#### Project

### **Ashbourne SHD**

**Report Title** 

**DMURS Design Statement** 

Client

Arnub Ltd. & Aspect Homes (ADC) Ltd





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# **1.0 INTRODUCTION**

#### 1.1 BACKGROUND

- 1.1.1 DBFL Consulting Engineers have been commissioned by Arnub Ltd. & Aspect Homes (ADC) Ltd. to prepare a DMURS Design Statement with regards to the proposed residential development located at Cherry Lane, Ashbourne, Co. Meath.
- 1.1.2 Arnub Ltd. & Aspect Homes (ADC) Ltd. seek permission for a strategic housing development, located in the townlands of Baltrasna and Milltown, Ashbourne, Co. Meath. The proposed development site is located to the west of the R135 Dublin Road, south of existing housing at Alderbrook Rise, Alderbrook Downs & Alderbrook Heath, east of existing housing at Tara Close & Tara Court, south of Cherry Lane and west of Hickey's Lane.
- 1.1.3 The development will consist of 702 no. dwellings, comprised of 420 no. 2 & 3 storey, 2, 3, 4 & 5 bed houses, 39 no. 2 & 3 bed duplex units in 19 no. blocks, and 243 no. 1, 2 & 3 bed apartments in 20 no. buildings, which range in height from 3, 3-4, 4-5, & 4-6 storeys. The proposed development also provides for the following uses: (i) 2 no. creches (c.288.56m<sup>2</sup> & 383.68m<sup>2</sup>) accommodated in Blocks A and A1 respectively, (ii) 4 no. retail/commercial units (c. 105.58 m<sup>2</sup> & 173.83m<sup>2</sup> in Block A, c.190.6m<sup>2</sup> in Block A1 & c.469m<sup>2</sup> in Block B1) and (iii) GP practice / medical use unit (c.186m<sup>2</sup>) in Block A1.
- 1.1.4 Access to the development will by via (i) Cherry Lane to the north-east, off the R135 Dublin Road, via a new proposed internal access road and (ii) via Hickey's Lane to the east, off the R135 Dublin Road, including pedestrian and cycle paths.
- 1.1.5 The proposed development provides for (i) all ancillary / associated site development works above and below ground, (ii) public open spaces, including hard & soft landscaping, play equipment & boundary treatments, (iii) communal open spaces, (iv) undercroft, basement & surface car parking (v) bicycle parking (vi) bin storage, (vii) public lighting, (viii) plant (M&E), utility services & ESB sub-stations, all on an overall application site area of 20.04Ha.
- 1.1.6 The proposed development also includes for an area of c. 1Ha reserved for a school site and playing pitch in the western part of the site. Permission is also sought to demolish all existing structures on site, i.e. 3 no. single storey dwellings & associated out-buildings (659m<sup>2</sup> in total).
- 1.1.7 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) and also the National Cycle Manual (NCM).

- 1.1.8 The scheme proposals are the outcome of an integrated design approach that seeks to implement a sustainable community connected by well-designed streets which will deliver safe, convenient, and attractive networks in addition to promoting a real and viable alternative to car-based journeys.
- 1.1.9 The following documents, which are included with the Planning submission, were reviewed among others:
  - DBFL Consulting Engineers Report 200059-DBFL-XX-X-0005-TTA titled `Traffic and Transport Assessment'
  - Existing Transportation Linkages: Drawing. No. 200059-DBFL-TR-SP-DR-C-1101
  - Proposed Transportation Linkages: Drawing. No. 200059-DBFL-TR-SP-DR-C-1102
  - DBFL Roads Layout Drawings No. 200059-DBFL-RD-SP-DR-C-1201 to 200059-DBFL-RD-SP-DR-C-1204
  - DBFL Masterplan Road Hierarchy Layout Drawing No. 200059-DBFL-RD-SP-DR-C-1205
  - Proposed Signalised Junction at Cherry Lane: Drg. No. 200059-DBFL-RD-SP-DR-C-1206

# 2.0 DMURS OBJECTIVES

### 2.1 OVERVIEW

2.1.1 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".

2.1.2 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

2.2.1 DMURS set outs a clear user hierarchy which promotes and prioritises sustainable forms of transport that designers must follow when preparing schemes. The Mulhuddart residential 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

- 2.3.1 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
- 2.3.2 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.

### **3.0 DMURS DESIGN ATTRIBUTES**

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
		The proposed development street hierarchy is composed of <i>a Link Street</i> , <i>Primary</i> and <i>Secondary Local Streets</i> as well as <i>Shared Surface (Homezones)</i> areas.
DMURS encourages		The <b>proposed development</b> will be accessed via 2 no. site access points from Dublin Road (R135). The primary vehicular site access will be from Cherry Lane via a new signalised junction provided, while a secondary vehicular access will be provided via Hickey's Lane, using an uncontrolled priority junction.
	The overall network design has sought to optimise connectivity to/from public transport and provide high quality facilities for pedestrians and cyclists. The adopted design philosophy has also sought to consider the context / place status in terms of level of connectivity and permeability provided, quality of the proposed design, level of pedestrian/cyclist activity and vulnerable users requirements whilst identifying appropriate 'transition' solutions between the different street types.	
Movement	designers to consider the movement function of a street / street network and	<b>Link Street:</b> The link street extends from the Dublin Road and running through the subject and providing connection to potential future development lands west of the development. The link Street is 6m wide road with 1.5m grass verge, 1.75m wide cycle track and 2.5m wide footpath on both sides of the road.
Function deve refle conr volu	reflective of the levels of connectively required and volumes of traffic	The function of the <i>Local Streets</i> and <i>Shared Surface</i> areas will be to provide access within/across the development but also contribute to a high quality sense of 'place' through the proposed landscaping proposals and material finishes. In particular, the <i>Shared Surface</i> areas prioritise the movement of people over vehicles and promote low vehicle speeds throughout.
		<b>Primary Local Street:</b> The primary local streets are linked to the proposed Link Street and Hickeys Lane, providing a key function of primary access. This street has width of 5.5m wide and runs within the development.
		<b>Secondary Local Street:</b> The secondary local streets are linked to the Primary Local Streets and provides a function of secondary access. This street has width of 5m – 5.5m wide and runs within the development.
		<b>Shared Surface (Homezones):</b> There are several Homezones created within the development. The Homezones will have primary function of serving the needs of pedestrian, cyclists, children and residents with the reduced speed and dominance of cars.

DMURS Guidance	Proposed Development Adopted Design Approach		
	<b>Pedestrian/Cycle Greenway:</b> The 4m wide greenway is proposed within the development which extends from the Dublin Road and run through the development and connecting to future development lands west of the proposed development. Providing high quality connectivity and permeability for pedestrian and cyclists.		
	<b>Pedestrian/Cycle Link:</b> Pedestrian and cycle links are provided to/from Hickeys Lane and the adjoining lands north and west of the proposed development.		
The ' <i>Place Function'</i> 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	The adopted design philosophy has sought to achieve a very high quality ' <i>sense of place'</i> by incorporating several green open space areas to encourage social activity with the site. There are also smaller landscaped areas provided between the blocks, which contributing to an aesthetically pleasing streetscape. These provide recreational paths, seating areas and play spaces. 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		
environment			
<ul><li>DMURS state the following optimal block dimensions:</li><li>60-80m for local centres</li><li>100m in neighbourhoods or suburbs</li></ul>	The block sizes within the proposed are optimised in line with densities being within the 60m-80m dimensions and thereby comply with the requirements of DMURS. The development aims to maximise accessibility and permeability internally, particularly for those travelling on foot or by bicycle.		
DMURS states that in general "the more the orthogonal street layout the more legible it will be (as well as being the most connected)"	A legible street pattern has been adopted for the proposed development in accordance with DMURS through creating defined footpaths either side of the <i>Link/Local Street</i> , whilst <i>Shared Surface</i> areas defined by changes in materials and landscaping. A network of footpaths throughout the open space areas provide further permeability throughout the site and linkages to the external network along the Dublin Road. The grid and curvilinear street pattern adopted for the proposed development is recognised by DMURS as being legible in terms of wayfinding.		
	DMURS Guidance		

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 key local destinations. The scheme affords a high degree of permeability and legibility for all network users, particularly for sustainable forms of travel. Pedestrians and cyclists can access the site from three locations along the R135. Potential pedestrian/cycle connections could be provided into the existing Alderbrook and Tara Close housing developments to the North and West respectively, if required in the future to connect to neighbouring lands. In addition to the pedestrian and cyclist facilities internal to the site, Cherry Lane junction will also be upgraded to a signalised junction with the provision of improved pedestrian & cycle facilities. The development incorporates an extensive network of off road pedestrian/cyclist paths through the open spaces. The connections maximise permeability through the development and to the wider residential area and cycling network by delivering a high quality, attractive facilities along what will be key travel desire lines. The resulting development layout offers a well-connected, self-regulating street network with appropriate levels of internal connectivity delivered for motorised vehicles, via the <i>Link Street, Local Street</i> and <i>Shared Surface areas</i> , and excellent levels of connectivity and permeability for pedestrians/cyclists through, to and from the development site.
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 <i>Link Street</i> has been designed in accordance with DMURS design parameters for a 50kph design speed, whilst the <i>Local Streets</i> have been designed in accordance with the design parameters for a 30kph design speed. Similarly, the <i>Shared Surface</i> areas have been designed to ensure they are self-regulating through a combination of 'soft' (landscaping and active edges) and 'hard' measures (street geometry, buildouts and raised table). The proposed scheme also proposes to manage vehicle speeds on local streets through the provision of speed calming raised tables at local access junctions with the Link Street and a raised toucan crossings on the Link Street to the potential future school from the greenway. This calming measure along with the proposed walking/cycling facilities will help create the sense of a more 'built up' urban environment which will encourage motorists to reduce their speed.

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
Street Trees, Planting & Street Furniture	DMURS primarily considers street trees in terms of enclosure and suggests that for ratios of building height and street width within this development that supplementary street trees are desirable	A comprehensive landscape masterplan for the proposed development has been prepared by Cunnane Stratton Reynolds. The landscape masterplan reinforces a sense of street enclosure through the areas of planting, landscaped buildouts and street trees with appropriate canopy spreads best suited to <i>Link/Local Streets</i> and <i>Shared Surfaces</i> for optimal compliance with DMURS.
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 of the internal street network and shared movement function of the <i>Shared Surface</i> areas, the proposed design has sought to minimise signage and line marking. It is considered that the street design, together with the proposed landscaping and surfacing material will provide an environment which is both intuitive for motorists and self-regulating. 'Stop' signage and line markings are proposed at the <i>Local Street</i> priority junction to reinforce priority. Similarly, new road markings and signage will be provided at the new <i>Link Street</i> .
Materials & Finishes	DMURS states that designers should use " <i>contrasting</i> <i>materials and textures to</i> <i>inform pedestrians of</i> <i>changes to the function of</i> <i>space (i.e. to demarcate</i> <i>verges, footway, strips, cycle</i> <i>paths and driveways) and in</i> <i>particular to guide the</i> <i>visually impaired</i> "	The range of proposed materials is in line with the requirements of DMURS with the <i>Link</i> and <i>Local Streets</i> being formed using standard macadam / asphalt finishes. <i>Shared Surface</i> areas will be formed using a buff colour surfacing material to further reinforce the different environment of the <i>Shared Space</i> compared to the remaining network. 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	Clear, unobstructed footpaths (2m wide) along the local streets are to be provided throughout the entire subject site. The <i>Link Street</i> will be provided with 2.5m wide footpaths on both sides of the carriageway in addition two segregated cycle tracks. The internal footpath network will tie-in to the external pedestrian

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
	enough to allow pedestrians to pass each other in comfort.	facilities along the Dublin Road, thereby complying with DMURS requirements. High-quality off road links through the open spaces areas are provided at 4.0m wide.
Pedestrian Crossings	DMURS considers crossings to be " <i>one of the most</i> <i>important aspects of street</i> <i>design as it is at this location</i> <i>that most interactions</i> <i>between pedestrians, cyclists</i> <i>and motor vehicles occur</i> ".	Well-designed pedestrian/cycle crossing facilities will be provided at frequent intervals along key travel desire lines throughout the scheme. All courtesy crossings are provided with either dropped kerbs or a raised flat top / continuous footpath treatment thereby allowing pedestrians to informally assert a degree of priority. There will be a 4.0m wide raised toucan crossing provided for the greenway crossing to the potential future school, for the benefit of both pedestrians and cyclists as well as children going to the future school. Signal controlled pedestrian crossing swill be provided at the site access junction at Cherry Lane. All informal pedestrian crossing facilities are at least 2.0m wide, whilst all controlled pedestrian crossings are at least 2.4m wide and all Toucan crossings are 4.0m wide.
Corner Radii	Reducing corner radii improves pedestrian and cyclist safety at junctions by lowering vehicle speeds and increasing inter-visibility between users	<ul> <li>With the objective of encouraging low vehicle speeds and maximising pedestrian safety and convenience, corner radii have been provided as per DMURS guidance, at:</li> <li><i>Site Access / Local Street</i> have generally been specified as between 3.0m-4.5m, as informed by swept path analysis.</li> </ul>
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 existing Cherry Lane junction will be upgraded to a signalised cycle protected junction facilitating safe, direct crossing movements along key desire lines and connections to the future Recreational Hub lands. High-quality segregated cycle tracks will be provided on both side of the <i>Link street</i> carriageway which will appropriately tie in with the proposed cycle facilities on Dublin Road. This will encourage and promote cycling not only for the proposed residential development, but for existing and future residents in the wider lands. Shared pedestrian and cyclist facilities (4m wide) will be provided through the open space within the development extending from Dublin Road to the future potential school and lands west of the development.

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
		This share pedestrian / cycle link has been designed in accordance with the NCM. Raised uncontrolled crossings, as well as a toucan crossing are proposed on local streets within the development.
		The connected network of pedestrian and cycle paths provided through the open space areas which will encourage and promote cycling not only for the proposed residential development, but for the future educational development proposed and potential future development to the west of the subject site.
		Along the remaining lightly trafficked, low speed internal <i>Local Streets</i> , cyclists will share the carriageway with other street users as per the NCM guidance for such situations. This well designed integrated environment along the <i>Local Streets</i> 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.
Carriageway Widths	<ul> <li>DMURS recommends the following carriageway / lane widths:</li> <li><i>Local Street</i> lane widths within the range of 2.5-2.75m (i.e. carriageway width of 5.0m-5.5m)</li> <li><i>Shared Surface</i> carriageway width should not exceed 4.8m</li> </ul>	<ul> <li>The proposed residential developments internal street network and carriageway widths are compliant with DMURS, incorporating:</li> <li><i>Link Streets:</i> <ul> <li>The Link Street through the development comprises a 6.0m wide carriageway.</li> </ul> </li> <li><i>Local Streets:</i> <ul> <li>The Primary Local Streets comprise a 5.5m wide carriageway, while the Secondary Local Streets have a carriageway 5.0m wide.</li> </ul> </li> <li><i>Shared Surface Areas:</i> <ul> <li>The Shared Surfaces have widths between 4.8m with a 1.5m flush pedestrian strip.</li> </ul> </li> </ul>
Carriageway Surfaces	Where low design speeds are desirable DMURS states that changes in colour and/or texture should be used periodically such as at crossings or where shared carriageways are proposed (i.e. 10-20km/h) applied to the full length of the street	<ul> <li>The <i>Link</i> and <i>Local Street</i> network will be primarily formed using standard macadam / asphalt finishes, whilst footpaths will be formed by concrete.</li> <li>However, contrasting materials will be applied at the transitional points to assist in alerting drivers to the low speed environment, reinforce pedestrian/cyclist priority at crossings. Furthermore, the <i>Shared Surface</i> areas will have a buff tarmac finish to emphasis the shared nature of the environment.</li> <li>To reinforce narrower carriageways (particularly when parking spaces are empty), each parking space at surface level is finished so that it is clearly distinguishable from the main carriageway, i.e. paved versus black top/buff finish.</li> </ul>

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
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 Primary site access junction at Cherry Lane will be upgraded to a cycle protected signalised junction which will enable appropriate traffic management of the future predicted traffic flows. The design of the signalised junction incorporates high quality pedestrian and cyclist crossing facilities which facilitate direct crossing movements and links to the wider pedestrian and cycling network. The junction design will tie in with the proposed upgrades to the R135, as part of the "Ashbourne Main Street Refurbishment Scheme". The secondary site access junction will remain priority controlled junction and will be capable of catering for the projected volumes of development traffic. Protected cycle facilities will be provided through the junction to tie the proposed upgrades to the R135, as part of the "Ashbourne Main Street Refurbishment Scheme". 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.
Forward Visibility & Visibility Splays	DMURS provides SSD 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 the site access junctions to the external road network.
Horizontal & Vertical Deflections	DMURS highlights that traffic calming features should be provided on longer straights where there is more than 70m between junctions	Vertical deflections in the form of raised tables have been strategically placed across the internal street network to promote lower speeds, enable pedestrians to cross key nodes at-grade. Raised tables/platforms have been located at <i>Local / Link</i> nodes to reinforce changes between design speeds. Horizontal deflections due to the internal street geometry will help to create a self-regulating speed environment as well as offering opportunities to facilitate soft landscaping features such as street trees.
Kerbs	DMURS recommends kerbs heights of 125mm on Link Streets, lower kerb heights of 60mm are appropriate where	Internally within the development, carriageway kerb heights will comply with DMURS requirements. They have been specified as 100mm on the <i>Link Street</i> and specified as 75-80mm on <i>Local Streets</i> .

Design Element	DMURS Guidance	Proposed Development Adopted Design Approach
	pedestrian activity is higher & design speeds lower. No kerb should be provided for shared surface areas.	The <i>Shared Surface</i> areas will also have a minimal kerb height of 25mm, defining the edge of the shared surface area and the privacy strip to the front of each unit.
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.	<ul> <li>In accordance with DMURS, on-street spaces parking is provided and measures: <ul> <li>Perpendicular: 5.0m x 2.4m</li> <li>Parallel: 6.0m x 2.4m</li> </ul> </li> <li>The potential for on street parking to dominate the streetscape has been minimised by limiting the number of surface spaces.</li> <li>The residents within one of the proposed residential apartments will not include the ownership of a designated parking space. All residents of the proposed development will have the opportunity to apply to the management company for a resident's car parking permit.</li> <li>Access to visitor parking spaces will be achieved via visitor's car parking permit for a short period of time. The majority of the visitor parking will be located on the ground level by the site access</li> </ul>
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 proposed scheme has been prepared by a multi- disciplinary design team including Hughes Planning and Development Consultants (Planning), Davey Smith Architects, DBFL Consulting Engineers (Civil & Transport Engineering) and Cunnane Stratton Reynolds Land Planning & Design and Arborist Associates Ltd.

# 4.0 SUMMARY AND CONCLUSION

#### 4.1 SUMMARY

- 4.1.1 DBFL Consulting Engineers have been commissioned to prepare a Design Manual for Urban Road and Street (DMURS) Design Statement with regards to the proposed residential development at Cherry Lane, Ashbourne, Co. Meath. The report has sought to identify how the scheme is consistent with and adheres to the principle and guidance within DMURS and supporting guidance such as the National Cycle Manual (NCM).
- 4.1.2 The development layout has been prepared with careful consideration of optimising connectivity between key local areas through the provision of a high degree of permeability and legibility for all network users and particularly prioritising sustainable forms of travel.
- 4.1.3 Furthermore, the provision of a Link Street with segregated cycle tracks and quality footpaths on both side of the carriageway as well as the 4m wide shared pedestrian and cyclists greenway extending from Dublin Road (R135) running through the site to adjoining lands west of the development will provide better connectivity and permeability.
- 4.1.4 Accordingly, the proposed residential scheme delivers greater modal and route choices along direct, attractive and safe linkages to a range of amenities, public transport nodes and local service destinations as illustrated in the supporting proposed transportation linkages plan (Drawing No. 20059-DBFL-TR-SP-DR-C-1102) submitted as part of the planning application. The development will be accessed primarily via Cherry Lane which will be upgraded to a signalised junction. The site will have a secondary site access via Hickeys Lane.
- 4.1.5 The design approach also sought to achieve a high quality '*sense of place'* by incorporating several open green spaces areas including a large linear park along the northern and southern edges of the development.
- 4.1.6 Appropriately sized blocks, together with filtered permeability delivers an overall street network that is highly permeable, legible and accessible in nature for all road users.

### 4.2 CONCLUSION

- 4.2.1 The preceding sections of this report outline the specific the proposed scheme's attributes which contribute to achieving the DMURS design objectives. The overall design approach successfully achieves an appropriate balance between the functional requirements of different network users, whilst also providing for an enhanced sense of place. The implementation of a self-regulating street network will actively manage movement by offering real modal and route choices in a low speed, high quality residential environment.
- 4.2.2 Consequently, the proposed residential development is the outcome of an integrated design approach which will ultimately deliver safe, convenient and attractive networks in addition to promoting real and viable alternatives to car-based journeys.