Proposed LRD at Taylors Lane, Ballyboden, Dublin 16

DMURS Compliance Statement

190068-X-X-X-XXX-RP-DBFL-CE-0006

TRANSPORTATION

March 2023

DBFL CONSULTING ENGINEERS

Project Title:	**Proposed LRD at Taylors Lane, Ballyboden, Dublin 16**		
Document Title:	**DMURS Compliance Statement**		
File Ref:	**190068-X-X-X-XXX-RP-DBFL-CE-0006**		
Status:	**P3 – Planning**	Rev:	**P03**
	S - Issued		

Rev.	Date	Description	Prepared	Reviewed	Approved
0	16/09/22	Draft - Design Team Review	Ruairi Browne	Mark Kelly	-
1	30/09/22	Stage 2 Pre-Planning Issue	Ruairi Browne	Mark Kelly	-
2	10/03/23	Stage 3 LRD Design Team Review	Ruairi Browne	Mark Kelly	-
3	29/03/23	Stage 3 Planning Issue	Ruairi Browne	Mark Kelly	Robert Kelly

Contents

1 INTRODUCTION

1.1 BACKGROUND

DBFL Consulting Engineers have been commissioned by Shannon Homes Ltd to prepare a DMURS Design Statement with regards to the proposed Residential Development at Taylor's Lane, Ballyboden, Dublin 16. A total of 402 residential units are proposed as part of the development, comprising 39 no. 1-bed apartments, 302 no. 2-bed apartments, 61 no. 3-bed apartments, one 656 sqm creche facility, and two retail units (97 sqm & 262 sqm).

The purpose of this report is to identify the specific design features that have been incorporated within the proposed residential scheme with the objective of delivering a design that is consistent with both the principles and guidance outlined within the Design Manual for Urban Roads and Streets (DMURS) (Version 1.1, 2019).

The proposal is for a Large Residential Development on this site of net c. 3.5ha comprising the following:

- Demolition of existing former Institutional buildings and associated outbuildings (c.5231 sq.m);
- Construction of 402 residential units within 3 apartment/duplex blocks ranging in height from 2-5 storeys and comprising of 39 no. 1-Beds; 302 no. 2-Beds; and 61 no. 3-Beds all with associated private balconies/terraces to the north/south/east/west elevations;
    - Provision of one crèche and two retail units.
    - Provision of 290 no. car parking spaces
    - Provision of 1054 no. cycle parking spaces
    - Vehicular access to the site via Edmondstown Road to the west.
    - Pedestrian Access to the site via Edmondstown Road to the west and Taylor's Lane to the north.
- The development proposal also includes the creation of a new access from the existing 3 arm signalised junction (Scholarstown Road / Ballyboden Road / Edmondstown Road) which will result in the upgrade of the junction to a four-arm signalised junction.

The following documents, which are included with the application consultation report submission, were reviewed:

- DBFL Consulting Engineers 'Traffic and Transport Assessment'
- DBFL Consulting Engineers 'Parking Strategy'
- DBFL Consulting Engineers 'Mobility Management Plan'
- DBFL Drawing: X-04-00-XXX-DR-DBFL-CE-1201 Roads Layout
- DBFL Drawing: X-04-00-XXX-DR-DBFL-CE-1202 Basement Layout
- DBFL Drawing: X-04-00-XXX-DR-DBFL-CE-1203 Roadworks at Edmondstown Road Layout
- 190068-X-04-Z00-XXX-DR-DBFL-CE-3201 Roadworks at Edmonstown Road Cross-Sections Sheet 1.pdf
- 190068-X-04-Z00-XXX-DR-DBFL-CE-3202 Roadworks at Edmonstown Road Cross-Sections Sheet 2.pdf
- DBFL Drawing: X-04-00-XXX-DR-DBFL-CE-5201 Road Construction Details Sheet 1

2 DMURS OBJECTIVES

2.1 OVERVIEW

DMURS seeks to balance the needs of all users, creating well designed streets at the heart of sustainable communities. It states that:

"Well designed streets can create connected physical, social and transport networks that promote real alternatives to car journeys, namely walking, cycling or public transport".

DMURS also seeks to create streets which are attractive places and encourage designs appropriate to context, character and location that can be used safely and enjoyably by the public.

2.2 THE DMURS USER HIERARCHY

DMURS set outs a clear a user hierarchy which promotes and prioritises sustainable forms of transport that designers must follow when preparing schemes. The Taylor's Lane development design team have adhered to this hierarchy, by assigning higher priority to the movement of pedestrians and cyclists within the development and implementing self-regulating streets which actively manage movement in a low speed, high quality residential environment.

2.3 DMURS DESIGN PRINCIPLES

At the heart of DMURS is a place-based, integrated approach to road and street design with the following four overarching design principals to be applied to the design of all urban roads and streets.

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

The ways in which the proposed the proposed development complies and adheres to the design principles of DMURS is described in the following sections, with details of how the various design elements will be implemented throughout the scheme.

3 DMURS DESIGN ATTRIBUTES

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
Place Function	The '*Place Function*' essentially distinguishes a street from a road, achieved largely by creating a relationship between the street and the buildings and spaces that frame it, ultimately resulting in a richer and more fulfilling environment	The adopted design philosophy has sought to achieve a quality '*sense of place*' by incorporating several large green open space areas to encourage social activity including linear parks running throughout the site. Furthermore, the type of surface materials, landscaping and street furniture have been chosen with consideration of both their aesthetic qualities and context of the existing surrounding environment. The design has also sought to minimise the impact of highway features by avoiding excessive signing, road markings and street furniture.

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
Permeability	Permeability can be categorised into four types: • Dendritic Networks • Open Networks • 3 Way Off-Set Networks • Filtered Permeability	The development strategy primarily adopts an open network model with elements of filtered permeability incorporated into the design, thereby maximising connectivity between key local destinations. The scheme affords a high degree of permeability and legibility for all network users, particularly for sustainable forms of travel. Filtered permeability is provided for example between the apartment blocks which line the access road providing links to/from to the access road to Taylor's Lane providing convenient access for pedestrians and cyclists. Further permeability will also be achieved with connections to the existing Taylor's Lane roadway to the north of the site. This will enhance connectivity not only for future occupants travelling between the development and the nearby retail, but also benefit current residents travelling west toward the Scholarstown Road developments. There are four separate access points onto Taylor's Lane, including a shared pedestrian and cycle entrance, and three pedestrian entrances. The development layout offers a well-connected, self-regulating street network with appropriate levels of internal connectivity for motorists via the ***Local Streets***. However, there is encouragement for active travel measures to be used where possible thanks to easy access to local public transport.

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
Approach to Speed	DMURS states that designers should balance speed management, the values of place and reasonable expectations of appropriate speed according to Context and Function. Where vehicle movement priorities are low, such as on Local Streets, lower speeds limits should be applied (30km/h)	The proposed ***Local Streets*** have been designed in accordance with DMURS design parameters for a 30kph design speed, with streets designed to ensure they are self-regulating through a combination of 'soft' (landscaping and active edges) and 'hard' measures (street geometry and raised tables).

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
Active Street Edges	Designers should aim for active street edges which provide passive surveillance and promote pedestrian activity	On-street activity is promoted within the internal layout through the direct access to the apartments and from the ***Local Streets,*** along with additional access points for pedestrians only.
Signage & Line Marking	DMURS notes that designers should use discretion with regard to the self-regulating characteristics of streets and the impact of signs / line marking on the value of place	In recognition of the low-speed nature and low movement function of the ***Local Streets***, the proposed design has sought to specify minimal signage and line markings along the internal streets with such treatments used sensitively throughout.

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
Materials & Finishes	DMURS states designers should use "*contrasting materials and textures to inform pedestrians of changes to the function of space (i.e. to demarcate verges, footway, strips, cycle paths and driveways) and in particular to guide the visually impaired*""	The ***Local Streets*** will be primarily contrasting materials to the ***Link Road*** (Edmondstown Road) to alert and subsequently influence driver behaviour and vehicle speeds. The use of tactile paving has been applied throughout in accordance with the guidance contained within the Traffic Management Guidelines (2003) and the UK Guidance on the use of Tactile Paving Surfaces to ensure a logical and navigable pedestrian environment is delivered for those with visual impairments.
Footways	DMURS notes that well-designed footpaths are free of obstacles and wide enough to allow pedestrians to pass each other in comfort.	Clear, unobstructed footpaths no less than 2.0m wide are provided throughout the scheme, with connections and tie-ins to existing external pedestrian networks. High-quality off-road links through the open spaces areas are provided, with widths up to 4.0m in sections.

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
Pedestrian Crossings	DMURS considers crossings to be "*one of the most important aspects of street design as it is at this location that most interactions between pedestrians, cyclists and motor vehicles occur*".	Well-designed pedestrian crossing facilities are provided at frequent intervals 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 continuous footpath treatment thereby allowing pedestrians to informally assert a degree of priority. Formal signalised crossings are provided at the more heavily trafficked crossings on Taylor's Lane and the proposed four-way signalised junction for the benefit of both pedestrians and cyclists. Such crossings are provided with a single straight direct movement to minimise crossing distance and enhance pedestrian / cyclist convenience and comfort levels. The two signalised pedestrian crossings located on Taylor's Lane are within easy reach of the pedestrian access points on the north of the site. All formal and informal pedestrian crossing facilities are at least 2.0m wide.
Corner Radii	Reducing corner radii improves pedestrian and cyclist safety at junctions by lowering vehicle speeds and increasing inter-visibility between users	With the objective of encouraging low vehicle speeds and maximising pedestrian safety and convenience, corner radii have been provided as per DMURS guidance, at: • ***Link*** / ***Local*** signalised junction and priority access junction corner radii at 5.0m, and • ***Local*** / ***Local*** nodes are predominantly 3.0m

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
Cycling Facilities	DMURS refers to the *National Cycle Manual (NCM)* as the principle form of guidance in relation to guidance on the design and provision of appropriate cycle facilities.	The ***Link*** / ***Local Street*** access junction will be designed in accordance with the NCM standard signalised junction arrangement. The upgrade of the Scholarstown Road /Ballyboden Road/Edmondstown Road junction to a four way intersection will incorporate signalised pedestrian crossings. A shared 5.0m pedestrian / cycle link is provided in the north of the site, connecting to Taylor's Lane. This will be key in terms of facilitating east-west connectivity between the site and access from the South. Various pedestrian links are also provided from the northeast, north west and south west corner, which connect to the new radial pedestrian pathway following the site boundary. As noted previously, there is also a connected network of pedestrian and provided through the open space areas which will encourage and promote cycling for the proposed residential development. Along the remaining lightly trafficked, low speed internal ***Local Streets***, cyclists will share the carriageway with other street users as per the National Cycle Manual guidance for such situations. This well-designed integrated environment along the ***Local Streets*** will provide a high Quality of Service for cyclists by offering quiet, interesting and well-surfaced streets along with the self-evident and self-enforcing nature of the environment.

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
Carriageway Surfaces	For low design speeds (i.e. 30km/h) changes in colour and/or texture should be used, where shared carriageways proposed (i.e. 10-20km/h) applied to the full length of the street	The ***Local Streets*** will be primarily contrasting materials to the ***Link Road*** (Edmondstown Road). Contrasting coloured surfacing will also be applied to the cycle lanes through the cycle signalised junction to increase driver awareness of the presence of cyclists.
Junction Design	DMURS notes that junction design is large determined by volumes of traffic and that designers should take a more balanced approach to junction design catering for all users	The main access junction will be upgraded to a four-way signalised junction which will enable appropriate traffic management of the future predicted traffic flows. The design of the signalised junction incorporates high quality crossing facilities which facilitate direct crossing movements and links to the wider pedestrian and cycling network. With the exception of the proposed upgraded signalised junction, all other junctions within the proposed development will be priority controlled which is consistent with the proposed traffic flows and complies with the requirement of DMURS for junctions between ***Local Streets.***

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
Forward Visibility & Visibility Splays	DMURS provides Stopping Sight Distances Standards in relation to forward visibility requirements at junctions to ensure drivers have sufficient reaction time	Appropriate clear unobstructed visibility splays on both the horizontal and vertical planes, as per DMURS requirements; are provided / safeguarded at all internal nodes and at the site access junctions to the external road network.
Kerbs	DMURS recommends kerbs heights of 125mm on Link Streets and lower kerb heights of 60mm where pedestrian activity is higher & design speeds lower. No kerb for shared surface.	Internally within the development carriageway kerb heights will comply with DMURS requirements having been specified as 75-80mm on ***Local Streets*** internally within the development in accordance with the objectives of DMURS.

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
On-Street Parking	Well-designed on-street parking can help calm traffic, although a balance needs to be struck as an over provision will conflict with sustainability objectives and be visually dominant.	In accordance with DMURs, parking is provided through a mix of perpendicular and parallel spaces measuring: - On-street perpendicular spaces: 5.0m x 2.5m - On-street parallel spaces: 6.0m x 2.5m minimum - Underground perpendicular spaces: 5.0m x 2.5m The potential dominance of on-street car parking, particularly around the apartment blocks, is actively managed through the provision of landscaped buffers, street trees and the provision of landscaped communal open space areas with blocks of perpendicular parking being limited to no more than six spaces.
Multi-disciplinary Design Team	DMURS advocates multi-disciplinary input into the development of a scheme to ensure a holistic design approach is implemented	In accordance with design philosophy of DMURS, the Taylor's Lane scheme has been prepared by a multi-disciplinary design team including McGill Planning, McCrossan O Rourke Manning Architects (architect and landscape architect), DBFL Consulting Engineers (civil engineers & transportation planning).

DBFL CONSULTING ENGINEERS

Registered Office
Ormond House
Upper Ormond Quay
Dublin 7 Ireland D07 W704

+ 353 1 400 4000
info@dbfl.ie
www.dbfl.ie

Cork Office
14 South Mall
Cork T12 CT91

+ 353 21 202 4538
info@dbfl.ie
www.dbfl.ie

Waterford Office
Suite 8b The Atrium
Maritana Gate, Canada St
Waterford X91 W028

+ 353 51 309 500
info@dbfl.ie
www.dbfl.ie