



Kingsbridge Consultancy Ltd.

Proposed Residential Development

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Haggardstown, Blackrock, Dundalk, Co. Louth

DMURS Statement of Consistency Report

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## DOCUMENT CONTROL SHEET

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## 1.0 Introduction

Finn Design Partnership have been retained by Kingsbridge Consultancy Ltd to complete an assessment of a new residential development to determine its consistency with the Design Manual for Roads and Streets. (DMURS) The development site which extends to 17.55 ha and is located at Haggardstown, Blackrock, Dundalk, Co. Louth will be the subject of an Strategic Housing Development (SHD) application to An Bord Planeála.

The site is located off the R172 coastal roadway linking the village of Blackrock to the South and the town of Dundalk to the North. (refer to Figure 1). The site is bounded by Dundalk Golf Club to the West, residential dwellings to the North and East where there are residentially zoned land and the practice area of the adjoining Golf Club to the South.

The entrance to the site will be from the R172 from where there will be a new service roadway extending circa 250 m in a westerly direction that will provide vehicular access to the main development area.



Figure 1 Site Location

## 2.0 Nature of Proposed Development

The proposed development will consist of the construction of 483 no. residential units including;

- 258 no. houses (41 no. five bedroom units, 101 no. four bedroom units and 116 no. three bedroom units.)
- 213 no. apartments (64 no. one bedroom units and 149 no. two bedroom units)
- 6 no Duplex Units (6 no. two bedroom below duplexes and 6 no. three bedroom duplexes)
- Construction of the access road and priority junction with right turning lane off the R172 (Dundalk to Blackrock Roadway).
- landscaped public open space and associated site works that are needed to facilitate the development



Figure 2 Proposed Site Plan

### 3.0 DMURS Objectives

The Design Manual for Roads and Streets (DMURS) is the appropriate design guidance to be applied to urban environments such as cities, towns, villages, and urban developments such as residential estates.

DMURS needs 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 consistency of the proposed development with the principles within DMURS has been a key input for the design where the practical design measures included in the design reference encouraged more sustainable travel patterns for the scheme.

For an analysis of the relevant traffic and roads in the wider Blackrock and Dundalk areas please refer to the Traffic and Transport assessment prepared by W.S Atkins Ireland Ltd

### 4.0 DMURS Compliance

The development layout is designed to deliver a safe place of high functionality where the streets and open spaces can be used for social interaction/congregation and play. This function is achieved by developing a self-regulating street environment where the vehicular movement function is limited, to create a desirable maximum design speed

One of the key principles that has been adopted for the street design has been the creation of a defined hierarchy which as well as establishing desirable speed limits, improves legibility through the site. The inclusion of raised tables, home zones and uncontrolled crossing points at appropriate locations ensure that vehicle speeds are minimised and routes favour pedestrians and cyclists, where appropriate. Two street types are proposed, namely Local Streets having a self-regulating desirable maximum speed of 30kph and home zones that have pedestrian priority and where desirable vehicular speeds will be encouraged to remain below 20kph





<u>Legend</u>		
Main Access Road –	6.0m wide carriageway	
Local Streets –	typically, 5.50 m wide	
Shared Home-Zone Streets –	5.00 m wide for entrance section with 6.00 m wide in car parking areas	

**Figure 3 Road Hierarchy Plan**

The proposed street layout has elevated levels of permeability for pedestrians and cyclists along the streets, through the large public open space and onto Bothar Maol both at the North-western edge and at the North-eastern edge, at junction with the R172. The pedestrian and cycle routes that terminate at the North-west boundary of the site allow for future connections into the adjoining Finnabair Industrial Estate or along the currently unused section of Bothar Maol that extends to the West of the development.

Vehicular permeability is restricted to local access for residents of the development with appropriate access provision for emergency and service vehicles. There will be no vehicular access through this site.

All routes will be overlooked where possible, helping to create a safe and overlooked environment. The inclusion of public lighting along all main routes also ensures that routes are usable throughout the day and at night if required.

While cul-de-sacs have been used in some areas to create a safe and relatively traffic free residential environment, provision has been made to maximise the free movement of pedestrians and cyclists by omitting barriers and facilitating desired movement lines. This is particularly the case adjoining the large central public open space into which there will be unrestrictive access from the home zones.

Home zones have been designed as shared surfaces and while contrasting materials will be introduced in these areas, changes in vertical alignment between different surfaces will be kept to a minimum. It is proposed that where home zones abut public open spaces there will be a natural diffusion from hard to soft landscaping.

All cul de sac heads are as short as possible, with pathways included to allow for pedestrian and cyclist movement between each residential street.



### a) Internal Street Design

Where possible the maximum road gradient is less than 1:20 (5%). Where it has been necessary because of site topography to increase this gradient, we have done so for short stretches to a maximum gradient of 1:12 (8.3%). All proposed roads are to have a cross fall of 2.5% and to be designed for speeds up to 30km/hr. Vertical alignment has been carefully considered to minimise the amount of cut and fill on site.

Internal access roads include restrictive road bends and vertical traffic calming measures that will ensure low vehicular speeds to provide protection to vulnerable road users within the development.

Road nos 1 and 2 provide the main access through the development, where in the case of road 2 it provides access and egress to all the remaining streets including the home zones. A combination of vertical deflections, footpaths to both sides, shared surfaces (raised and coloured) and street planting to narrow the perception of the street width will provide both hard and soft measures aiding the self-regulation of traffic speeds. The vertical deflection on Road no.2 is designed according to the Traffic Management Guidelines (DTTAS, 2012) and will consist of the following:

- A raised speed cushion between the inset kerbs to slow transit through the feature,
- Yield lines and yield signs that slow traffic entering the housing areas.

The street layout provides high levels of permeability for pedestrians and cyclists along streets and through open spaces

Measures have been included to reduce the dominance of the vehicles in favour of pedestrians and cyclists.

The dominance of on-street car parking is negated by providing 'in curtilage' parking within the residential units that have direct access onto the Link street.

Street trees will promote a sense of enclosure on all estate roads having a traffic calming effect. Trees can also act as a buffer to traffic noise and pollution. Lower planting will be used in verges and beds adjacent to the roads.

A street lighting design has been carried out by Caldwell Consulting (in accordance with class P2 of IS EN 13201/BS5489 with a S/P ratio of 1.4 (8.4 lux average, 1.7 lux minimum) where LED luminaires will be used throughout. The street lighting will be of a high standard and will promote a safer environment for both pedestrians, cyclists and road users.

Tactile paving will be placed on the footpaths at all crossing points and junctions in compliance with Section 13.3 of the Traffic Management Guidelines (2003)

Signage and line marking throughout the estate will be in accordance with the Department of Transport Traffic Signs Manual (2010)

#### b) Junction Design

The design of the junctions within the development have been based on reducing vehicle speed through the junction so as to create a safer urban environment for pedestrians and cyclist movements. In taking this approach consideration has also been taken to ensure that safe movement of the anticipated largest vehicle (refuse truck) that will access the development. Swept path analysis have been completed of the different junctions where modifications have been made where necessary.

Restrictive speed kerb radii of 6.0m has been provided at the junctions between link and local roads where kerb radii of 3m is provided at the junctions between local roads and home zones.

Unobstructed visibility splays are provided at all junctions and nodes and at the priority access junction with the R172. Sight lines will be such so as to provide visibility splays of 85.0m at a setback of 2.0m. Visibility splays have been assessed for each proposed junction between the estate roads and the existing public roads according to DMURS 2013.

The R172 roadway has a speed limit of 50km/h where it abuts the site where it is assumed that Bothar Maol has a speed limit of 30km/h.

All junction visibility splays shall be kept clear of obstructions large enough to obscure vehicles, pedestrians or cyclists.

### c) Facilities for Pedestrians and Cyclists

Footpaths that are no less than 1.8m will be provided throughout the development where connections will be provided to tie-in to existing external pedestrian paths.

Shared surfaces are utilised at several junctions and within the home zones throughout the development. The road surface will be raised 75mm above the carriageway with 1:15 ramps painted with triangular markings. The Tarmacadam surface will be tinted to highlight the shared surface and flush kerbs will help to reinforce the shared area.

Well-designed pedestrian and cyclist crossing points are provided throughout the scheme where these are located so as to provide the shortest route through the development and to the main external access/connection points. All crossings are provided with either dropped kerbs or a raised flat top treatment to give the sense of pedestrian/cyclist priority.

All informal pedestrian crossing facilities are at least 2.0m wide.

### d) Car Parking

Car parking will be provided for each of the residential units where the provision will exceed the parking standards set out in the County Development Plan. Table 7-6.

Unit Type	No. Units	Spaces/Unit	No of Spaces
Dwelling Units	259	2	518
GF Apartment + Duplexes	12	12	12
Apartment Unit	213	1 space per unit	213
Apartment (Visitor Spaces)		1 space per 4 units	57
Creche	1	Spaces provided for staff and drop-off area	24
		<b>Total</b>	<b>824</b>

### e) Cycle Parking

Cycle parking will be a key a provision of the development where a total of 519 spaces will be provided for the site. The quantity be broken down into strategic locations where it in envisaged the demand will be the greatest. Cycle parking standards will be conveniently located close to the high-density area served, secure, easy to use, have adequate artificial lighting and be clearly signposted.