

Project

# SHD Development at Cooldown Commons Phase 3

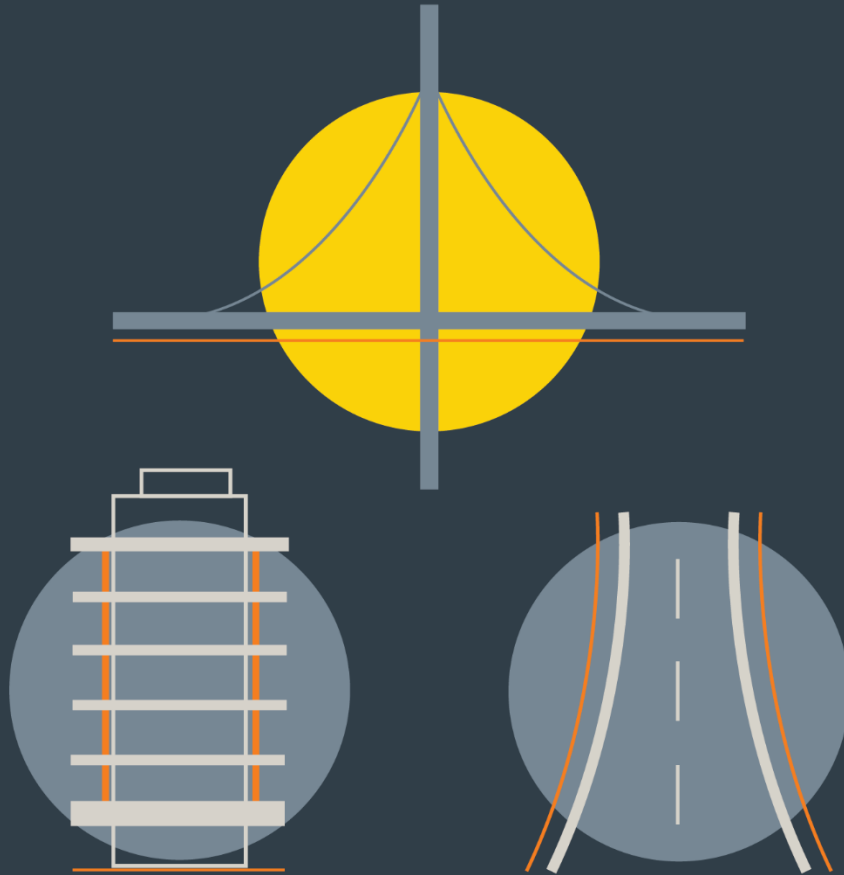
Report Title

## DMURS Design Statement

Client

Cairn Homes Properties Limited

INFRASTRUCTURE



DBFL CONSULTING ENGINEERS

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# Technical Note 190003-TN-001

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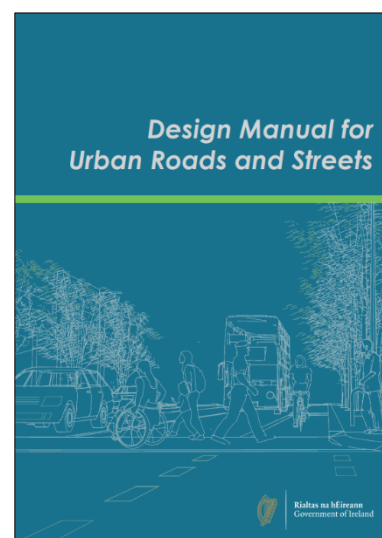
## 1.0 INTRODUCTION

- 1.1.1 It is DBFL’s opinion that the proposed development is consistent with both the principles and guidance outlined within the *Design Manual for Urban Roads and Streets, (DMURS) 2019*. The scheme proposals are the outcome of an integrated design approach that seeks to implement a sustainable community which promotes a real and viable alternative to car-based journeys.
- 1.1.2 The following section outlines the specific design features that have been incorporated within the proposed development, with the objective of delivering a design that is in compliance with DMURS.

## 2.0 DMURS CORE DESIGN PRINCIPLES

- 2.1.1 DMURS sets out the principles, approaches and standards to be applied to the design of all urban roads and streets (i.e. streets with a speed limit of 60km/h or less). At the heart of DMURS is a place-based, integrated approach to road and street design. This means a collaborative multi-disciplinary approach to the design process, adhering to the following four core principles:

- **Design Principle 1:** 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
- **Design Principle 2:** The promotion of multi-functional, place-based streets that balance the needs of all users within a self-regulating environment
- **Design Principle 3:** The quality of the street is measured by the quality of the pedestrian environment.
- **Design Principle 4:** Greater communication and co-operation between design professionals through the promotion of a plan-led, multidisciplinary approach to design.



### 3.0 DESIGN ATTRIBUTES

#### 3.1 Strategy Development

- 3.1.1 The adopted strategy maximises connectivity between key local destinations through the provision of a high degree of permeability and legibility for all network users particularly for sustainable forms of travel. Accordingly, the proposed residential scheme delivers greater mode and route choices along direct, attractive and safe linkages to a range of amenities and local service destinations.
- 3.1.2 The identified masterplan incorporates a hierarchy of streets with *Arterial* links including the N7, N82 and N81 to the north, east and south of the subject site respectively. *Link* streets adjacent to the site, include Fortunestown Lane and Citywest Avenue Extension. Citywest Avenue to the north of the subject site provide the connections between the proposed development and both the above *Arterial* links and neighbourhood centres, parks and schools. The internal road network has been designed to deliver a hierarchy of *Local* streets that provide access within/across the proposed new residential community and between the *Link* streets within the site and adjacent to the site. The movement function of each of internal *Local* street has sought to respect the different levels of motorised traffic whilst optimising access to/from public transport and catering for higher number of pedestrians and cyclists. In parallel, the adopted design philosophy has sought to consider the context/place status of each residential *Local* street in terms of level of connectivity provided, quality of the proposed design, level of pedestrian / cyclists activity and vulnerable users requirements whilst identifying appropriate 'transition' solutions between different street types.
- 3.1.3 Vehicular access to the development will be provided via the existing Citywest Avenue/Edenbrook signal-controlled junction. Currently, this junction acts as a 3-arm signal-controlled junction providing access to the Edenbrook development on the northern side of the recently constructed Citywest Avenue Extension. The fourth (southern) arm of this junction will accommodate the permitted development (ABP-302398-18) in addition to the future subject development traffic. The existing access roads and junction will be utilised by all modes of transport travelling to/from the proposed development.
- 3.1.4 The layout of the proposed development maximises permeability and enhances legibility, and the design of appropriately sized blocks actively contributes to a highly permeable and accessible community for both pedestrians and cyclists.



3.1.5 High levels of internal connectivity are also delivered for motorised vehicles, albeit at slower speeds to that achievable along the *Link* streets. The provision of a dedicated pedestrian/bicycle link in the southwest corner (leading to/from Fortunestown LUAS stop) of the site maximises permeability along key travel desire lines thereby delivering convenient, attractive and safe linkages for pedestrians and cyclists. The pedestrian and cycle route also facilitates links between the development and the park along the eastern boundary.

3.1.6 The Plaza link to Fortunestown LUAS Stop includes provision of adequate cycle facilities and consideration of pedestrian desire lines and allows for a seamless integration of the scheme with the Phase 2 development under construction under ABP-302398-18 and with Fortunestown LUAS Stop itself. Refer to Figure 1 below.

3.1.7 The street network and pedestrian and cycle links connect the development with the primary schools to the north west and also provides connections between adjoining residential areas and the proposed retail units at the plaza.

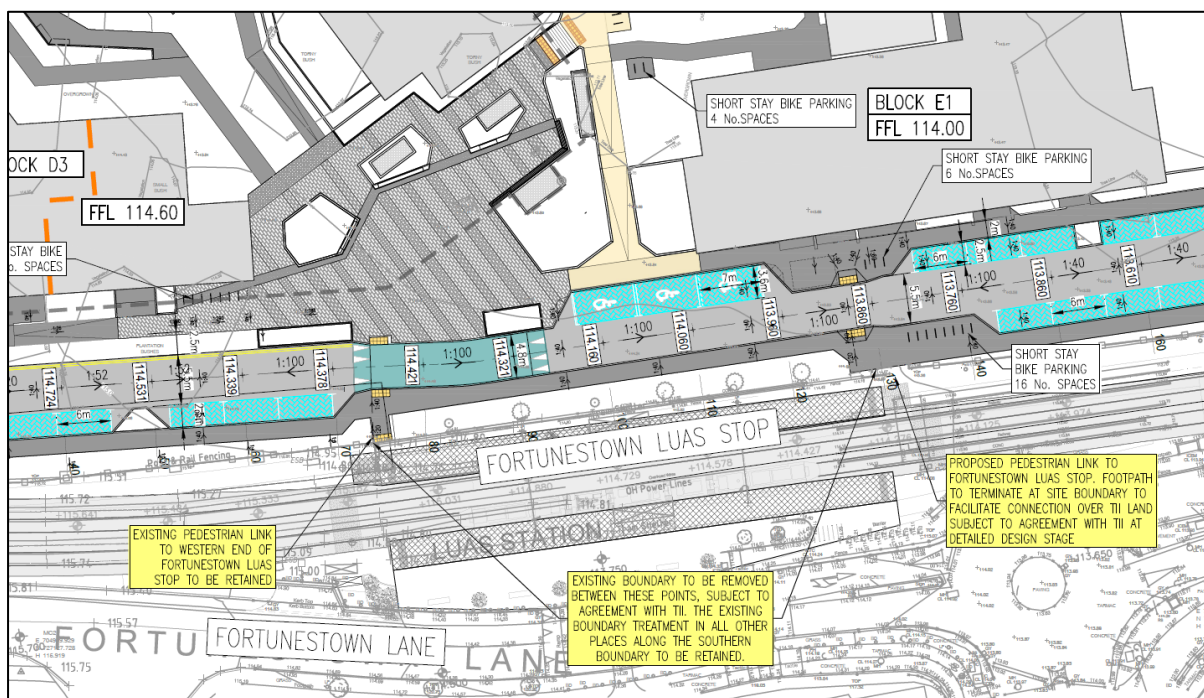


Figure 1: Connection to Fortunestown LUAS Stop



### 3.2 Design Parameters

The adopted design approach successfully achieves the appropriate balance between the functional requirements of different network users whilst enhancing the sense of place. Specific attributes of the schemes design which contribute to achieving this DMURS objective include:

- a) A strong sense of street enclosure is achieved by utilising the adopted building height to street width ratios internally. This is achieved on the 'Green Link' by moving the on-street cycle lane to an off-road arrangement and introducing a tree lined verge.
- b) A self-regulating street environment is created through the introduction of on-street parking, tight corner radii, reduced visibility splays and staggered junctions. Refer to *Figure 2* below.
- c) Footpaths no less than 1.8m (generally 2.0m or wider) are provided throughout the scheme with connections/tie-in to existing external pedestrian networks.

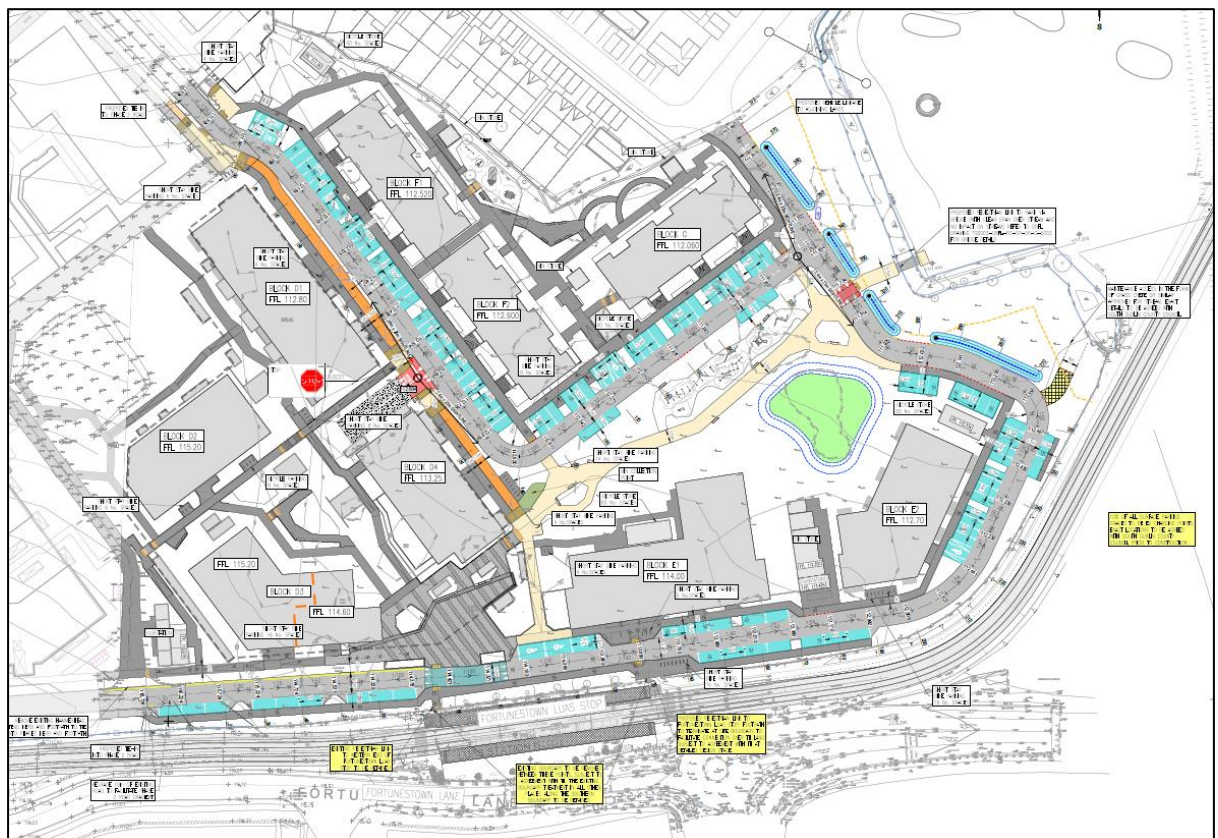


Figure 2: Extract of Road Layout

- d) Appropriate clear unobstructed visibility splays, as per DMURS requirements; are provided / safeguarded at all internal nodes and at the site access junctions to the external road network.
- e) Pedestrian crossing facilities are provided along key travel desire lines throughout the scheme in addition to those located at street nodes. All courtesy crossings are provided with either dropped kerbs or a raised flat top treatment thereby allowing pedestrians to informally assert a degree of priority.
- f) A variety of materials and finishes have been specified in the '*Shared Areas*' to indicate that the carriageway is an extension of the pedestrian domain. Refer to *Figure 3* below.
- g) Internally within the development carriageway kerb heights have been specified as 75-80mm in accordance with the objectives of DMURS.
- h) The developments principle *Local* streets connecting the new residential area with the external *Link* streets incorporate dedicated bicycle infrastructure with off-road 2-way cycle lanes (2.5m wide) provided along the '*Green Link*' and a shared pedestrian and cycle path continuing to the east to complete the link to the open space and to the park to the east. The '*Green Link*' also connects the proposed development with the District Park circa 1.5km to the north west (under construction under ABP 300555-18) and provides the link between both parks and with primary schools along that route.
- i) The proposed residential developments internal hierarchy of *Local* streets incorporates 5.5m wide carriageways on the main access routes (e.g. leading to/from the site access nodes with *Link* streets) and incorporates a 4.8m wide 'shared areas'.
- j) The proposed design incorporates the provision of a continuous local access road which upon entering the site from the north loops around the outer extents of the site accommodating a circuitous but highly legible vehicle connection that enables the centre of the development area to be prioritised for active modes of travel and high quality public realm / landscaping areas. This approach delivers a people focused central environment with pedestrian and cyclists accommodated along key travel desire lines (to internal and external destinations) whilst directing motorised vehicles to the peripheral areas along the meandering yet slightly longer route. The



alignment of the local access road has been designed to physically regulate a low speed environment whilst accommodating valuable permeable linkages to neighbouring residential sites to the northeast and west thereby accommodating valuable walk/cycle connectivity through the subject development to both the LUAS interchange and Citywest Shopping Centre to the south.

- k) This approach delivers an integrated network for all modes of travel, negating the creation of problematic cul-de-sac arrangements, eliminates the need for inefficient and unsightly vehicle turning areas, yet enables access to each apartment block (and delivery vehicle to the commercial units) in an appropriate balanced manner whilst ensuring that the majority of vehicle movements are centred upon the northern extents of the development (including access to/from basement car park facility) away from both (i) the central plaza and adjoining landscaped areas and (ii) the LUAS interchange (and onwards pedestrian / cycle connection) to the south.
  
- l) At the interface between the LUAS interchange (and onwards pedestrian / cycle link to City West Shopping Centre) the proposed design has purposively been modified to respond to the different demands placed upon this particular lightly trafficked section of the internal access road. Reflecting the need to give a greater level of priority to vulnerable road users, traveling to/from the eastern and western approaches to the LUAS interchange (and associated crossing points of the LUAS rail line) in addition to delivering traffic calming benefits this section of the access road has been designed to function as a shared street with the carriageway narrowed to 4.8m in width, the provision of a ramped entry / exit treatment to the shared carriageway and the implementation of material change to highlight the change in environment and the presence of pedestrians crossing the access road in this immediate area between the LUAS interchange and the developments central plaza area.
  
- m) The provision of on-street car parking includes both parallel and perpendicular parking bays along either one or both sides of the internal *Local* streets. In accordance with DMURS the parallel parking bays are dimensioned 6.0m long by 2.5m wide and perpendicular parking spaces are either 5m or 5.5m long and 2.4m or 2.6m wide.
  
- n) To reduce the visual impact of parking, it is primarily accommodated in a basement carpark and where surface parking is provided, the number of spaces per bay are generally limited to four parallel spaces and five perpendicular spaces.



- o) To reinforce narrower carriageways (particularly when spaces are empty) each parking space at surface level is finished so that it is clearly distinguishable from the main carriageway, i.e. permeable paving versus black top finish. Refer to Figure 2.
  
- p) The proposed 13 storey building is a key landmark identifying the subject site and Fortunestown LUAS Stop and plaza area, as per DMURS wayfinding principles.

