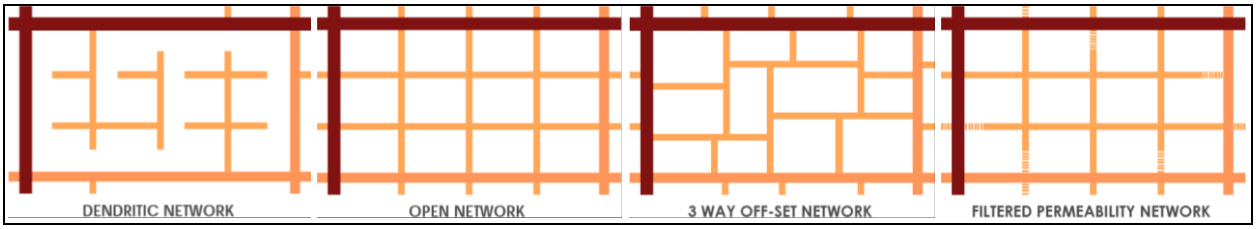

Figure 8 | *Type of Street Network (Source: Figure 3.22 – DMURS)*

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.

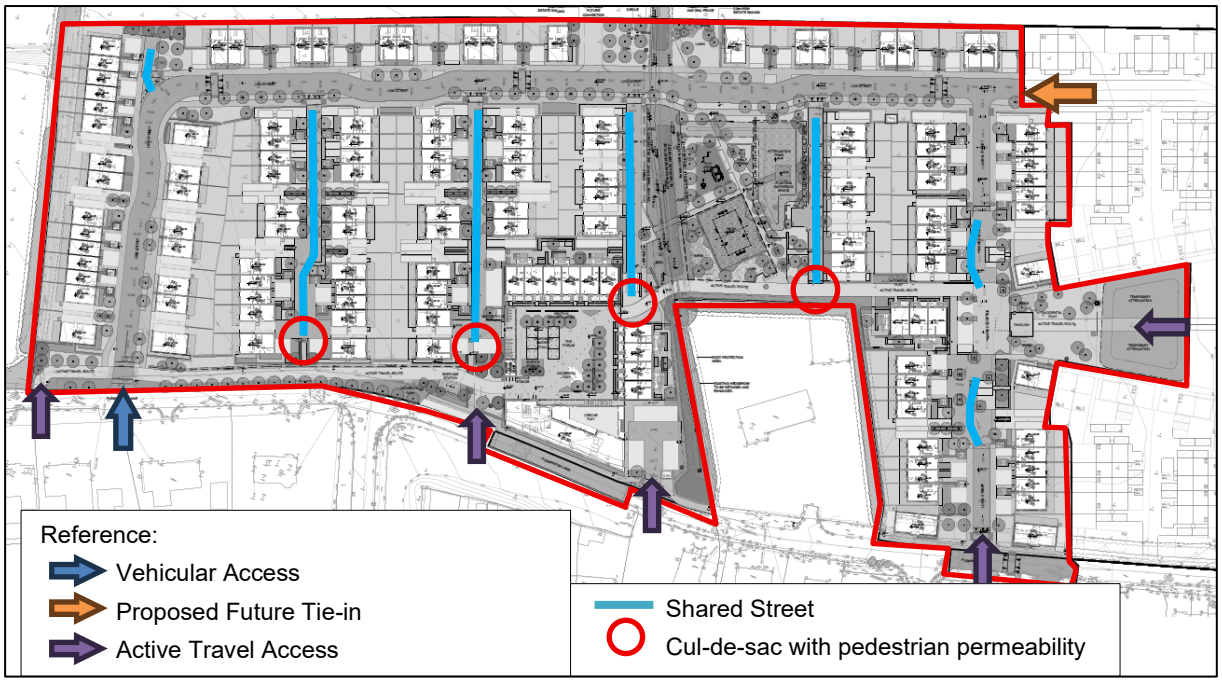

Figure 9 | *Subject Development – Street Network*

The developed has been designed with the following considerations:

- The Subject Site is located within an existing residential area, as illustrated in **Figure 2** above. It is worth noting that this area will be further developed when the balance of the LAP lands be completed.
- The site is currently a greenfield site, bounded to the south by existing residential areas, to the east, west and north by greenfield lands.
- Most streets within the development are residential access roads as was indicated in **Section 2.2.1** above.

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.

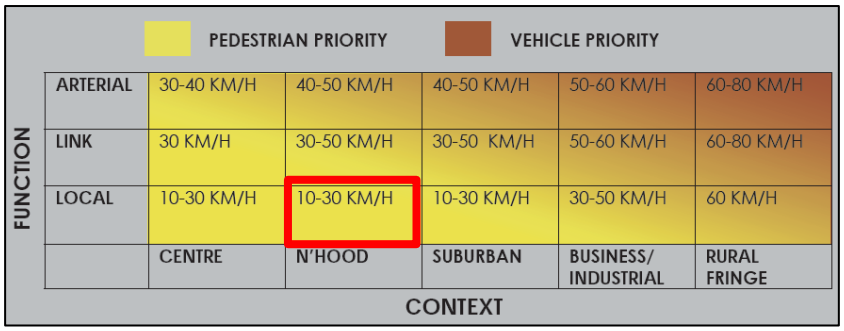

Figure 10 | *Design speed selection*
(Source: Table 4.1 – DMURS)

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. FLE-WMC-CA4-ZZ-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 4** above)

- Raised crossings are proposed at road intersections, with ramps provided in line with each access road from Flemington Lane (refer to Drawing No. CLGD-WM-ZZ-XX-DR-C-P101, *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**).
- In-cortile car parking (refer to Traffic and Transport Assessment, Waterman-Moylan report No. 25-107r.004 *Traffic and Transport Assessment*, Section 9, 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**) 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.

3.2.2 Self-Regulation Streets

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

- Streets with horizontal deflections in place of straight roads (see **Figure 11** above)
- Raised tables are proposed along the Link Street at key desire-line locations to facilitate pedestrian movement throughout the site. In addition, in response to the LRD Opinion, which identified the need for improvements along Flemington Lane to enhance walking and cycling connectivity through the provision of controlled crossing facilities and appropriate traffic-calming measures, the proposed

development includes raised tables at two locations along Flemington Lane: adjacent to the proposed crèche and close to the eastern access. These raised tables serve a dual function, acting as traffic-calming measures while also providing safe and convenient pedestrian crossing points.

- Reduced radii on corner to access to the shared to improve pedestrian crossing and reduce vehicle speed (refer to **Section 3.3.2**).
- Shared surface designed with a higher road level and a reduced road width. (see **Figure 11** above).

Given the self-regulating measures outlined above, the risk of excessive vehicle speeds developing within the Subject Development is considered to be minimal. The figure below illustrates the location of each proposed measure.

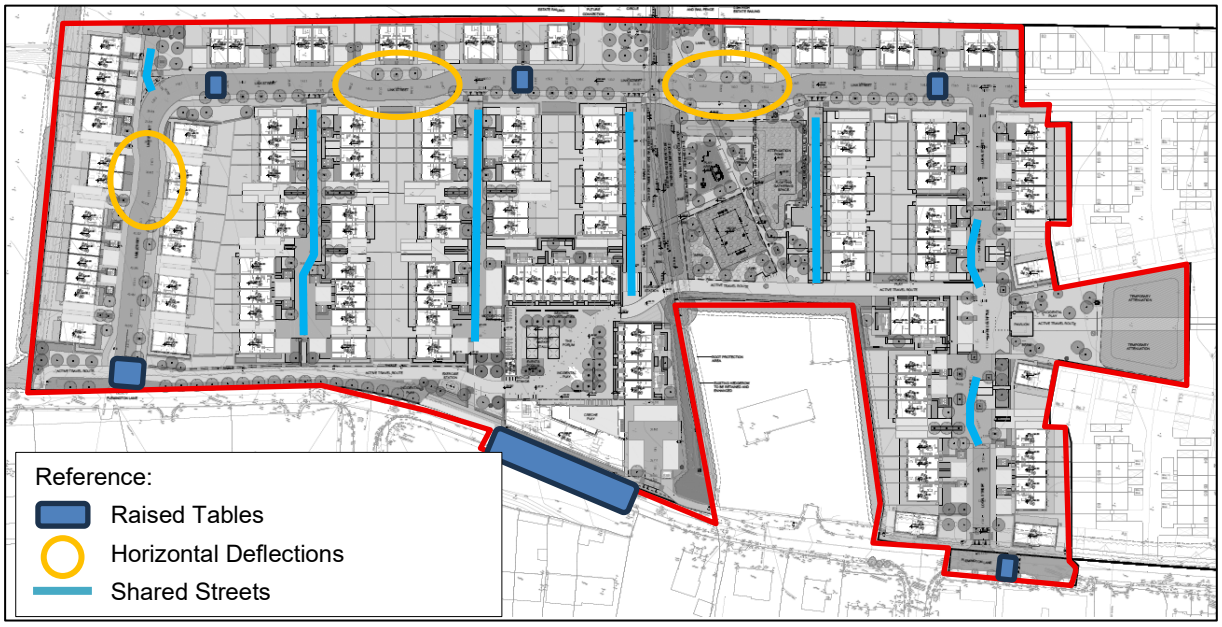

Figure 11 | *Subject Development – Self-Regulation Street Measures*

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 12** 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.

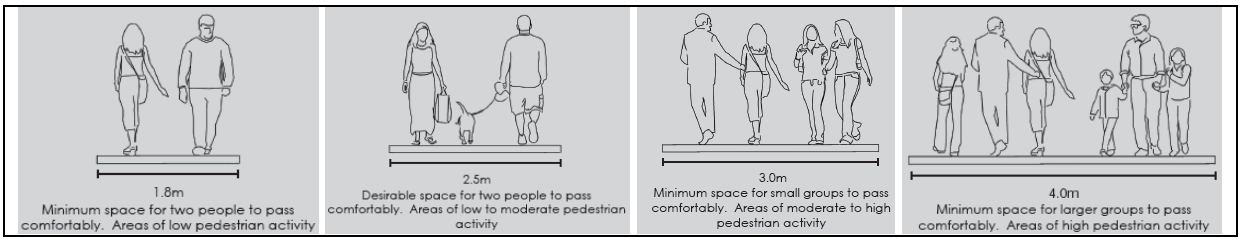

Figure 12 | *Spaces needed for pedestrian to pass each other*
(Source: Figure 4.34 – DMURS)

The Proposed Development incorporates pedestrian footpaths throughout the site on both sides of the Link Street, providing connections between all residential units, communal open spaces, and the wider pedestrian network. These footpaths have been designed with a minimum width of 2.0 m. In general, landscaped verges are provided between the carriageway and footpaths to create a buffer between pedestrians and vehicular traffic. These verges range in width from 1.7 m to 2.0 m.

In addition, several pedestrian crossing facilities are proposed along the Link Street at key desire-line locations to facilitate pedestrian movement throughout the site. These crossings are provided on raised tables, which will assist in maintaining low vehicle speeds and enhancing pedestrian safety.

Shared vehicular-pedestrian streets are proposed to provide access to the residential dwellings.

Variable-width landscape strips have been incorporated in front of the dwellings to provide a planting buffer between the buildings and the footpaths, enhancing the streetscape and improving the pedestrian environment.

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.

The proposed site includes 3.0-metre junction radii between Link Road and shared streets, as is illustrated in **Figure 13** below.

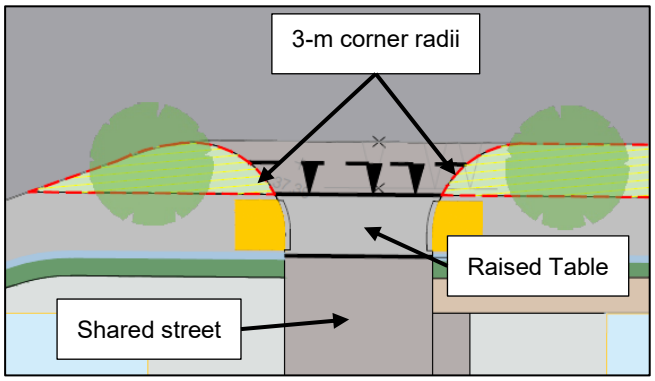

Figure 13 | *Subject Site – Internal junction corner radii*

In addition, the proposed Link Road has been assessed to ensure that it can accommodate any future public transport service. Accordingly, additional carriageway width has been provided through the bend to improve vehicle manoeuvrability and enhance road safety, as shown in **Figure 14** below.

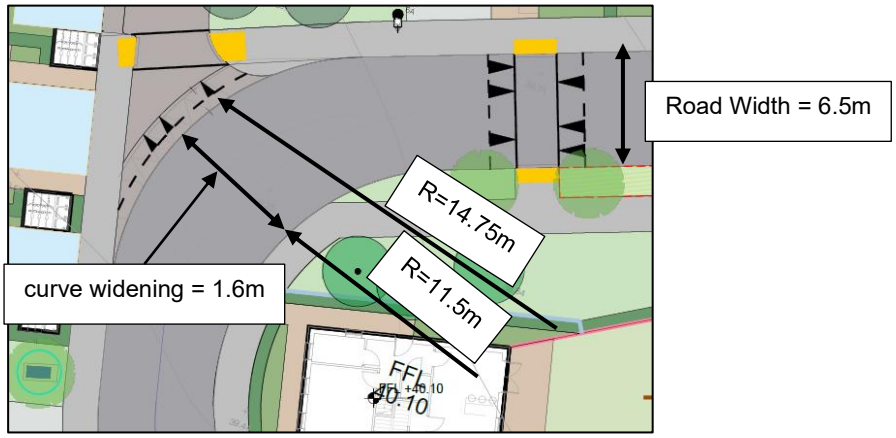

Figure 14 | *Subject Site – Proposed Localised widening at the bend*

Details are shown on the Waterman Moylan Consulting Engineer Drawings No *FLE-WMC-CA4-ZZ-DR-C-P0111-P0113 Proposed Levels & Kerbing Layout Sheets* which is accompanying the documentation package.

The proposed development will be accessed via a priority-controlled T-junction at Flemington Lane / new Link Street junction, as shown in the figure below. The Proposed Development includes 3-metre junction radii and a raised table in order to reduce the vehicular speed.

The Subject Site will be accessible for refuse vehicles. An AutoTrack analysis has been undertaken. Details of the AutoTrack layout is shown on the Waterman Moylan Consulting engineer Drawing No. FLE-WMC-CA4-ZZ-DR-C-P0116 Swept Path Analysis Refuse Vehicle, which are accompanying the documentation package.

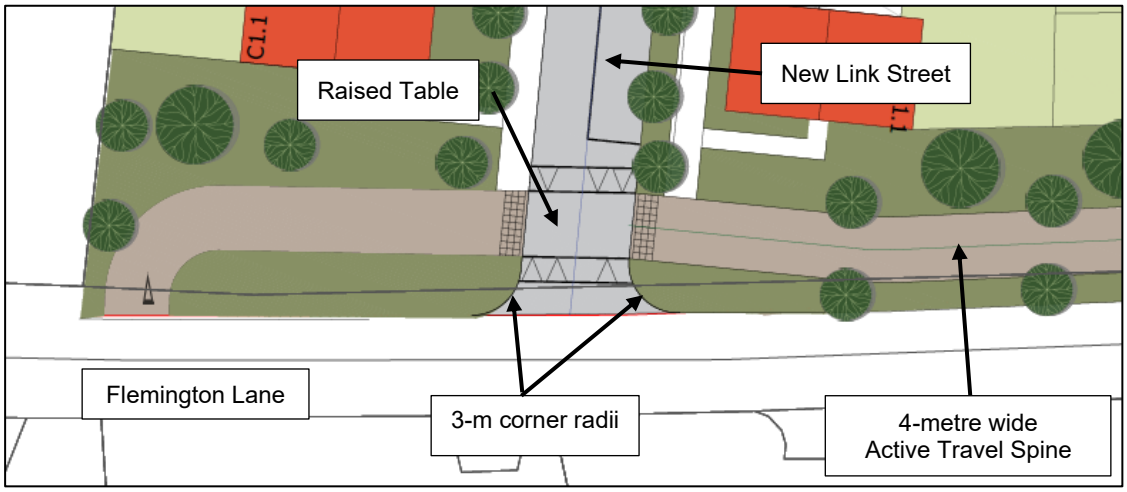

Figure 15 | *Proposed Road upgrade – Western Access Road*

Furthermore, the junction area has been designed to accommodate a future upgrade of the junction in accordance with the road hierarchy established under the Flemington LAP. The upgrade is intended to be delivered upon completion of the new Link Street, which will provide a connection between Flemington Lane and the R132. The upgraded junction will facilitate vehicular access to the Link Street in accordance with the Flemington LAP objectives, under which Flemington Lane is intended to function as a local access road only.

The junction has been designed to accommodate a future public transport service operating along the Link Street.

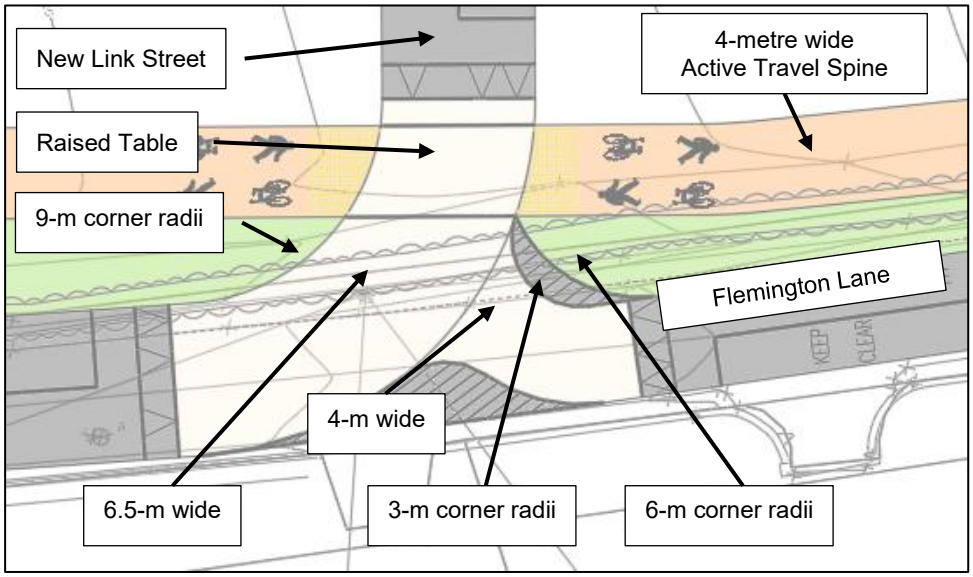

Figure 16 | *Proposed Road upgrade – Western Access Road*

As shown in the figure above, the corner radii have been increased to accommodate vehicular movements, and an extended raised table has been incorporated to reduce vehicle speeds. The eastern access to Flemington Lane has been reduced to 4.0 m in width to limit vehicular use and reinforce its function as access streets for residents along its extension.

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 *FLE-WMC-*

CA4-ZZ-DR-C-P0116 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.

Pedestrian footpaths are provided throughout the development on both sides of the Link Street, connecting all residential units to communal open spaces and the wider pedestrian network. These footpaths have been designed with a minimum width of 2.0 m.

In addition, several pedestrian crossing facilities are proposed along the Link Street at key desire-line locations to facilitate pedestrian movement throughout the site. These crossings are provided on raised tables, which will assist in maintaining low vehicle speeds and improving pedestrian safety.

Internal local streets, designed as shared surface environments for pedestrians and vehicles, are proposed to provide access to residential properties. These streets are proposed as shared surfaces, incorporating a vehicular ramp at each access point. The streets comprise a 6.0 m wide shared surface, consisting of a 4.8 m carriageway and a 1.2 m pedestrian refuge. A distinct paving material and finish will differentiate these streets from the Link Street. Fully embedded kerbs are also incorporated within the street surface. Drawing details can be found in the Waterman Moylan Drawing No. FLE-WMC-CA4-ZZ-DR-C-P0135 Typical Road Cross-Sections, which are included in the documentation package.

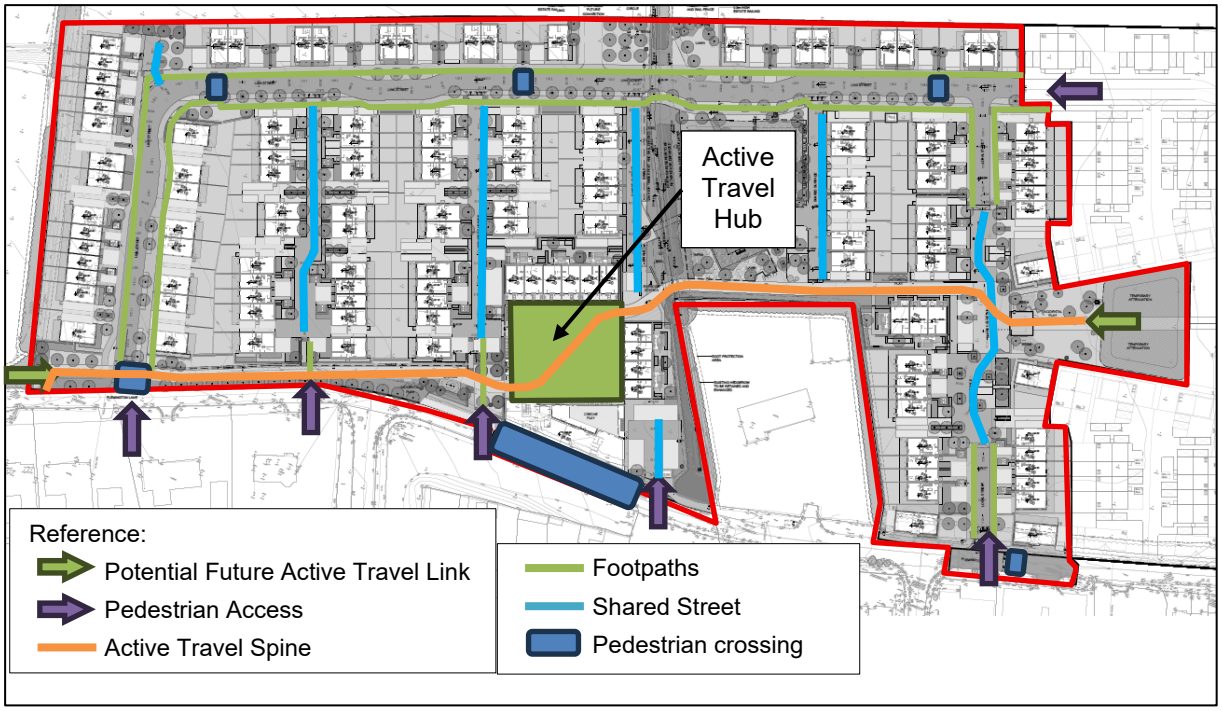

Figure 17 | *Subject Development – Pedestrian facilities*

The development includes a 4.0 m wide shared Active Travel Spine in accordance with the Flemington Local Area Plan. This facility begins at Flemington Lane, to the west of the Flemington Lane/New Link Street junction, and extends across the site in a west-east direction. In line with the Flemington LAP, the

Active Travel Spine will be extended towards the R132 with the future extension of the residential developments along the LAP, forming part of the principal pedestrian and cycle route through the LAP lands.

In addition, an Active Travel Hub is proposed which will enhance the public realm and serve as a focal point for both residents of the proposed development and the surrounding area

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.

As indicated above, the development includes a 4.0 m wide shared Active Travel Spine in accordance with the Flemington Local Area Plan. This facility begins at Flemington Lane, to the west of the Flemington Lane/New Link Street junction, and extends across the site in a west-east direction. In line with the Flemington LAP, the Active Travel Spine will be extended towards the R132 with the future extension of the residential developments along the LAP, forming part of the principal pedestrian and cycle route through the LAP lands.

In addition, an Active Travel Hub is proposed which will enhance the public realm and serve as a focal point for both residents of the proposed development and the surrounding area

For the proposed 146 No. residential units, a total of 465 No. bicycle parking spaces are proposed, comprising 396 No. spaces designated for long-stay residential parking, 13 No. visitor spaces located in proximity to the apartment units, 38 No. visitor spaces distributed throughout the Subject Site and the Active Travel Hub, and 18 No. spaces designated for the crèche. In addition, the crèche is provided with 15 scooter parking spaces.

Further information about the number of cycle parking spaces can be found in the Waterman Moylan Consulting Engineer Report No. *24-007r.004 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.

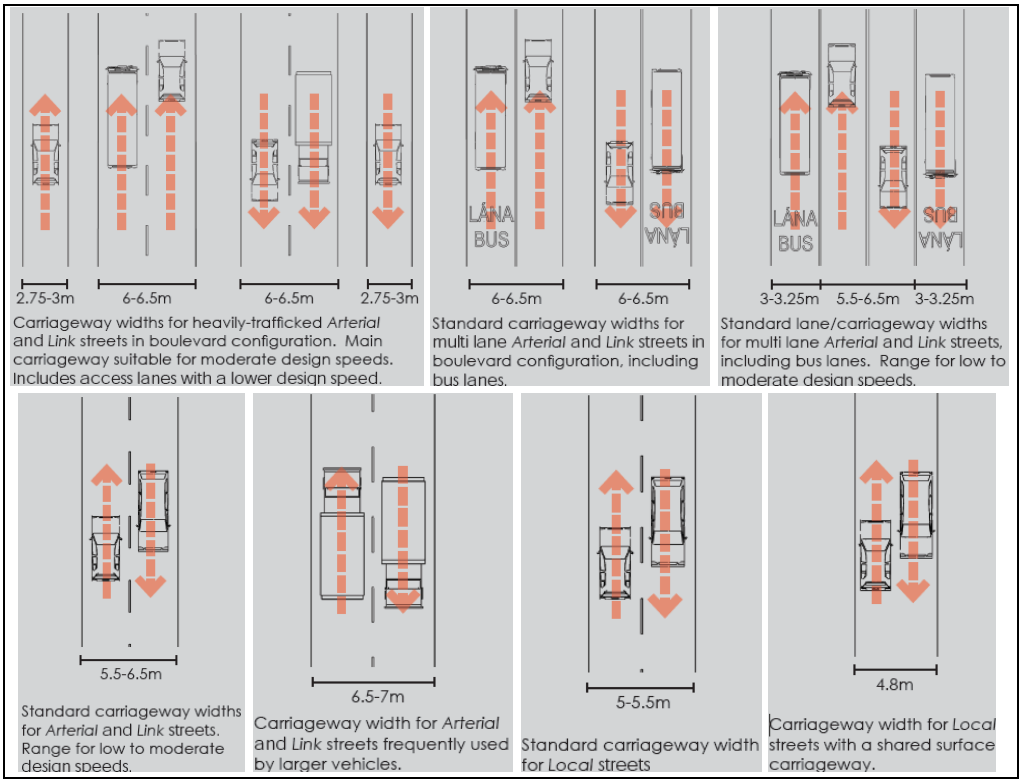

Figure 18 | *Carriageway widths*

(Source: Figure 4.55 – DMURS)

The Proposed Development includes a Links Street designed with carriageway widths of 6.0 metres. Shared roads are designed with a carriageway width of 4.8 metres, complemented by a 1.2-metre-wide pedestrian refuge along the shared road.

In addition, the proposed Link Road has been assessed to ensure that it can accommodate any future public transport service. Accordingly, additional carriageway width has been provided through the bend to improve vehicle manoeuvrability and enhance road safety, as shown in **Figure 14** above.

The Proposed Development will be accessible to refuse collection vehicles and fire tenders. Swept path analysis has been undertaken to demonstrate that these vehicles can safely manoeuvre throughout the site and access all required areas. Details of the AutoTRACK analysis are provided on Waterman Moylan Drawing No. FLE-WMC-CA4-ZZ-DR-C-P0116, Swept Path Analysis Refuse Vehicle, which accompanies the planning 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 19 | *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 access routes to car parking areas. 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 19** above. The methodology for measuring distances is illustrated in **Figure 20** 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.

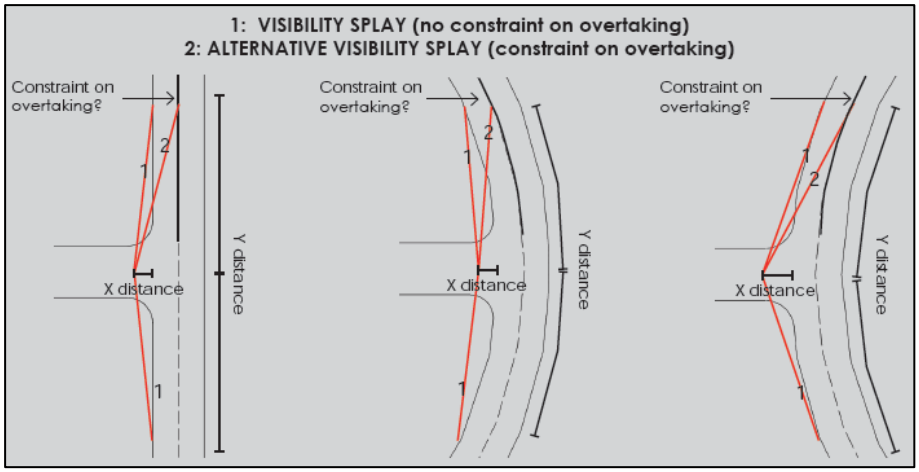

Figure 20 | *Visibility splay refers to an X and Y value*
(Source: Figure 4.63 – DMURS)

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 20**, 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. Flemington Lane is identified as a link road with a posted speed limit of 50 km/h; therefore, the access road / Flemington Lane junctions has been assessed using a required sightline distance of 49 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 *FLE-WMC-CA4-ZZ-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 on behalf of the Client, Lagan Homes, as part of a planning submission for a proposed Large-scale Residential Development comprising 146-no. residential units at Flemington Lane, Balbriggan, Fingal, Co. Dublin.

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