

# Design Manual for Urban Roads and Streets

## Street Design Audit

### Prepared in respect of the residential development at Dawsons Demesne, Ardee

The development will consist of the provision of a total of 122no. residential units along with provision of a crèche. Particulars of the development comprise as follows:

- (a) Site excavation works to facilitate the proposed development to include excavation and general site preparation works.
- (b) The infilling and raising of ground levels within the site as required with inert materials.
- (c) The provision of a total of 48no. residential dwellings which will consist of 2 no. 2 bed units, 44no. 3 bed units and 2no. 4 bed units;
- (c) The provision of a total of 74no. apartments/duplex units consisting of 17no. 1 bed units, 32no. 2bed units and 25no. 3bed units;
- (d) Provision of a creche;
- (e) Provision of associated car parking at surface level via a combination of in-curtilage parking for dwellings and via on-street parking for the creche, duplexes and apartment units;
- (f) Provision of electric vehicle charge points with associated site infrastructure ducting to provide charge points for residents throughout the site;
- (g) Provision of associated bicycle storage facilities at surface level throughout the site and bin storage facilities;
- (h) Creation of a new access point from Castleguard Road with associated upgrade works to the existing internal access road to facilitate vehicular, pedestrian and cycle access;
- (j) Provision of internal access roads and footpaths and associated works;
- (k) Provision of residential communal open space areas to include a formal play area along with all hard and soft landscape works with public lighting, planting and boundary treatments to include boundary walls, railings & fencing;
- (l) Provision of 1no. ESB substation;
- (m) Provision of a foul mains pumping station with associated infrastructure;
- (m) Internal site works and attenuation systems which will include for provision of a hydrocarbon and silt interceptor prior to discharge into the surface water network in Castleguard Manor ;
- (n) All ancillary site development/construction works to facilitate foul, water and service networks for connection to the existing foul, water, gas and ESB networks.

**Prepared by:** Genesis Planning Consultants & Dowdall Architects

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**Connectivity**

Key Issues	Key DMURS Reference.	Design Response
Strategic routes/major desire lines been identified and are clearly incorporated into the design.	3.1 – Integrated Street Network 3.2.1 – Movement Function 3.3.1 – Street layouts 3.3.4 - Wayfinding	-Connections to adjoining lands facilitated via the internal roadway and footpaths which connect onto the local roads -DMURS states that block dimensions of 60-80m is optimal for pedestrian movement and will sustain a variety of building types. This has been achieved throughout the site to the fullest practical extent.
Multiple points of access are provided to the site/place, in particular for sustainable modes.	3.3.1 – Street Layouts 3.3.3 – Retrofitting <sup>1</sup>	-The roadway/pedestrian routes through the site encourages permeability for pedestrians/cyclists. -Multiple pedestrian access points to the site are also proposed along both Hale Street and Castleguard Road.
Accessibility throughout the site is maximised for pedestrians and cyclists, ensuring route choice.	3.3.1 – Street Layouts 3.3.2 – Block Sizes 3.4.1 – Vehicle Permeability	- Frequent entrances to the neighbourhood reduce the size of individual junctions and streets. This reduces the potential for severance between communities and increases pedestrian/ cyclist mobility as streets/junctions are more compact and easier to navigate. Links are incorporated to all areas of the site and in particular to open space and landscaped areas.
Through movements by private vehicles on local streets are discouraged by an appropriate level of traffic calming measures.	3.2.1 – Movement Function 3.2.3 – Place Context 3.4.1 – Vehicle Permeability	-The internal access road is separated from the pedestrian routes/zones via appropriate kerbing. -Incorporation of home zone areas to avoid any through-traffic via local streets via the slower nature of the home zone will result in this being less attractive to through traffic. -Traffic calming via raised tables and courtesy strips to control speed.

<sup>1</sup> When connecting with existing communities a detailed analysis and extensive community consultation should be carried out to identify the optimal location for connections (refer also to the NTA Permeability in Existing Urban Areas: Best Practice Guide).

## Self-Regulating Street Environment

Key Issues	Key DMURS Reference.	Design Response
A suitable range of design speeds have been applied with regard to context and function.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.1.1 – A Balanced Approach to Speed <sup>2</sup>	-The plaza associated with the creche/community building creates a sense of place which is re-iterated via the central open space. -The proposed development has been designed so that there is priority for pedestrians, cyclists, public transport and then cars with a design speed of 30kph for local streets. - Courtesy crossings, which will be defined by a change in material and vertical deflection, allow pedestrians to informally assert a degree of priority over drivers while also acting as traffic calming measure to reduce road speeds.
The street environment will facilitate the creation of a traffic calmed environment via the use of 'softer' or passive measures. <sup>3</sup>	4.2.1 – Building Height and Street Width 4.2.2 – Street Trees 4.2.3 – Active Street Edges 4.2.4 – Signage and Line Marking 4.2.7 – Planting 4.4.2 – Carriageway Surfaces 4.4.9 - On-Street Parking Advice Note 1 – Transitions and Gateways	-Increased building height at appropriate locations to create a sense of place & tree lined avenues provided. -Appropriate surface treatments at frontage onto internal roads to create a pedestrian friendly zone. -Internal traffic speed and children at play signs to be provided. Road line marking & signage also to be provided. -Incorporation of a reduced entrance radii of 3 metres for internal junctions within the site to prioritise pedestrians throughout. -Carriageway surfaces will incorporate coloured raised tables/courtesy strips. -Active street edge provided alongside the main vehicular entrance point.
A suitable range of design standards/measures have been applied that are consistent with the applied design speeds.	4.4.1 - Carriageway Widths 4.4.4 – Forward Visibility 4.4.5 – Visibility Splays 4.4.6 – Alignment and curvature 4.4.7 – Horizontal and Vertical Deflections	Design requirements are met as below: -local distributor roads within the site of 5.5m internal roads and 5m on local roads within the development. -footpath width of 2 metres (min) throughout. -visibility splays of 2.4 X 49m or 2.4m x 23m at all road junctions. - Traffic calming via raised tables and courtesy strips to control speed.

<sup>2</sup> Refer also to the National Speed Limit Guidelines

<sup>3</sup> In retrofit situations a detailed analysis should be carried out to establish what measures exist, what their likely effectiveness is and level of intervention required to achieve the designed design speed.

## Pedestrian and Cycling Environment

### Key Issues

The built environment contributes to the creation of a safe and comfortable pedestrian environment.

### Key DMURS Reference.

4.2.1 – Building Height and Street Width  
 4.2.3 – Active Street Edges  
 4.2.5 – Street Furniture  
 4.4.9 - On-Street parking

### Design Response

-The proposed development has been designed so that residential units are overlooking the main access route(s) through the site and all areas within the site.  
 -High-quality landscaping works and tree planting in addition to raised surfaces are also proposed on 6m wide roads  
 -On street parking/parallel parking proposed in accordance with section 4.4.9 of DMURS which states

'On street parking when well designed can:

- Calm traffic by increasing driver caution
- Add to the vitality of communities by supporting retail/commercial activities that front on to streets through the generation of pedestrian activity as people come and go from their vehicles
- Contribute to pedestrian/cyclist comfort by providing a buffer between the vehicular carriageway and foot/cycle path
- Reduce the need or temptation for drivers to kerb mount and block foot/cycle paths
- Provide good levels of passive security as buildings are overlooked by buildings.'



Extract from DMURS- Figure 4.76

<p>Junctions been designed to ensure the needs of pedestrians and cyclists are prioritised<sup>4</sup>.</p>	<p>4.3.2 - Pedestrian Crossings  4.3.3 – Corner Radii  4.4.3 - Junction Design  4.4.7 - Horizontal and Vertical Deflections</p>	<p>-Throughout the site courtesy crossings are provided to prioritise pedestrian and cyclist crossings/ connectivity.  - In general, on junctions for local streets a maximum corner radii of 3m has been applied on local streets as design speeds are low and movements by larger vehicles are infrequent, such as on Local streets,</p>
<p>Footpaths are continuous and wide enough to cater for the anticipated number of pedestrian movements.</p>	<p>3.2.1 – Movement Function.  3.2.3 – Place Context.  4.2.5 – Street Furniture  4.3.1 - Footways, Verges and Strips  4.3.2 - Pedestrian Crossings</p>	<p>-Throughout the site, pedestrian routes are 2m wide which provides adequate space for 2 people to pass comfortably. (DMURS identifies a minimum width of 1.8m). Additional width (total 2.1m) of footpath has been provided along locations of head-on parking to ensure continued ease of movement.  -Seamless connectivity provided to all areas of the site for residents and patrons.</p>

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<sup>4</sup> Refer also to the National Cycle Manual (2011)

## Pedestrian and Cycling Environment (cont)

Key Issues	Key DMURS Reference.	Response
<p>The particular needs of visually and mobility impaired users been identified and incorporated in the design.</p>	<p>4.2.5 - Street Furniture            4.3.1 - Footways, Verges and Strips            4.2.5 - Street Furniture            4.3.2 - Pedestrian Crossings            4.3.4 - Pedestrianised and Shared Surfaces</p>	<p>-The design of the scheme has placed a particular focus on the pedestrian.            -The plaza, walkways and open space area has been designed to provide a sense of enclosure, be active spaces and with good surveillance in order to enhance pedestrians sense of safety. Road crossing and internal raised junctions are to be constructed in a different colour. Tactile paving has been provided to facilitate pedestrian movement along all junction points.            -All areas readily accessible to mobility impaired persons.</p>
<p>Cycling facilities will cater for cyclists of all ages and abilities.<sup>5</sup></p>	<p>3.2.1 – Movement Function.            3.2.3 – Place Context.            4.3.5 - Cycle facilities.</p>	<p>-Provision of local roads and pedestrian routes throughout the site to connect with all areas and the wider locality.            -Provision of adequate bicycle storage areas at various locations throughout the site to encourage usability.            -Pedestrian crossing points are proposed along the internal road with appropriate provision for cyclists also facilitated.</p>

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<sup>5</sup> Refer also to the National Cycle Manual (2011)

## Visual Quality

Key Issues	Key Considerations and DMURS Ref:	Design Response
The landscape plan responds to the street hierarchy and the value of the place.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.2 – Street Trees 4.2.7 – Planting Advice Note 1 – Transitions and Gateways	-The area associated with the creche/community building creates a sense of place which is re-iterated via the central open space which is only accessible to pedestrians and cyclists. -Landscaping proposals are designed specifically to create a high quality residential environment in accordance with DMURS via feature planting, trees and buffer/privacy strips.
Street furniture is orderly placed.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.5 - Street Furniture. 4.3.1 Footways, Verges and Strips	-The street furniture positioned at focal points such as the plaza and at the open space area to serve the movement patterns of pedestrians and encourage usability. Street furniture will be placed within designated zones and items chosen from a limited colour palette that promotes visual cohesion with the number of items balanced with other facilities. -Footpaths, verges and strips designed to required standards (refer to road design specifics).
The use of signage and line marking has been minimised.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.4 - Signage and Line Marking.	-Line marking only required to serve the internal junctions providing a 'less is more' approach to reinforce lower design speeds. A similar approach is to be taken with signage as drivers must navigate the street environment with full regard to their own behaviour and the behaviour of others around them. An emphasis on the values of place and shared road use will also reduce the requirement of signage and it's visual impact in order to reduce visual clutter. -All other surface treatments will consist of paving, resin-bound surfacing and a concrete finish for the main pedestrian and cyclist route. -Provision of internal speed limit and 'children at play' signs.
Materials and finishes used throughout the scheme have been selected from a limited palette and respond to the value of the place?	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.6 – Materials and Finishes 4.2.8 – Historic Contexts. 4.3.2 – Pedestrian Crossings 4.4.2 – Carriageway Surfaces	-As above, landscaping proposals designed specifically to create a high quality residential environment in accordance with DMURS; specifically block paving to the perimeter of buildings. -Surface finishes to the footpaths will be a high quality concrete surface and constructed to a taking in charge finish specification. Courtesy crossings, which will be defined by a change in material

and vertical deflection, allow pedestrians to informally assert a degree of priority over drivers.

-Pedestrian crossing facilities to be provided at junctions and on each arm of the junction.

-Corner radii have been minimised so that crossing points are located closer to corners on pedestrian desire lines.

-Crossings located at strategic locations where pedestrians are likely to cross or to coincide with traffic calming measures on longer straights.



## Additional Comments

The principle design guidance of DMURS has been considered in the design as the design prioritises pedestrians, cyclists, public transport and then private cars, as per the extract opposite from DMURS. Specifically we highlight:



- a pedestrian focus is incorporated into the layout with block sizes of 60-80m in accordance with DMURS to achieve ease of movement and wayfinding for pedestrians.
- pedestrian links to open space and landscaped areas.
- provision of adequate street furniture & street lighting throughout.
- use of contrasting materials between pedestrian and vehicular routes.
- provision of cycleway(s) within/through the site are provided on-street, except along the Link Road which has designated cycleways provided.
- provision of pedestrian footpaths of min 1.8 metres in areas of low pedestrian activity & 2 metres elsewhere
- internal pedestrian and cyclist crossings via provision of 'courtesy crossings'.
- provision of bicycle storage spaces both at street level to encourage use of public transport/sustainable modes of transport.
- Provision of a bus lay-by along the link road adjacent to the creche, which allows for future bus route(s) to serve the site internally.
- incorporation of the 'pedestrian focus' to inform the site landscaping works.
- provision of internal speed limit and 'children at play' signs.
- Provision of on-street/parallel parking in accordance with section 4.4.9 of DMURS.

Overall the scheme design will be consistent with standards and objectives as set out under DMURS.

Personnel Information			
	Name	Date	Signature
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