

# ATKINS

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# Coastal Quarter SHD 2

DMURS Statement

Shankill Property Investments Limited.

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# Notice

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This document has 13 pages including the cover.

## Document history

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## Client signoff

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# 1. Introduction

## 1.1. Overview

This Design Manual for Urban Roads and Streets (DMURS) Statement has been prepared for the SHD planning application submission with An Bord Pleanála for a proposed Coastal Quarter, Bray residential development.

This Statement should be read in conjunction with the architectural and engineering site layout drawings and the masterplan prepared incorporating the Coastal Quarter and the River Quarter. This Statement relates to the internal street network within the proposed Coastal Quarter residential development site.

## 1.2. Development Description

The applicant intends to apply to An Bord Pleanála for permission for a Strategic Housing Development (SHD) comprising 586 no. residential units in a mix of apartments, duplexes and houses. In addition, a childcare facility, café, retail unit and a commercial unit are proposed along with all associated and ancillary development and infrastructural works, hard and soft landscaping, open spaces, boundary treatment works, ancillary car and bicycle parking spaces at surface, undercroft and basement levels. The proposed houses and duplexes range in height from 2 – 3 storeys with the proposed 4 no. apartment blocks ranging in height from 3 – 12 storeys. Block A will accommodate 162 no. Build-to-Rent (BTR) units. It is proposed that 274 no. units will be located within the administrative area of Dun Laoghaire-Rathdown County Council and 312 no. units will be located within the administrative area of Wicklow County Council. The childcare facility, retail, café and commercial unit will all be located in the administrative area of Wicklow County Council.

Planning permission was granted on part of the subject site for 234 no. residential units, a childcare facility, café and retail unit subject to compliance with the terms of conditions attached to reference ABP-311181-21. The proposed development includes development as permitted under ABP-311181-21 together with minor revisions chiefly addressing conditions and new proposals for Blocks A and B which were previously refused.

## 1.3. The need for DMURS

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

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

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

The street layout has been developed to deliver a high place function (focus on high level pedestrian and cyclist connectivity and low traffic speeds) wherein the streets and open spaces form part of the social fabric and are appropriately used for congregation and play. Achievement of this function can be greatly facilitated by developing a self-regulating street environment wherein vehicular movement function should be limited, as much as is practicable, and a desirable maximum design speed of 20kph being achieved.

## 1.4. Related Documents

This DMURS Statement should be read in conjunction with the submitted Quality Audit (inclusive of the Road Safety Audit) document (Ref: 5214419DG0013), the Engineering and Planning Report document (Ref: 5214419DG0018), the Mobility Management Plan (Ref: 5214419DG0020), the Traffic and Transport Assessment (Ref: 5214419DG0017), the Roads Engineering drawings and the Environmental Impact Assessment Report.

## 2. Compliance with DMURS

### 2.1. Design Principles

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

**Table 2-1 – Compliance with DMURS Principles**

Core Principle	Development Approach
<p><i>Pedestrian Activity / Facilities</i> – “To support the creation of integrated street networks which promote higher levels of permeability and legibility for all users and in particular more sustainable forms of transport.”</p>	<p>The proposed Coastal Quarter development has been carefully designed to ensure that the focus on connectivity is centred on pedestrians and cyclists.</p> <p>The provision of high levels of connectivity for pedestrians and cyclists are intended to promote walking and cycling by making them a more attractive option to the private car.</p> <p>Facilities for the proposed onsite sustainable modes such as on-site bicycle parking and the carpooling scheme space have been located conveniently and with ease of access in mind.</p> <p>Links to the external transport network have also been considered with convenient access to bus stops along the Dublin Road and access to Bray DART Station to the fore.</p>
<p><i>Multi-Functional streets</i> - “The promotion of multi-functional, place based streets that balance the needs of all users within a self-regulating environment.”</p>	<p>The proposed development contains a number of new streets that have been designed to a high quality to ensure that the users of the streets and those that live there are facilitated with an attractive, comfortable and safe environment.</p> <p>Numerous measures have been introduced such as road layout and geometry to safe-guard low and self-regulating speeds and landscaping and public realm features to further enhance the sense of place.</p>
<p><i>Pedestrian Focus</i> - “The quality of the street is measured by the quality of the pedestrian environment.”</p>	<p>The design of the proposed scheme has placed a significant emphasis on the movement of people, both within the proposed development and between the internal and external areas.</p> <p>Footpaths widths are generous with crossing points located on key desire routes ensuring good permeability throughout the site to key destinations such as the open space provision, the creche and the retail and convenience store locations.</p> <p>External connectivity is facilitated through connections to the north to Corke Abbey Valley Park, connections to Bray DART Station and Bray Promenade via the rail underpass to the south east of the proposed development and connections to the south and south west to the town centre via the Dublin Road and the existing greenway along the River Dargle.</p>

Core Principle	Development Approach
<p><i>Multi-Disciplinary Approach</i> - “Greater communication and co-operation between design professionals through promotion plan led multidisciplinary approach to design.”</p>	<p>The design of the proposed Coastal Quarter development has been developed through a collaborative effort between all members of the design team and the client team.</p> <p>This process began with conceptual development during the masterplan stage right through to the current proposed plan subject of this planning application.</p> <p>The proposed development design is led by RAU Architects working together with Atkins Consulting Engineers, Parkhood Landscape Architects and RPS Planning Consultants.</p> <p>The developer and promoter of the scheme, Shankhill Property Investments, are committed to delivering a high-quality development which complies with the principles of DMURS.</p>

## 2.2. Design Speed Promotion

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

- Horizontal and vertical alignment designed to 20km/h;
- Carriageway widths in line with DMURS requirement for street type;
- Constrained junction radii in line with DMURS requirement; and
- Provision of raised tables at junctions with contrasting colour and texture (subject to detailed design).

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

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

## 2.3. Internal Street Layout

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

- National Transport Authority, 2011. *National Cycle Manual*;
- Department of Transport, Tourism and Sport, 2019. *Design Manual for Urban Roads and Streets (DMURS)*;
- Department of Environment, 2003, *Traffic Management Guidelines*;
- Transport Infrastructure Ireland, *Design Manual for Roads and Bridges (DMRB)*, (where relevant).

The site layout has been developed in accordance with the principles of DMURS taking note of the site constraints and the requirement of the Bray Municipal District Local Area Plan, the Wicklow Development Plan and the Dún Laoghaire-Rathdown Development Plan.

The street layout for the development is made up of three typologies, as outlined in Figure 2-1 below:

- Link Street
- Local Street
- Home Zone Street



**Figure 2-1 – Proposed Development Street Layout**

Vehicular permeability provides for local access for residents and access to Dublin to the north and Bray Town to the south via existing link roads to the R761 Dublin Road.



The street design criteria for the street typologies in Figure 2-1 are detailed in Table 2-2 below.

**Table 2-2 – Street Design Criteria**

Design Criteria	Link Street	Local Street	Home Zone Street
DMURS Recommended Design Speed	30-50km/h	10-30km/h	10-30km/h
Adopted Design Speed	40km/h	20km/h	20km/h
Minimum Horizontal Radius	46-56m	11m	11m
Maximum Gradient	5%	5%	5%
Minimum Gradient	0.5%	0.5%	0.5%
Carriageway Width	6.5m	5.5m	4.8m

## 2.4. Junction Design

The design of the junctions is based on the proposed cross sections at these locations and vehicle swept path analysis has been utilised to determine if any of the junctions require amendment to incorporate the largest expected vehicle manoeuvres, a refuse vehicle, through the junction. In general, tight corner radii are proposed in order to reduce traffic speeds which, in turn, create a safer urban environment for pedestrians and cyclists.

### 2.4.1. Development Junction Criteria

Development junction radii and visibility splays are provided in accordance with the design criteria outlined in Table 2.3 below.

**Table 2-3 – Junction Design Criteria**

Design Criteria	Local Street	Home Zone Street
Junction Radii	* 6.0m between Local Street and Link Street. 3.0m to 4.5m between Local Street and Local Street.	3.0m between Local Street and Local Street.
Junction Approach Gradient	+/-2%	+/-2%
Visibility Splay	2.4m x 36m for junctions from Local Street onto Link Street 2.0m x 14m for junctions from Local Street onto Local Street	2.0m x 14m for junctions from Home Zone Street onto Local Street

Note:

\*6.0m radius to accommodate occasional larger vehicles (i.e. Irish Water Tanker servicing Existing Underground Irish Water Foul Storage Tank) per DMURS Figure 4.43.

No changes are proposed at the existing junctions between the existing link streets and the R761 Dublin Road.

## 2.5. Facilities for Pedestrians and Cyclists

### 2.5.1. Connections

The street layout accommodates high levels of permeability for pedestrians and cyclists along streets onto the R761 Dublin Road to the west and into Bray Seafront & Bray Town via the existing Dart Underpass. The development will provide a green link to the north into the Corke Abbey Residential Development and into the existing open space. The future Public Transport Link will provide a link into Bray Dart Station. These permeability connections are detailed in Figure 2-2 below.



Figure 2-2 – Permeability Connections

## 2.5.2. Pedestrian and Cyclist Provision

The pedestrian and cyclist provision are as follows in Table 2-4 below.

**Table 2-4 – Pedestrian and Cyclist Design Criteria & Provision**

Design Criteria	Link Street	Local Street	Home Zone Street
Footpath Provision	Footpaths both sides	Footpaths both sides	Shared surface with 1.2m wide pedestrian refuge
Footway Width	2.0m	2.0m	1.2m
Cyclist Provision	Segregated cycle track on northern side	Shared Street Provision, cyclist shares carriageway with vehicles in low traffic speed and low traffic volume environment	Shared Street Provision, cyclist shares carriageway with vehicles in low traffic speed and low traffic volume environment
Cyclist Width	2.0m	n/a	n/a

The proposed design of the link street in terms of footpath and cycle path provision aligns with the existing provision and the proposed provision for the public transport link.

In addition, pedestrian linkages through and around the proposed development have been considered in the context of desire lines, particularly in the context of facilitating the connections in Figure 2-2.

Drop kerb crossings will be provided at the junctions on local streets and home zone streets throughout the site with raised table crossings provided on the link street junctions.

The use of raised table crossing points will have the benefit of providing both a convenient crossing point for pedestrians and cyclists and a traffic calming effect for traffic entering into local and home zone streets.

The raised table crossing design is based on the recommendations in DMURS and the Traffic Management Guidelines.

In overall terms the pedestrian and cyclist provision are as outlined below with locations detailed in Figure 2-3 below:

- Existing Raised Segregated Cycle Track ■
- Proposed Raised Segregated Cycle Track ■
- Future Raised Segregated Cycle Track ■
- Proposed Shared Street (Local Street) ■
- Proposed Shared Street (Home Zone Street) ■
- Proposed Shared Path ■

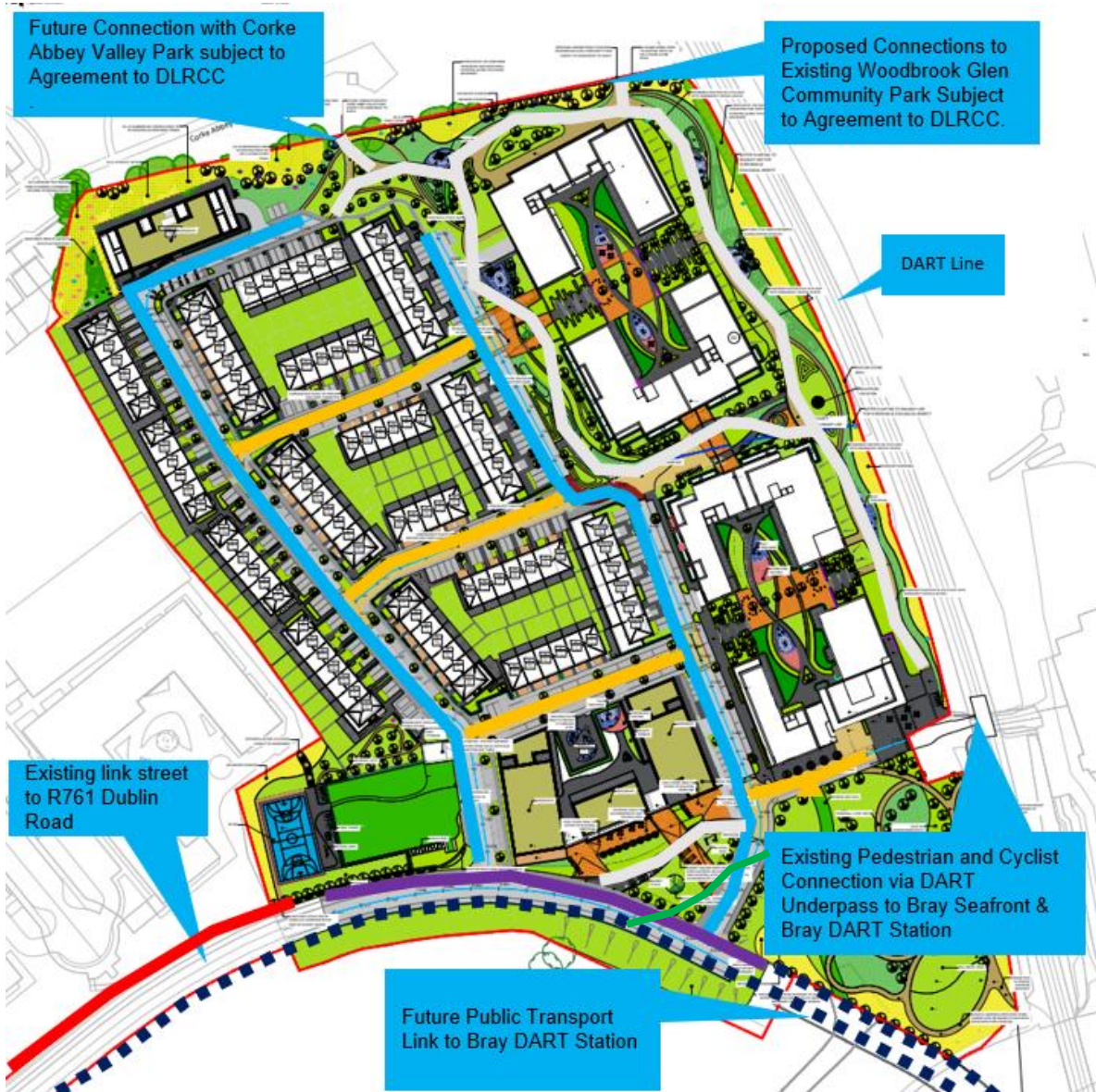


Figure 2-3 – Pedestrian and Cyclist Provision

### 3. Conclusion

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

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