CASTLELAKE SHD

DMURS Statement of Consistency

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1 INTRODUCTION

1.1 Background

RPS has been commissioned by BAM Property Ltd to prepare a Design Manual for Urban Roads and Streets (DMURS) Statement of Consistency to accompany the Castlelake Strategic Housing Development (SHD) planning permission application for a development at Terrysland, Carrigtwohill, Co Cork.

This report should be read in conjunction with all submitted planning application drawings.

1.2 Proposed Development

The development will consist of the construction of a strategic housing development of 716 no. units and a 2 no. storey creche. The proposed development comprises 224 no. houses, 284 no. duplex units and 208 no. apartments. The two storey houses comprise 48 no. detached, 126 no. semi-detached and 50 no. terraced Houses containing 60 no. two bed units, 139 no. three bed units and 25 no. four bed units. The part-one to part-three storey duplex units are contained in 122 no. buildings providing 82 no. one bed units, 142 no. two bed units and 60 no. three bed units. There are 7 no. apartments blocks ranging in height from part-1 to part-5 no. storeys.

- Block 1 is 4 no. storeys and contains 34 no. units (7 no. one bed units, 19 no. two bed units and 8 no. three bed units).
- Block 2 is part-1 to part-5 no. storeys and contains 42 no. units (15 no. one bed units, 20 no. two bed units and 7 no. three bed units).
- Block 3 is 5 no. storeys and contains 17 no. units (8 no. one bed units and 9 no. two bed units).
- Block 4 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).
- Block 5 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).
- Block 6 is 4 no. storeys and contains 13 no. units (6 no. one bed units and 7 no. two bed units).
- Block 7 is 5 no. storeys over basement and contains 76 no. units (23 no. one bed units, 41 no. two bed units and 12 no. three bed units).
- All blocks contain ancillary internal and external resident amenity space.

The proposed development also provides for: hard and soft landscaping; boundary treatments; public realm works; car parking; bicycle stores and shelters; bin stores; lighting; plant rooms; and all ancillary site development works above and below ground.

2 CONSISTENCY WITH PRINCPLES OF DMURS

2.1 General

The Design Manual for Urban Roads and Streets (DMURS) was published in 2013 by the Department of Transport, Tourism and Sport, and was subsequently updated in May 2019. The document sets out an integrated design approach to address street design within urban areas, and requires that the design must be influenced by the type of place in which the street is located, and must provide a balance for the needs of all road users.

It also aims to put well-designed streets at the heart of sustainable developments and to promote a sustainable approach to design that promotes real alternatives to the car. In order to allow for this approach, it is required that sustainable modes of transport must be considered before the private car. DMURS sets out a clear user hierarchy, which should be considered in the following order:

1. Pedestrians,
2. Cyclists,
3. Public Transport,
4. Private motor vehicles.

2.2 Hierarchy within the Development

2.2.1 General

DMURS sets out and defines a hierarchy of street classification, with the classification described as Arterial, Link and Local streets. Based on the descriptions of these various classifications, the streets that will be formed as part of this proposed development are a combination of Local and Link streets. The Local streets are typically provided within the heart of the residential development, and provide access within the communities and provide further access to the Link streets. The Link streets provide further access from the residentials areas within the development to the existing road infrastructure, providing access back to the town centre, while allowing for further connectivity to the surrounding area via arterial streets.

2.2.2 Link Road Requirements

The intent of the link roads in the development are to provide further access from the residential areas within the development to the existing road infrastructure, providing access back to the town centre, allowing for further connectivity to the surrounding area via arterial streets. In accordance with the requirements of DMURS, these local roads should have a total width of 5.5-6.5m, allowing for a carriageway width of 2.75-3.25m. For the adjoining footpaths, the width requirements are based on the expected level of pedestrian usage. A desirable width of 2.5m is suggested to allow for two people to pass comfortably in areas of low to medium pedestrian activity. A minimum width of 1.8m is suggested, in areas of low pedestrian activity. This minimum width is based on that required for two wheelchairs to pass.

DMURS also sets out several other design standard recommendations for link road design, and they are summarised in **Table 2-1** below.

Table 2-1: Typical DMURS Requirements for Link Streets

Link Street Element	Typical Link Street Requirement Details
Lane Width	5.5-6.5m for link streets
Footpaths	2.5m for moderate pedestrian activity, 1.8m legal minimum
Verges	Verges of 1.5-2.0m should be provided on link streets to provide a buffer and to facilitate planting and placing of street furniture.
Corner Radii	A maximum radius of 6m should be utilised on link streets to allow larger vehicles, such as buses and rigid body trucks, to turn corners without crossing the centre line of the intersecting road.
Junction Design	Priority junctions between local and link/arterial streets (external network)
Kerbs	The standard height for kerbs on a link road is 125mm and this provides a clear definition of a segregated street environment.
Crossings	In general, signalised crossings should be provided on busy Link streets and/or where cyclists are likely to cross.
Cycle Facilities	On busier/moderate speed streets, designers are generally directed to apply separate cycle lanes/cycle tracks, further details are available from the National Cycle Manual.

2.2.3 Local Street Requirements

The intent of the local streets within the development are to serve the community and provide access to link / arterial streets. In accordance with the requirements of DMURS, these local roads should have a total width of 5.0-5.5m, which allows for a carriageway width of 2.5-2.75m. For the adjoining footpaths, the typical width requirements are based on the expected level of pedestrian usage. A desirable width of 2.5m is suggested to allow for two people to pass comfortably in areas of low to medium pedestrian activity. A minimum width of 1.8m is suggested, in areas of low pedestrian activity. This 1.8m width is based on the minimum width required to allow for two wheelchairs to pass.

DMURS also sets out several other design standard recommendations for local road design, and they are summarised in **Table 2-2** below.

Table 2-2: Typical DMURS Requirements for Local Streets

Local Street Element	Typical Local Street Requirement Details
Lane Width	5-5.5m for local streets
Footpaths	2.5m for moderate pedestrian activity, 1.8m legal minimum
Verges	No verges required on local streets, but street furniture should not encroach on footpath
Corner Radii	1-3m on local streets to create compact junctions and reduced crossing times for pedestrians
Junction Design	Uncontrolled junctions between local streets (internal network). Priority junctions between local and link/arterial streets (external network)

Local Street Element	Typical Local Street Requirement Details
Kerbs	Lower kerbs of 60mm are more appropriate along local streets, no kerbs where shared surface junctions or streets are proposed but tactile paving or drainage channels should be used to assist visually impaired users in navigating the road.
Crossings	Local streets do not require the provision of controlled crossings, provision of dropped kerbs will suffice.
Shared Space	Shared space streets and junctions are highly desirable where movement priorities are lowand there is a high place value in promoting more liveable streets, such as on local streets. Shared streets should not exceed 4.8m in width and the kerbs should be flush with the carriageway.
Cycle Facilities	On lightly trafficked/low-speed roads designers are directed to create shared streets wherecyclists and motorists share the carriageway, with further details available from the National Cycle Manual.

2.3 Statement of Consistency

In order to demonstrate consistency with the requirements of DMURS within the proposed Carrigtohill Residential Development, the proposed development layout has been assessed against the core design principles of DMURS. **Table 2-3** below provides information on this assessment.

Table 2-3: DMURS Statement of Consistency Assessment

Design Principle	Provisions	Statement of Consistency
Integrated Street Networks	Does the development create connected centres that prioritise pedestrian movement and access to public transport?	Yes. The aim of the internal road layout and access strategy is the creation of a connected, walkable and cyclable network which facilities and encourages the sustainable and safe movement of people whilst maintaining a strong sense of place. The existing access points onto Main Street to the south, and Station Road to the west, will allow for pedestrian access directly to the bus stops at the IDA Business Park and at Ryan and Ahern Place, both located on Main Street. The proposed footpaths and cycleways will all link up with the existing footpaths and cycleways as already provided to the existing Castlelake development. In addition, Carrigtohill railway station is located to the immediate east of the proposed development, and can be accessed via Station Road. Station Road is also subject to a proposal by Cork County Council to upgrade the existing pedestrian and cyclist facilities, and the proposed development design has been cognisant of the proposed local authority upgrade works.
Movement and Place	Does the development create a legible street hierarchy that is appropriate to its context?	Yes. The street / road hierarchy for the proposed development is as follows: • Vehicular Access: Vehicles will access the development via the existing and established junction onto Main Street, to the south of the proposed development, which currently provides access to the existing Castlelake development lands. There are also two new access points under

Design Principle	Provisions	Statement of Consistency
		construction (in a separate project) that will allow for access direct to Station Road. These three access points will facilitate pedestrian, cyclist and vehicular access to the development. The link road alignment has also been designed to facilitate a future connection to the Terrysland area to the north of the railway, to facilitate future development. • Primary Vehicular Routes: The northern spine link road network will be provided as a 6.0m wide road, with 1.5m verge, 1.75m wide cycleway and a 3.0m wide footpath has been provided on each side of the road. This is consistent with the link road infrastructure under construction to facilitate then educational campus facility in Carrigtohill, all details of which have been agreed with Cork County Council. The internal local road network to the residential area will be traffic calmed with raised tables provided at junctions so that it will not be an attractive 'rat-run' or quicker alternative to the main external roads. • Secondary Vehicular Routes: The design of the secondary routes will have a high pedestrian/cycle priority with shared surfaces/home-zones used at appropriate locations. Vehicular traffic along these routes will be minimal due to the limited number of dwellings each local road will provide access to.
	Are the proposed streets connected, maximising the number of walkable / cyclable routes between streets as well as specific destinations (i.e., community centre, shops, creche, schools, etc.)?	Yes. The access strategy for pedestrians and cyclists has been designed to deliver a high level of permeability for active travel modes, connecting the residential buildings with the educational campus proposed to land within the Castlelake masterplan area, while allowing for connectivity to the existing infrastructure serving Carrigtohill town. The cycleway route has been designed in coordination with Cork County Council to allow for integration with the Dunkettle to Carrigtohill Cycleway / Greenway, while allowing for cyclist/pedestrian connectivity to the Carrigtohill rail station.
Permeability and Legibility	Has the street layout been well considered to maximise permeability for pedestrians and cyclists?	Yes. The routes through the site will be delivered as shared streets and mature tree-lined paths, interwoven with footpaths and green links, to ensure a pleasant and safe environment for walking and cycling – see accompanying Landscape Architects proposals.
	Are the streets legible with maximum connection opportunities?	Yes. Connection opportunities for pedestrians and cyclists have been maximised using a number of non-vehicular routes throughout the open space – see accompanying Landscape Architects proposals.

Design Principle	Provisions	Statement of Consistency
	Are blocks of a reasonable size and permeability, with consideration to the site constraints?	Yes. There are a comprehensive network of paths that help to maximise permeability between the various residential streets, apartment blocks and duplex units.
Management	Is the layout designed to self-regulate vehicle speeds and traffic congestion?	Yes. As per the DMURS guidelines for the local streets, the design speed for the internal road network is lower than 30kph. Furthermore, to encourage the self-regulation of speeds, the following has been included in the design: • Reduced carriageway widths (5.5m for two-way), • Minimal signage and road markings, • On-street parking, • Sense of enclosure provided by trees, • Reduced corner radii at junctions to shorten pedestrian crossing distances. These reduced radii may require some local lane encroachment at these junctions, as allowed under DMURS, • Frequent pedestrians crossing and junctions; and • Minimised corner radii. Surface treatments and colouring at crossing points and on shared surfaces will further encourage reduced speeds. For the link streets, the following has been included in the design: • Carriageway widths of 6.0m for two-way, • Minimal signage and road markings, • Sense of enclosure provided by trees, • Pedestrian crossings and junctions; and • Minimised corner radii at junctions to shorten pedestrian crossing distances. These reduced radii may require some local lane encroachment at these junctions, as allowed under DMURS. Tactile paving, surface treatments and colouring at crossing points and on shared surfaces will further encourage reduced speeds.
	Does the proposed layout minimise noise / air pollution wherever possible?	Yes. Due to the limited level of parking provision and lack of through routes for cars, there will only be a low level of traffic in the development itself, minimising pollution. Furthermore, the landscaping proposal to supplement the existing vegetation with new trees and planting proposed along street edges and in public open spaces will help further alleviate any air and noise pollution.

Design Principle	Provisions	Statement of Consistency
Movement, Place and Speed	Does the proposed development balance speed management with the values of place and reasonable expectations of appropriate speed?	Yes. As explained above the internal layout and proposed accesses are designed to regulate speed within the development. The provision of high quality cycle facilities and pedestrian links will also encourage an increased usage level by pedestrians and cyclists, thus reducing vehicular movements.
	Does the design promote a reasonable balance of both physical and psychological measures to regulate speed?	Yes. Both physical and psychological measures have been included in the design. Physical measures include road widths, junction and crossing design, surface treatments. Psychological measures include building heights, encroaching street furniture, trees and reduced forward visibility.
Streetscape	Does the scheme create an appropriate sense of enclosure in addition to a strong urban / suburban structure?	Yes. The building heights will provide a very strong sense of enclosure, with the provision of new street trees and all other planting proposed to both street and public open space adding to this.
	Have street trees and areas of planting been provided where appropriate?	Yes. Street trees have been provided along the edges of the proposed link streets through the development with additional planting along the public green areas – see accompanying Landscape Architects proposals.
	Have active street edges been provided where appropriate?	Yes. There are residential dwellings and own door ground floor apartments situated in all residential sections.
	Is a palette of high quality surface materials and finishes provided?	Yes. High quality street paving is proposed throughout the development including pedestrian sidewalk paving, home zone paving, shared surface paving, red tarmacadam cycleways and vehicular junction paving.
Pedestrian and Cyclist Environment	Are footways of appropriate width provided so as to ensure pedestrian safety?	Yes. All footpaths along edges of local roads are 2.0m minimum, which is above the 1.8m minimum requirement. The 6.0m northern spine link road on the east of the site will be provided with a 3.0m wide footpath on each side of the road, with this footpath width consistent with the link road infrastructure under construction to facilitate then educational campus facility in Carrigtohill, onto which they join. The 6.0m wide link road on the west of the site will be provided with a 3.0m wide shared surface.
	Are verges provided adjacent to larger roadways so as to provide a buffer between vehicular routes and pedestrian paths?	Yes. 1.5m wide verges have been provided along the edge of the main link street.

Design Principle	Provisions	Statement of Consistency
	Have pedestrian crossings, whether controlled or uncontrolled, been provided at appropriate locations?	Yes. There are uncontrolled crossing points throughout the development. New controlled crossings will be provided along the 6.0m wide norther spine link street to the east of the development. In addition, controlled pedestrian crossing facilities are to be provided (under a separate project) to the intersection between the proposed 6.0m wide northern link road and the 6.5m wide link roads as constructed as part of the school facility development (planning reg ref 19/05707) to provide safe crossing facilities for pedestrians accessing the development.
	Are shared surfaces located appropriately in areas where an extension of the pedestrian domain is required?	Yes. Shared surface have been provided to create zones of pedestrian priority.
	Have cycle facilities been factored into the design?	Yes. Cycle lanes are proposed along either carriageway of the 6.0m wide northern spine link road to the east of the site, with these cycleways linking to existing cycleway infrastructure in the site vicinity. The cycleway route has been designed in coordination with Cork County Council to allow for integration with the Dunkettle to Carrigtohill Cycleway / Greenway, while allowing for cyclist/pedestrian connectivity to the Carrigtohill rail station.
Carriageway Conditions	Are vehicular carriageways sized appropriately for their function / location?	Yes. In line with DMURS guidance for local and link streets, the carriageway width where two-way traffic flow is permitted is 5.5m and 6.0m respectively.
	Are surface materials appropriate to their application in order to inform drivers of the expected driving conditions?	Yes. Surface treatments for shared surfaces and crossing points will be tactile and coloured in order to differentiate these areas from the asphalt carriageway. This will provide clarity for drivers and pedestrians alike.
	Are junctions designed to balance traffic concerns with the needs of pedestrians / cyclists?	Yes. Junctions have been designed with appropriate materials to advise drivers of the need to be alert and share the space.
	Have adequate parking / loading areas been provided?	Yes. Parking within resident property grounds and on-street parking has been provided.

3 CONCLUSION

This statement of consistency sets out how the access, internal roads and streets, pedestrian and cycling facilities that serve the proposed development have been designed to achieve the objectives set out in DMURS.

In addition, the proposed development has incorporated a series of design measures to promote sustainable modes of transport and support vulnerable road users which is in line with the core principles of DMURS.