PINNACLE
CONSULTING ENGINEERS

PROPOSED RESIDENTIAL DEVELOPMENT ON OLDCOURT LAP LANDS.

PIN-RP-00-C003-V2

TRAFFIC AND TRANSPORT ASSESSMENT

- BUILDING INFORMATION MODELLING (BIM)
- CIVIL DESIGN & ENGINEERING
- DUE DILIGENCE
- OFFSHORE & ONSHORE ENGINEERING
- PRE-DEVELOPMENT
- STRUCTURAL ENGINEERING
- TRANSPORTATION & HIGHWAYS

DOCUMENT CONTROL SHEET

Project Name	Oldcourt LRD					
Document Title	DMURS Statement of Compliance					
Document Number	PIN-RP-00-C004-V1					
This Document Comprises	DCS	TOC	Text	List of Tables	List of Figures	No of Appendices
	1	1	5	0	0	1

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APPROVALS

	Name	Position	Date
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Reviewed by	Ronan Kearns	Associate Transportation Planner	02/09/2024
Approved by	James Mayer	Director	02/09/2024

REVISIONS

Revision By	Date	Context
V1	25/06/2024	Draft
V2	02/09/2024	Issued for planning

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1 INTRODUCTION

1.1 Introduction

This Statement of Compliance with DMURS has been prepared by Pinnacle Consulting Engineers as part of planning application to South Dublin County Council.

Capami Ltd. intends to apply for permission for a Large-scale Residential Development on a site measuring c.20.3Ha, located in the townlands of Bohernabreena, Oldcourt, and Killininny, Dublin 24. The development site is located to the east of Bohernabreena Road, north and east of Bohernabreena cemetery, south and south-east of St. Anne's GAA club, south and south-west of the Dodderbrook residential estate, west of the Ballycullen Gate residential development (currently under construction) and west of Oldcourt Road (the R113).

The proposed development consists of 523 no. residential units comprised of 253 no. 2, 3 & 4 bed detached, semi-detached and terraced houses, 208 no. 1, 2 & 3 bed duplex units in 20 no. 2 & 3 storey blocks, and 62 no. 1, 2 & 3 bed apartments in 4 no. 3 & 3-4 storey blocks, along with a 2-storey childcare facility of c. 457sq.m.

Private amenity space for the residential units is provided in the form of rear gardens for houses and ground floor terraces / upper floor balconies for apartments and duplex units. The proposed development provides for c. 7.38Ha of public open space and c.4,797 sq.m of communal open space associated with proposed residential units.

Vehicular access to the development will be via 4 no. access points, as follows: (i) from the west of the site via 2 no. accesses located off Bohernabreena Road, (ii) from the north of the site via 1 no. access at Dodderbrook Place, and (iii) from Oldcourt Road (the R113) to the east, via adjoining residential development. The proposed development includes for pedestrian and cyclist connections and accesses to adjoining lands to the north, east and west, and includes for cycling and pedestrian routes and infrastructure throughout the development.

The proposed development also includes the demolition of existing buildings / structures on the site (c.3,800sq.m), hard & soft landscaping, boundary treatments, SuDs features, drainage infrastructure, services infrastructure, bin stores, bicycle stores, car parking (including EV parking facilities), bicycle parking, public lighting etc. and all associated site development works.

The site location is shown in Figure 1.

In order to complete this report, Pinnacle Consulting Engineering has referred to the following documents:

- Design Manual for Urban Road and Streets
- South Dublin County Development Plan 2024-2028

Figure 1: Site Location

For the exact planning boundary refer to the Architect's drawings.

It is proposed to develop this site based on the schedule of accommodation illustrated in the table below.

Unit Type	No. of Units
Apartments	
1 bed / 2-person Apartment	24
2-bed / 3-person Apartment	6
2-bed / 4-person Apartment	25
3-bed / 5-person Apartment	7
Total Apartments	62
Duplex	
1-bed / 2-person Duplex	27
2-bed / 4-person Duplex	76
3-bed / 5-person Duplex	103
Total Duplexes	206
Houses	
2-bed House	61
3-bed House	160
4-bed House	34
Total Houses	255
Overall Total	523
Creche	457 sq. m

Table 1 Proposed Land Uses

2 DMURS OBJECTIVES

2.1 Introduction

Based on the approach recommended by DMURS, the following design principles have focused on the following key components of this development:

1. Site access/junctions
2. Cyclists
3. Pedestrians
4. fire tender access
5. Visibility splays
6. Multifunctional streets
7. Multidisciplinary approach to design

2.2 Site access/junctions

Based on Section 4.3.3 Corner Radii, reduced corner radii and carriage widths promote lower speeds throughout the development. These have been detailed with Corner Radii in accordance with DMURS.

The relevant illustration from DMURS is illustrated below.

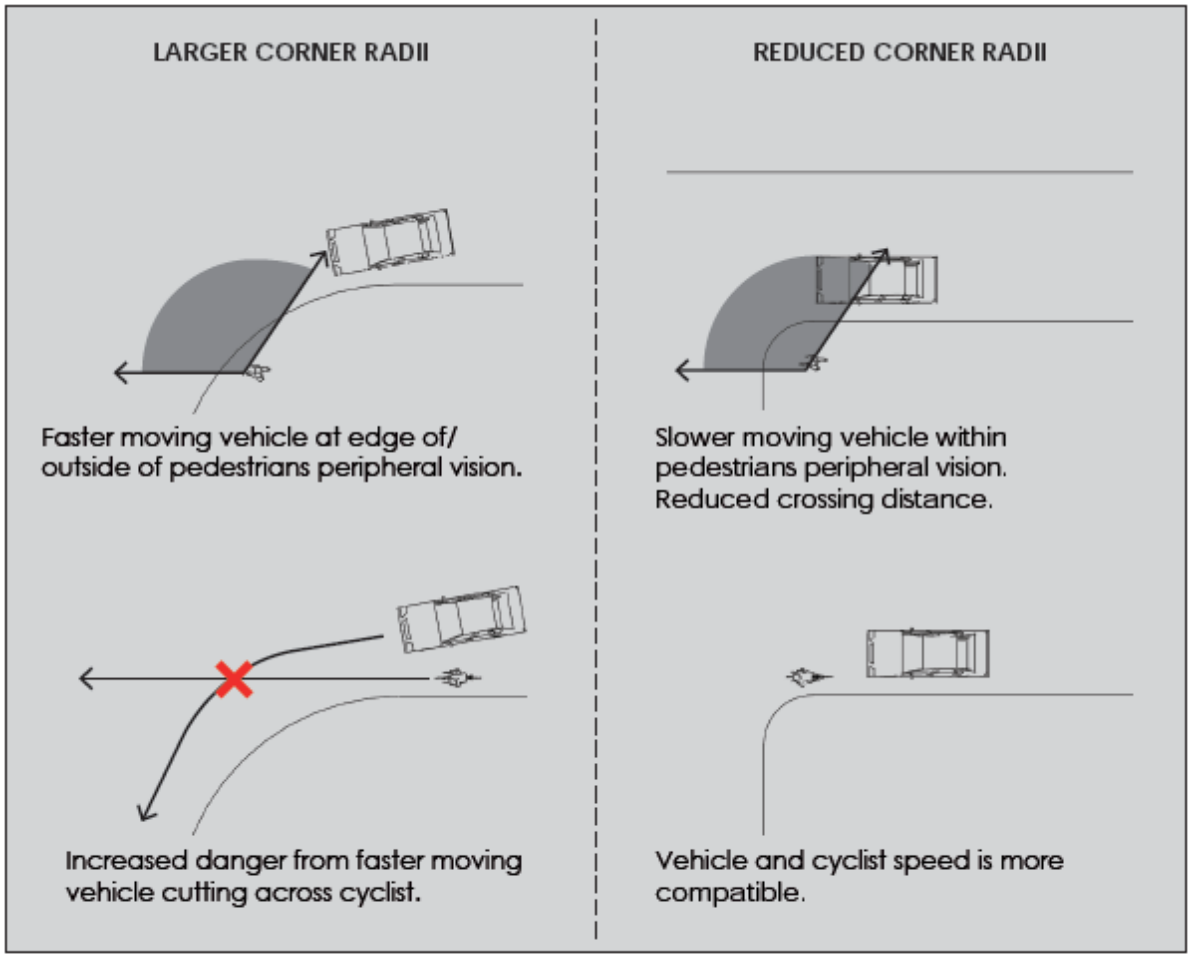


Figure 4.42: Illustration of the benefits of reduced corner radii on pedestrian and cyclist safety (images based on Figures 6.3 and 6.15 of the UK Manual for Streets (2007)).

Figure 2 Junction Radii (Source: DMURS)

The image below shows a typical internal junction with a radius of 6.00m.

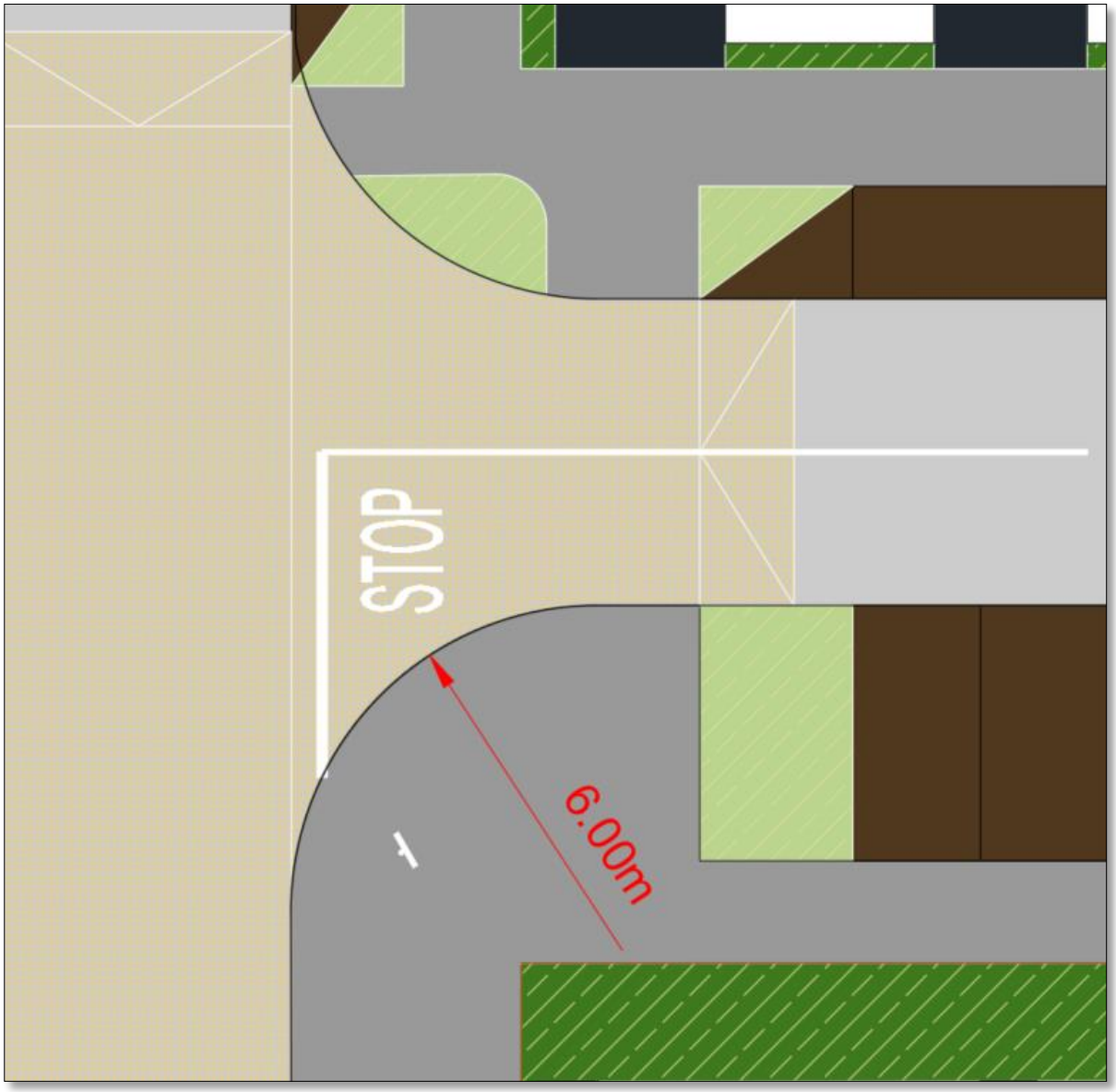


Figure 3 Typical Internal Junction

2.3 Cyclists

2.3.1 Segregated Cycle Infrastructure

Dedicated off road cycle infrastructure has been provided through the development. This infrastructure links the Oldcourt Road with the Bohernabreena Road .

It provides, as much as possible, a direct route from the access point on the Oldcourt Road to the Bohernabreena Road .

Cyclists are given priority at all Link Street road crossings, as is illustrated in the figure below.

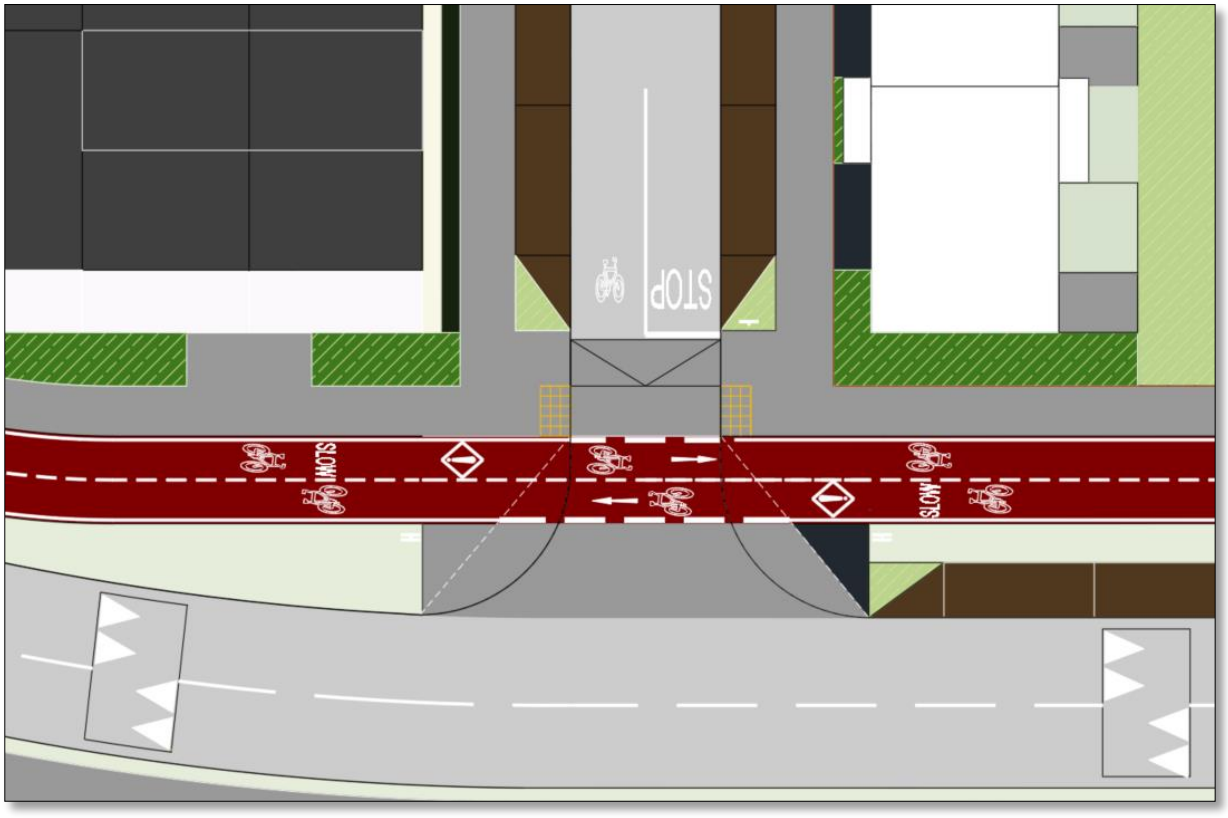


Figure 4 Sample Cycle Infrastructure

2.3.2 Shared Streets - DMURS

Figure 4.52, from the NCM, provides an overview of the integration and segregation of cycle traffic within the carriageway based on vehicle speeds and traffic volumes. For

example:

1. On lightly trafficked/low-speed streets, designers are generally directed to create Shared Streets where cyclists and motor vehicles share the carriageway
2. On busier/moderate speed streets, designers are generally directed to apply separate cycle lanes/cycle tracks. Designers must also have regard to the measures contained within this Manual when applying the NCM. For example:
3. To minimise the width of vehicular carriageways from kerb to kerb, preference should be given to the implementation of Raised Cycle Lanes or Raised Cycle Tracks over those design solutions where cyclists and vehicles are at grade.

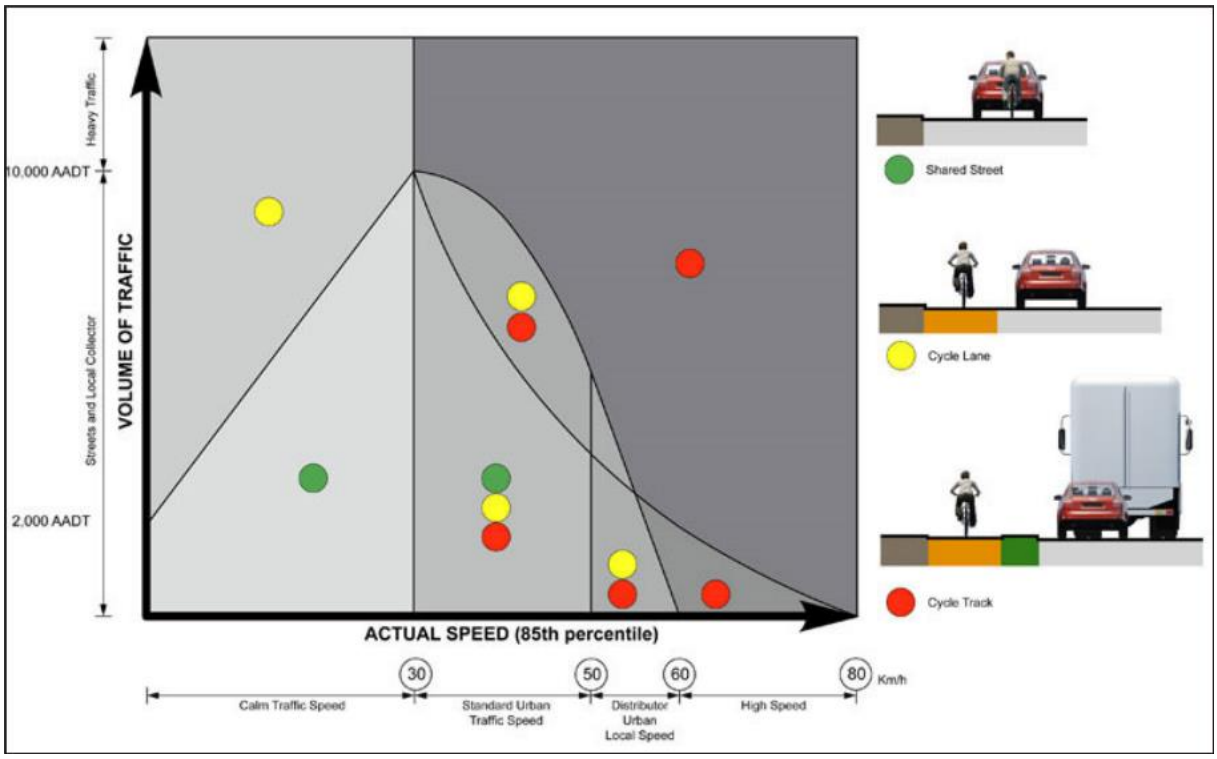


Figure 5 Extract From DMURS

Based on the above, the proposed development intends to create a shared space for lightly trafficked/low speed streets which will characterize the development.

2.3.3 Shared Streets – Cycle Design Manual

On local roads, residential streets and rural lanes, where traffic volumes and speeds are generally lower, many people are likely to be willing to cycle on-carriageway in mixed traffic or in unprotected cycle lanes as the perceived risk of injury is low. Designers may still choose to provide dedicated cycle facilities to address other requirements for cycle-friendly infrastructure, such as attractiveness or coherence. In some locations, a shared street may represent the best way to reconcile the conflicting needs of different users and different activities taking place within the street. Traffic management or calming techniques may be used to reduce traffic speed and/or volume to the point where cycling conditions are inclusive and suitable for most people. This may also be associated with the removal of non-local, through-traffic to reinforce the primary function of local access. Possible measures can range from a bypass for through-traffic at town or village level, to simple measures such as turning bans at a neighbourhood level.

2.4 Pedestrians

The width of the footpaths is determined by reference to DMURS Section 4.3.1 with a minimum required width of 1.8m based on the space needed for two wheelchairs to pass each other. However, in most cases a footpath width of 2.0m has been provided throughout the development.

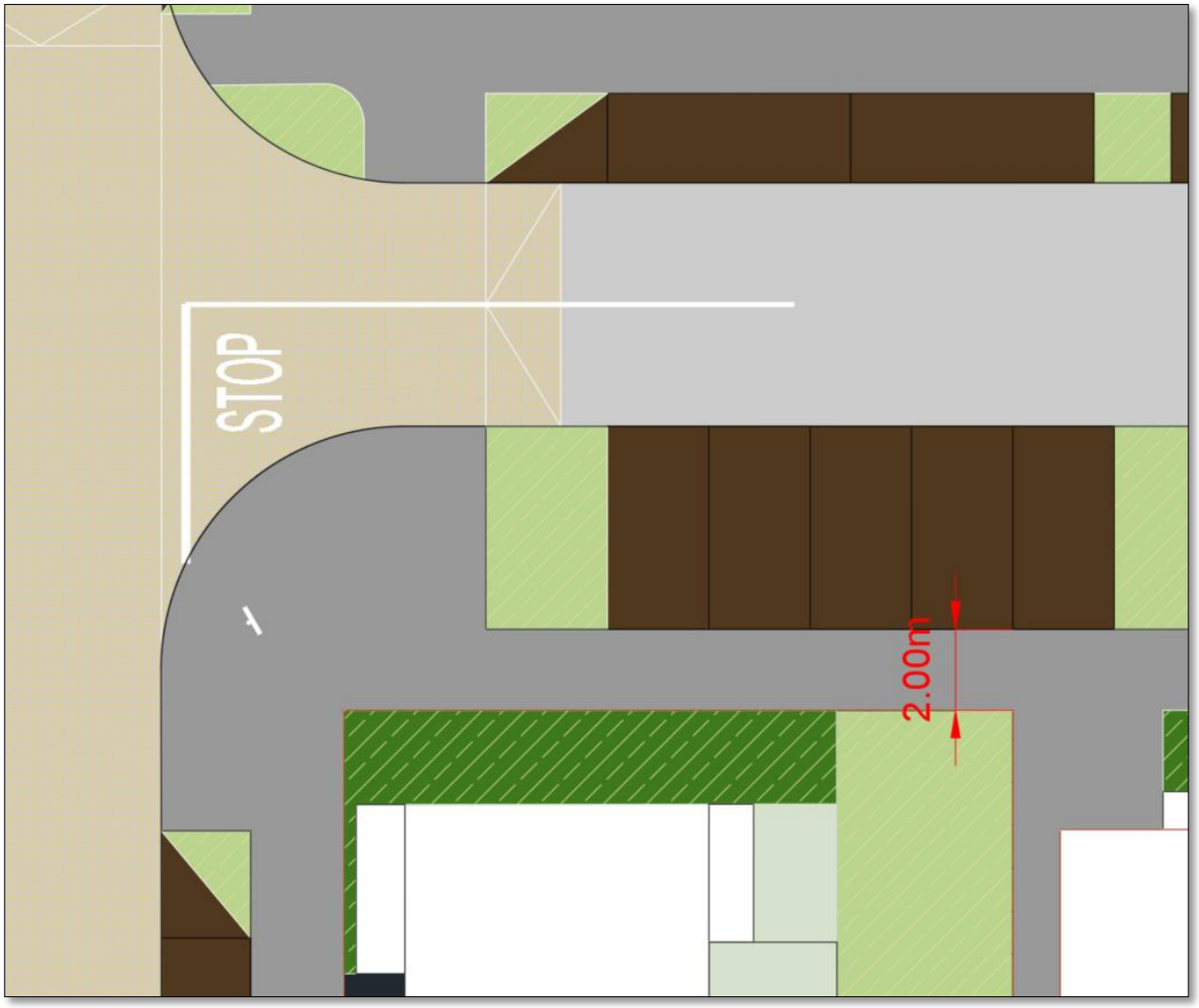


Figure 6 Sample Footpath Dimension

2.5 Fire Tender Access

Access for fire tenders and other emergency vehicles is also catered for with a swept path analysis having been carried out as per Drawing No. P211102-PIN-XX-DR-D-120-123-S1, submitted separately in support of this application.

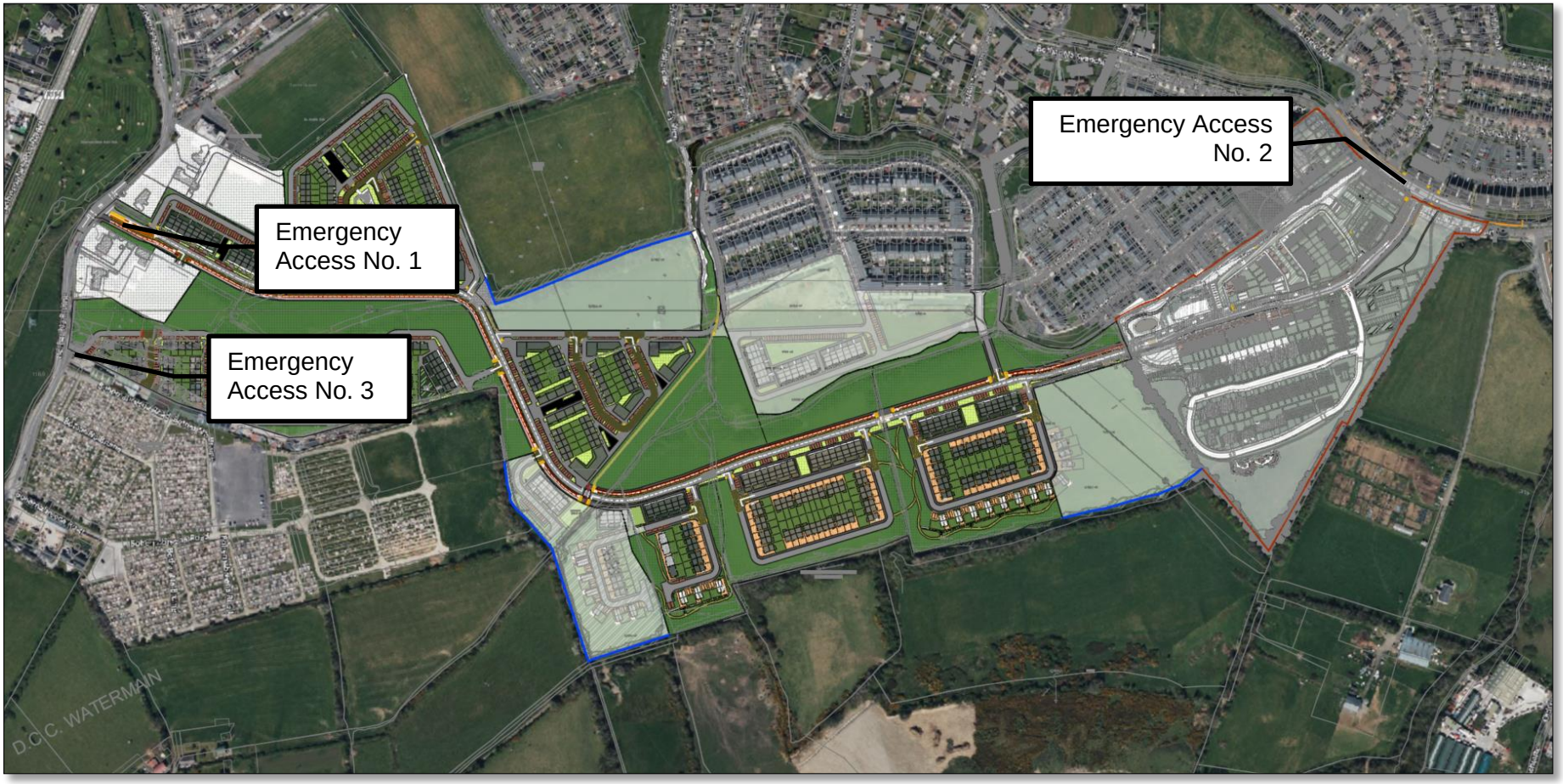


Figure 7 Emergency Access Routes

2.6 Visibility splays

Access to/from the development via Oldcourt Road Signal Controlled Junction, the Bohernabreena Road Signal Controlled Junction and Bohernabreena Road.

The intervisibility zone for the signal-controlled junctions are showing on Drawing No. P211102-PIN-XX-DR-D-110-113-S1. The visibility splay for the priority-controlled junctions is shown on Drawing No. P211102-PIN-XX-DR-D-110-113-S1.

2.7 Multifunctional streets

Based on extensive consultation with South Dublin County Council , the roads alignment design throughout the proposed development consists of short, curved stretches of roadway in order to slow traffic down.

These features create a passive method for controlling the speed of the vehicular movements throughout the development.

The development has been designed to include car parking for the apartment development, crèche and housing units that is both in curtilage and on street.

This will be provided in a mixture of in curtilage and on street parking. The Link Street will also include on street parallel spaces. This will help the 'self-regulating' principles that DMURS promotes.

Figure 8 Roads Layout

Vehicle access through the development is via a circuitous route where pedestrians and cyclists have priority.

2.8 Multidisciplinary approach to design

The design of the proposed housing development for 523 units and crèche facility has been done using a coordinated design team inclusive approach between architect, engineers, planning consultants and landscape designers taking into account considerations from all discipline and specialists.

The design team have progressed through several iterations of the layout in line with comments received from each discipline as well as South Dublin County Council to arrive at a solution which meets the guidance outlined in the DMURS. The resulting layout provides a development of high standard which incorporates spatial requirements and takes into account relevant plans and policies.

Therefore, we are satisfied that the now proposed design addresses all issues raised by the various disciplines and following integration of the Local Authorise and Design Team Members and meets the requirements / guidance of DMURS.

3 ROAD HIERARCHY

3.1 Introduction

A hierarchy of roads have been provided as follows:

- Link Streets,
- Side Streets &
- Homezones.

The aim is to provide self-regulating streets offering low speed route choices within a high-quality residential environment. While there is a hierarchy of road types, all roads through this residential development are provided as slow-moving traffic roads.

All internal estate roads have been designed with short straight elements, gentle horizontal curves from junction to junction, varying road widths , smooth & gentle vertical alignments and numerous interconnections, route options & looped sections keeping speeds low to create a pleasant living environment.

Fast moving traffic is discouraged by the horizontal alignment arrangement. Speed limits of 30km/hr maximum is proposed.

A sample of the road's hierarchy is shown in the figure below. Refer to Pinnacle Drawing No. P211102-PIN-XX-DR-D-106-S1 and P211102-PIN-XX-DR-D-107-S1 for the full road's hierarchy layout.

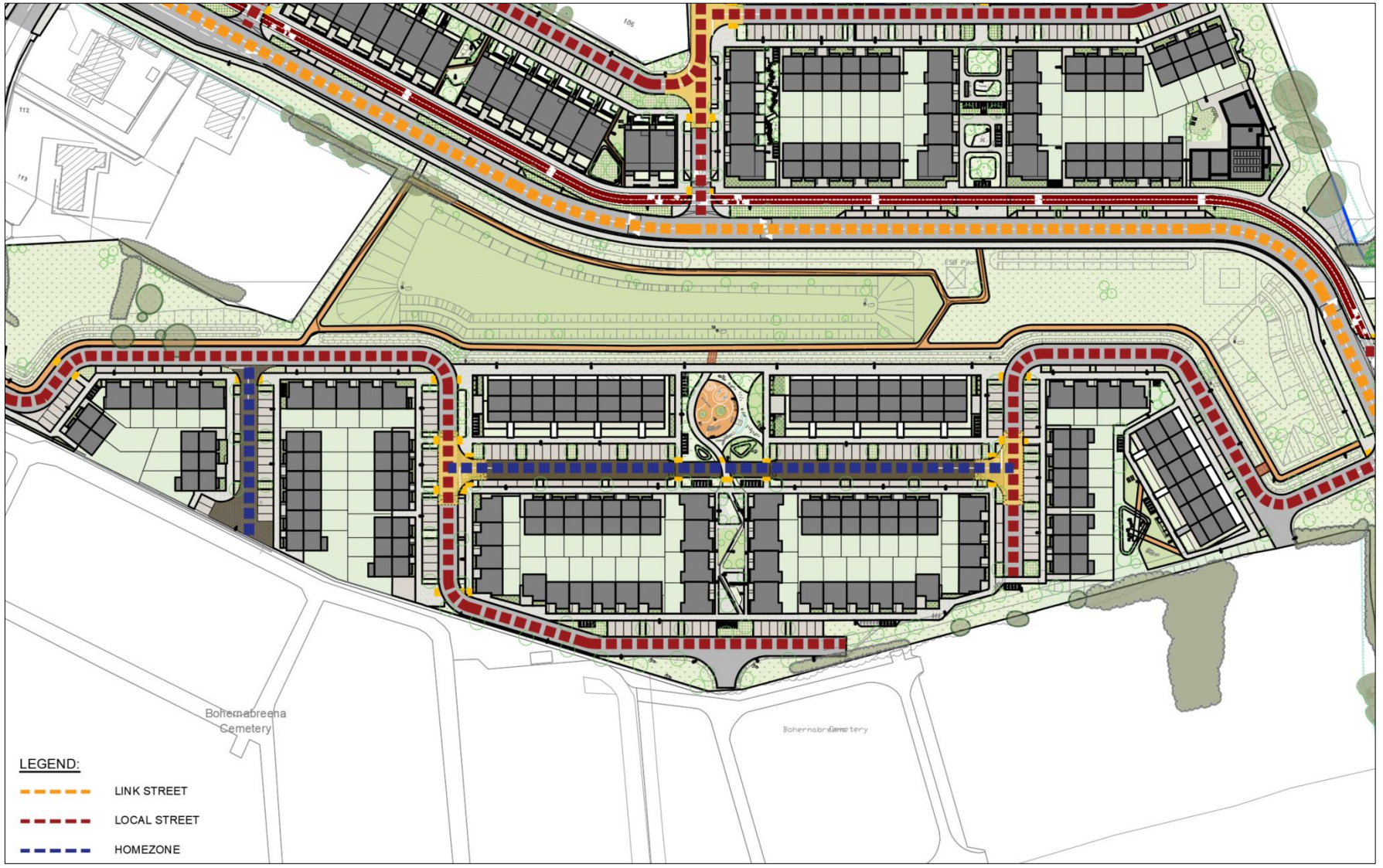


Figure 9 Sample Road Hierarchy

Road Hierarchy:

The numerous T-Junctions will assist in frequently stopping the flow of traffic when travelling through the development, which will create quiet side streets used for access by locals only. Home-zones promote a sense of community and are primarily proposed where there is no possibility of "through vehicular traffic".

Within the subject site, place-enhancement and movement management are influenced by introducing measures to reduce driver speeds such as:

a) roads with close proximity to buildings.
b) tighter corner radii provided where appropriate.
c) home-zones.
d) reduced visibility splays.
e) on street parking where appropriate.
f) horizontal deflections; and
g) pedestrian activity with numerous interlinking footpaths and crossing points.

All roads are provided with adjacent footpaths allowing pedestrian interconnectivity throughout this development and connection with local estates, the adjacent zoned lands and further connection with the wider network of paths.

The kerb corner radii have been designed through computer programme "swept path" analysis whilst considering traffic safety and practical turning arcs while also considering the guidelines set out within the DMURS.

Large vehicles such as waste collection trucks and furniture lorries are allowed for in the design, their frequency of passage is considered most infrequent in comparison to passenger cars. Therefore, the swept paths for these larger vehicles have been analysed to ensure circulation is achievable without overdesigning the kerb radii. Overdesign would result in the negative effect of encouraging car drivers to travel at higher than desired speeds thus defeating the purpose of applying other DMURS standards.

In general, the kerb radii dimensions are up to 6m. Horizontal alignment can have large radii to facilitate the placing of adjacent dwellings however junctions set out on these alignments will incorporate small radius bends.

In addition to kerb radii considerations and as the road network throughout the development consists of many interlinked looped routes, the road hierarchy has been considered with appropriately located STOP sign positions. With the numerous stoppage locations, traffic speeds are reduced overall to an acceptable level for driver, pedestrian and cyclist safety.

Road surface finishes will be standard tarmacadam with home zone areas being finished in coloured tarmacadam as per Architect's design proposals. The design has avoided permeable paving to the areas that are envisaged to be taken in charge by the local authority as such paving is not acceptable for taking in charge. Also, Irish Water do not accept their drainage network located below permeable paving hence the use of conventional tarmacadam. Permeable paving surfacing is however proposed for the carparking bays within the private front gardens.

4 DESIGN PRINCIPLES

4.1 Design Principle 1

The proposal is for sustainable residential development with linkage to the adjacent urban areas and transport hubs to the north of the site. The residential use and associated open space provided will complement the current residential developments surrounding the site including mature estates to the north and east of the site.

The layout for the proposed housing scheme has been carefully developed to provide smaller residential clusters which centre on well landscaped public open spaces located throughout the development. There is pedestrian linkage to the open spaces and provides permeability through these spaces.

The proposed road layout provides for both road, cyclist and pedestrian connectivity with the layout creating a clear system of roads and pavements which are easy to navigate for by drivers, cyclists and pedestrians. The design of the road and pavement alignment has been carefully designed to introduce curvature into the horizontal alignment which acts as a traffic calming measure throughout the scheme. The designers have avoided long straight sections of roadway.

Access to and from the site is through a new DMURs compliant access junction located off the Oldcourt Road Signal Controlled Junction, the Bohernabreena Road Signal Controlled Junction and Bohernabreena Road priority-controlled junction . The design of these junctions has been selected to ensure sight visibility both from the junction and for forward visibility from other road users on the Oldcourt Road and Bohernabreena Road .

4.2 Design Principle 2

The promotion of multifunctional streets that balance the needs of all users within a self-regulating environment.

The roads alignment design throughout the proposed development consists of short, curved stretches of roadway in order to slow traffic down. These features create a passive method for controlling the speed of the vehicular movements throughout the development.

The development has been designed to include car parking for the apartment development, crèche and housing units.

The apartment car parking comprises mostly on-street parking.

However, parking for homeowners in the development shall be predominantly within their front of house areas within their site boundary with some on-street parking. This has been specifically designed to align with homeowners' preference to have their private vehicles positioned within the limitations of the individual site ownership and to avoid a feeling of over dominance associated with having the majority of parking located on-street.

4.3 Design Principle 3

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

Raised tables located along the road alignment have been incorporated throughout the proposed development at specific locations to promote lower speed limits i.e. at junctions with the Link Street were pedestrians and cyclists cross.

These raised tables also act as providing pedestrian crossing point's at-grade. These raised crossings shall provide the pedestrian and cyclists with a sense of priority over vehicular movements at these interfaces. This is also in compliance with the Cycle Design Manual.

While footways adjacent to the roads have been provided through the development, a further independent network of footways is included through the open spaces away from vehicular routes.

The following geometric designs have been incorporated into the development:

- Pedestrian footpaths located alongside the road carriageways are a minimum 2.0m wide. The footpaths that extend through the open spaces are also 2.0m wide.
- The radii have been kept to a minimum in accordance with the guidance in DMURS (2019). The road entrance radii range from 6.0m at the main entrance to the development and 6.0m on the internal junctions.
- Road widths within the development are as follows:
    - Link Streets is to be 6.5m wide.
    - Side Streets are to be 6.0m wide.

The internal layout of the proposed development incorporates a number of design features such as varying surface materials and colours which will establish a sense of place while increasing the overall safety of providing a shared surfacing for all road users. The inclusion of a 'home zones' and an abundance of planting/vegetation will also encourage lower vehicle speeds throughout the development and give the pedestrian a sense of priority.

Pedestrian crossing points have been located along the entire road alignment throughout the development to allow the pedestrian to be afforded ease of movement through the proposed development and all desire lines have been carefully designed and incorporated into the scheme. Refer to Pinnacle Engineering Drawing No. P211102-PIN-XX-DR-D-101-105-S1 for details of the Internal Road Network.

4.4 Design Principle 4

Greater communication and cooperation between design professionals through the promotion of a plan led, multidisciplinary approach to design.

The design of the proposed housing development for 523 units has been designed using a coordinated design team inclusive approach between architect, engineers, planning consultants and landscape designers taking into account considerations from all discipline and specialists.

The design team have progressed through several iterations of the layout in line with comments received from each discipline while also taking into consideration feedback received from South Dublin County Council as part of the pre-planning process on this site to arrive at a solution which meets the guidance outlined in the DMURS. The resulting layout provides a high standard development which incorporates spatial requirements and takes into account relevant plans and policies.

Therefore, the designers are satisfied that the now proposed design addresses all issues raised by the various disciplines and following integration of all authorities and design members meets the requirements / guidance of DMURS.

4.5 Design Principle 5

The proposed development has been designed to allow permeability, both in terms of future residents and people currently living in the Ballycullen Area.

As outlined previously, the proposed development has been designed to ensure that future residents have access to local amenities, public transport nodes and highways through appropriately designed road, pedestrian and cycle links.

This permeability also opens up existing estates to greater access to local amenities. For example, the link through the development will allow local resident's easier access to public open spaces within the development.

Figure 10 Filtered Access to Dodderbrook

Refer to Pinnacle Engineering Drawing No. P211102-PIN-XX-DR-D-105-S1 for details of the filtered access route.

4.6 Design Principle 6

Dedicated off road cycle infrastructure is provided through the development linking the Oldcourt Road with the Bohernabreena Road . This cycle infrastructure is given priority across all road's crossings.

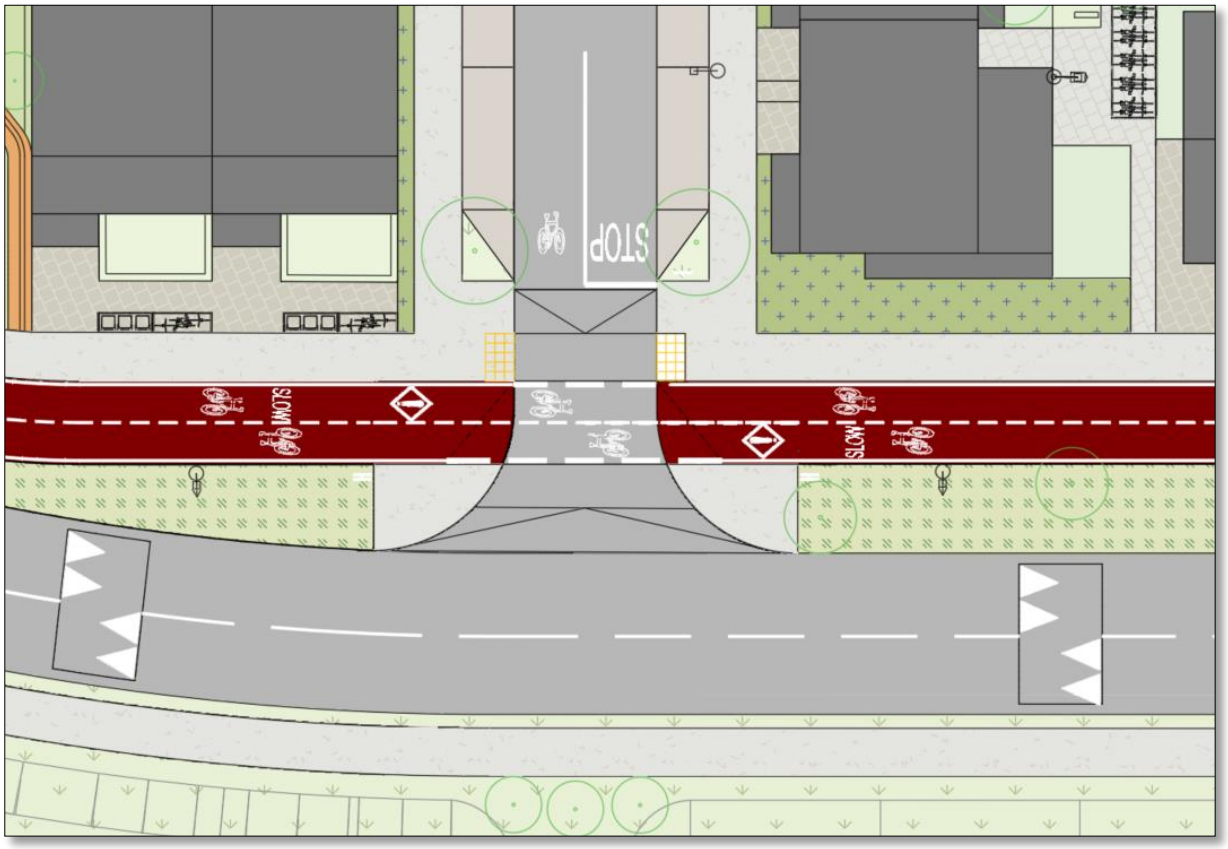


Figure 11 Junction Crossing

5 CONCLUSION

5.1 Summary

The Design Manual for Urban Roads and Streets offers a holistic approach to the design of streets within the proposed development.

The design process has been a collaborative and consultative design process involving architects, engineers, and landscape architects. The outcome is a safer environment for pedestrians, cyclists and drivers alike.

Added value and improvements in quality of life will be achieved through implementation of this integrated and progressive approach. It is, therefore, concluded that the proposed development is compliant with the design principles outlined in the Design Manual for Urban Roads and Streets.

APPENDIX A – DMURS Audit

Design Manual for Urban Roads and Streets

Street Design Audit

Prepared in respect of: *P211102 - OLDCOURT - LAP Lands*

Prepared by Ronan *Kearns BA BAI MSc MBA CEng MIEI*

Associate Transportation Planner, Pinnacle Consulting Engineers

Date: *August '24*

Connectivity		
Key Issues	Key DMURS Reference.	Design Response
Strategic routes/major desire lines been identified and are clearly incorporated into the design.	3.1 – Integrated Street Network 3.2.1 – Movement Function 3.3.1 – Street layouts 3.3.4 - Wayfinding	The proposed development has been designed to ensure that pedestrians and cyclists can move safely internally and transition to the external networks safely. Where possible, pedestrians and cyclist have priority across the Link Street. The development is laid out in such a way as to ensure easy way finding through the use of character areas.
Multiple points of access are provided to the site/place, in particular for sustainable modes.	3.3.1 – Street Layouts 3.3.3 – Retrofitting[1]	Based on the site of the development, there is 3 No. points of access for vehicles to the development with multiple pedestrian/cyclist access points allowing for permeability for all modes of movement.
Accessibility throughout the site is maximised for pedestrians and cyclists, ensuring route choice.	3.3.1 – Street Layouts 3.3.2 – Block Sizes	The proposed development has been designed to ensure that pedestrians and cyclists can move safely internally and transition to the external networks safely.

[1] *When connecting with existing communities a detailed analysis and extensive community consultation should be carried out to identify the optimal location for connections (refer also to the NTA Permeability in Existing Urban Areas: Best Practice Guide).*

	3.4.1 – Vehicle Permeability	
Through movements by private vehicles on local streets are discouraged by an appropriate level of traffic calming measures.	3.2.1 – Movement Function 3.2.3 – Place Context 3.4.1 – Vehicle Permeability	Changes in surface materials have been used as a tool to reduce speed. Road widths are up to 6.0m wide internally with the Link Street been up to 6.5m wide (subject to detailed design). Junctions have small radii i.e., 6.0m Drivers are encouraged to drive slowly through soft and hard measures i.e., narrow streets, direct access, multiple pedestrian crossings and changes in surface materials, vertical and horizontal deflections.

Self-Regulating Street Environment		
Key Issues	Key DMURS Reference.	Design Response
A suitable range of design speeds have been applied with regard to context and function.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.1.1 – A Balanced Approach to Speed[2]	A design speed of 30km/h has been applied to the internal roads of the development. All junctions have been designed as 'Stop' junctions with appropriate sight lines.

[2] *Refer also to the National Speed Limit Guidelines*

The street environment will facilitate the creation of a traffic clamed environment via the use of 'softer' or passive measures.[3]	4.2.1 – Building Height and Street Width 4.2.2 – Street Trees 4.2.3 – Active Street Edges 4.2.4 – Signage and Line Marking 4.2.7 – Planting 4.4.2 – Carriageway Surfaces 4.4.9 - On-Street Parking	Street edges are activated with several uses to again encourage a sense of enclosure. All junctions designed as 'stop junctions' with appropriate line marking and signage. Various landscaping treatments adopted to create a sense of place. Road surfaces vary in terms of materials particularly at pedestrian crossing points. Parking is provided both in curtilage and on street. Houses will mainly have off street parking. The Link Street will have parallel parking. The apartments will have on street. This is a generalization with some caveats.

[3] *In retrofit situations a detailed analysis should be carried out to establish what measures exist, what their likely effectiveness is and level of intervention required to achieve the designed design speed.*

	Advice Note 1 – Transitions and Gateways	
A suitable range of design standards/measures have been applied that are consistent with the applied design speeds.	4.4.1 - Carriageway Widths 4.4.4 – Forward Visibility 4.4.5 – Visibility Splays 4.4.6 – Alignment and curvature 4.4.7 – Horizontal and Vertical Deflections Advice Note 1 – Transitions and Gateways	Road widths are up to 6.0m wide internally with the Link Street been up to 6.5m wide (subject to detailed design). Sight lines have been provided for on all internal junctions for a 30km/h speed limit. Sight lines have been provided for on the Link Street for a 50km/h speed limit taking into account it is located on a future bus route. Minimum radii used for user comfort. Additional design measures such as direct access parking, pedestrian crossings, tighter junction radii combined with minimum radii will help keep speed low.
Pedestrian and Cycling Environment		
Key Issues	Key DMURS Reference.	Design Response

The built environment contributes to the creation of a safe and comfortable pedestrian environment.	4.2.1 – Building Height and Street Width 4.2.3 – Active Street Edges 4.2.5 – Street Furniture 4.4.9 - On-Street parking	A full landscape design has been provided which takes into account footpath widths. An active street edge is provided and includes landscape treatments such as street furniture. On street parking is provided throughout the development with opening on to both footpaths and roads.
Junctions been designed to ensure the needs of pedestrians and cyclists are prioritised[4].	4.3.2 - Pedestrian Crossings 4.3.3 – Corner Radii 4.4.3 - Junction Design 4.4.7 - Horizontal and Vertical Deflections	Uncontrolled at grade crossings along pedestrian desire lines. Includes links to open space and to external footpath/cycle paths. Junction radii are tight, in compliance with DMURS. Helps pedestrians cross over smaller distances and encourages reduced speed. Junctions designed as 'Stop Junctions' Landscaping etc help enforce the enclosed nature of the street to encourage lower speeds.

[4] *Refer also to the National Cycle Manual (2011)*

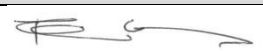
		A controlled crossing is provided on Bohernabreena Road and Old court Road. An additional controlled crossing links the southern side of the link street to the northern side.
Footpaths are continuous and wide enough to cater for the anticipated number of pedestrian movements.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.5 – Street Furniture 4.3.1 - Footways, Verges and Strips 4.3.2 - Pedestrian Crossings	Desire lines catered for to encourage permeability across site and to external footpath/cycle path. Footpaths are 2.0m wide and sufficient to cater to the expected demand taking into account the likely user such as prams, wheelchairs etc. Road signs to be placed outside of 'zone of influence' so that they don't reduce the width of footpath or become an obstacle that can be struck by vulnerable roads users or vehicles. Verges are provided. Footpaths are generally set behind car parking spaces. Uncontrolled at grade spaces along pedestrian desire lines.

Pedestrian and Cycling Environment (cont.)		
Key Issues	Key DMURS Reference.	Response
The particular needs of visually and mobility impaired users been identified and incorporated in the design.	4.2.5 - Street Furniture 4.3.1 - Footways, Verges and Strips 4.2.5 - Street Furniture 4.3.2 - Pedestrian Crossings 4.3.4 - Pedestrianised and Shared Surfaces	Footpaths kept clear of street furniture. Footways are generally 2.0m wide. Uncontrolled at grade spaces along pedestrian desire lines.
	3.2.1 – Movement Function. 3.2.3 – Place Context.	Internally, all cyclists will be on street due to slow speed and low volume nature of internal road network. Off road cycle lanes are provided along the Link Street.

Cycling facilities will cater for cyclists of all ages and abilities.[5]	4.3.5 - Cycle facilities.	

[5] *Refer also to the National Cycle Manual (2011)*

Additional Comments

Personnel Information			
	Name	Date	Signature
Report Prepared By:	Ronan Kearns	02/09/20204	
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