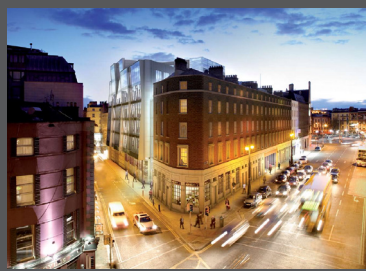


BM BARRETT MAHONY
CONSULTING ENGINEERS
CIVIL & STRUCTURAL



DMURS Statement of Compliance

RESIDENTIAL DEVELOPMENT AT COOKSTOWN ROAD,
ENNISKERRY, CO. WICKLOW

DMURS STATEMENT OF CONSISTENCY

1.0 INTRODUCTION

Cairn Homes Properties Ltd., intend to apply to An Bord Pleanála for permission for a strategic housing development on lands within the townland of Cookstown, Enniskerry, Co. Wicklow relating to lands with an overall area of c. 6.6 hectares including a strip to facilitate footpath and lighting upgrades on the Cookstown Road.

The Design Manual for Urban Roads and Streets (DMURS), published by Department of Transport, Tourism and Sport and the Department of Environment, Community and Local Government, updated in 2019, provides guidance relating to the design of urban roads and streets. It presents a series of principles, approaches and standards that are necessary to achieve balanced, best practice design outcomes with regard to networks and individual streets.

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

This statement outlines the four core DMURS principles, and provides specific commentary on the design features that have been incorporated within the proposed residential scheme to demonstrate the design is in full compliance with DMURS.

2.0 KEY DESIGN PRINCIPLES

It is a requirement of the regulations that the proposed housing development be compliant with the requirements of the Design Manual for Urban Roads and Streets. The four key principles of design aim to guide a more place-based/integrated approach to road and street design. Designers must have regard to the four core principles presented below:

- Design Principle 1: Connected Networks
- Design Principle 2: Multifunctional Streets
- Design Principle 3: Pedestrian Focus
- Design Principle 4: Multidisciplinary Approach

2.1 DESIGN PRINCIPLE 1: CONNECTED NETWORKS

“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.”

The proposed road and path networks will connect the development with nearby recreational, retail and educational services in the area. Presently, there are well-established footpaths linking Cookstown Road (L1020) to Enniskerry Village. Enniskerry Village Square is approximately 850m from the entrance to the site. Powerscourt National School is located directly adjacent to the site at the north-west corner, next to the proposed creche facility. Public transport links (bus routes 44 and 185) are available within 15 minutes' walk and less of the site. The development strategy maximises connectivity with the local environment through the provision of permeable and legible, orthogonal street networks, with a particular focus on adherence to the hierarchy of road users and sustainable means of travel. The development proposals make provision for future linkages to adjacent lands to the west and east. This represents good planning practice

and allows for the integration of adjacent lands in the future to the subject lands, thereby ensuring that wider permeability can be provided over time as other adjacent lands are developed.

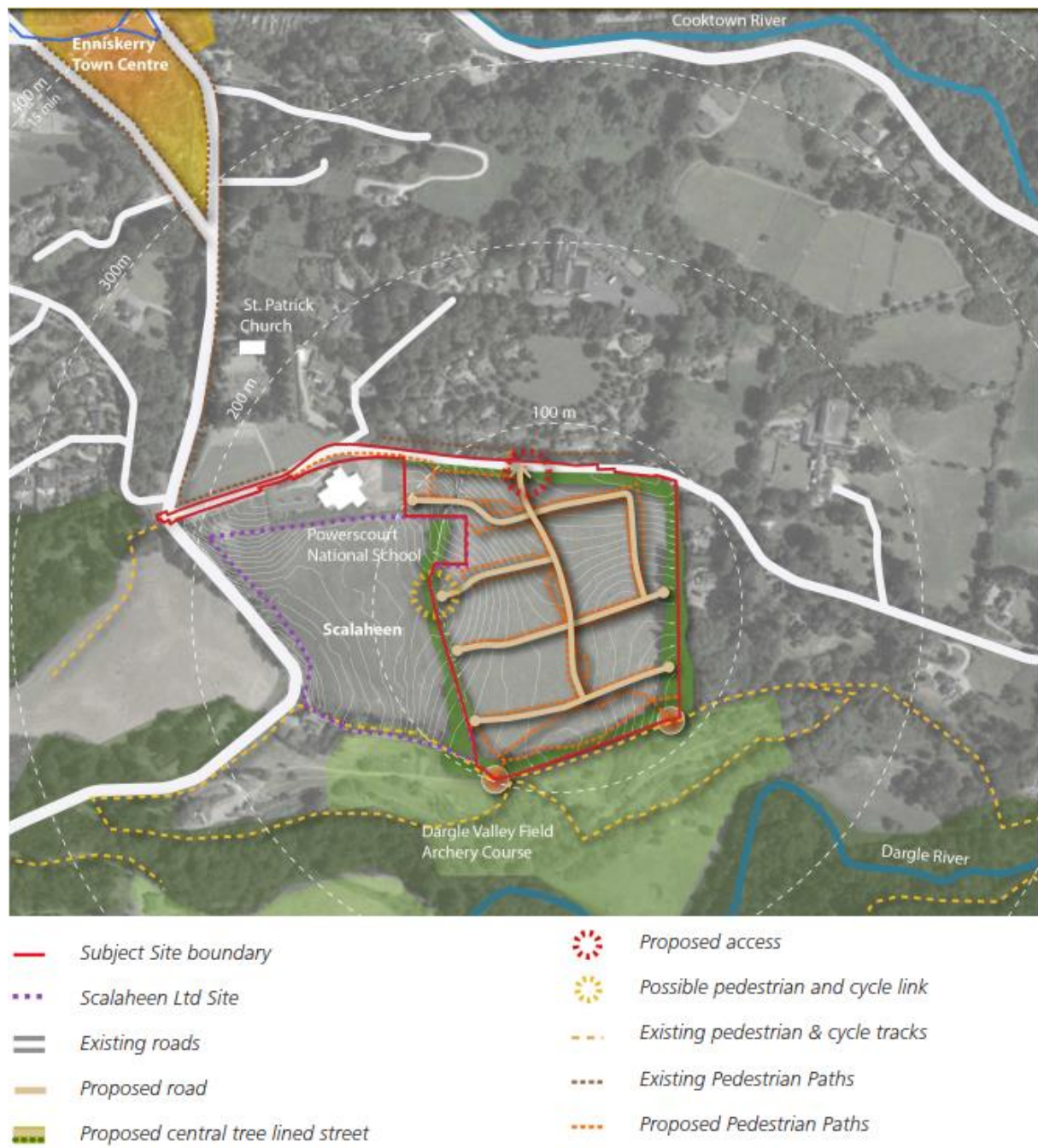


Figure 1: Extract from MOLA Architecture Design Statement showing nearby amenities, and pedestrian and cycle links

The proposed street network is structured to draw future residents toward focal points including the communal open spaces and the public linear park to the south, while respecting the protected view of Sugarloaf Mountain. Links to the public linear park from the Lovers Leap Lane to the south are also proposed opening alternative destination options for pedestrians. With reference to the Wicklow County Council Roads Department’s observations on the pre-application submission, it is noted that a new pedestrian footpath connecting the development with the pedestrian crossing at the neighbouring school is now proposed, on the southern side of Cookstown Road. Furthermore, in response to the Bray Municipal District Engineer’s Report on the pre-application submission, a new pedestrian crossing will be provided on

Cookstown Road close to the development entrance. This will provide safe connectivity between the development and the existing footpath on the northern side of Cookstown Road, and between the development and Enniskerry Demesne.

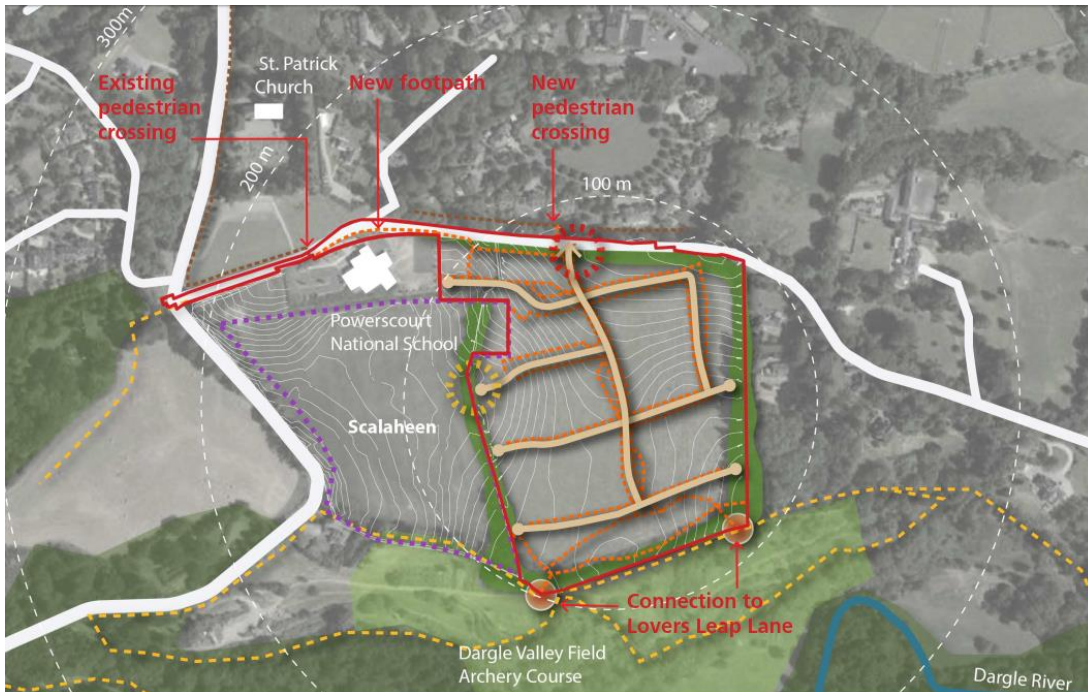


Figure 2: Extract from MOLA Architecture Design Statement showing new footpath to south of Cookstown Road, new pedestrian crossing to north of Cookstown Road and connections to Lovers Leap Lane to the south the development.



Connectivity routes

Figure 3: Extract from MOLA Architecture Design Statement showing Primary and Secondary Streets, along with Homezones and future links to adjoining lands.

2.2 DESIGN PRINCIPLE 2: MULTIFUNCTIONAL STREETS

“The promotion of multi-functional, place-based streets that balance the needs of all users within a self-regulating environment.”

The development incorporates a conspicuous hierarchy of multifunctional streets that offer route choice and flexibility for managing movement within the development. The layout facilitates creation of distinct place-based streets which serve to emphasise the low-speed residential nature of the development, providing safe means of travel for more vulnerable road users such as cyclists and pedestrians.

Both horizontal and vertical deflections have been introduced throughout the road network to address the need for self-regulating traffic-calming. In addition, road levels have been designed to minimise surface gradients to reduce the need for revving engines and associated noise and emissions. Standard local street widths of 5.5m within the development are proposed in compliance with Section 4.4.9 of DMURS and Wicklow County Council Roads Department’s pre-application submission observations. Junctions have been designed to minimise corner radii in line with Section 4.3.3 of DMURS.

Self-regulating shared surface homezones are included in appropriate locations which serve to create a sense of place while balancing the needs of all users. These shared surface homezones are designed with a minimum 4.8m wide carriageway along with associated 1.2m wide flush pedestrian comfort zones as per pre-application observations received from Wicklow County Council Roads Department. Furthermore, these shared surface homezones will be distinguished from standard local streets using contrasting surfacing materials to create a distinct change in environment from standard local streets, further enhancing the sense of place in these areas.

2.3 DESIGN PRINCIPLE 3: PEDESTRIAN FOCUS

“The quality of the street is measured by the quality of the pedestrian environment.”

As noted in Section 2.2 above, the development layout facilitates the creation of a low-speed residential environment. With respect to the hierarchy of road users outlined in DMURS, the development places a strong focus on creating a vibrant and sustainable pedestrian environment, prioritising pedestrians while balancing the needs of all road users.

Footpaths in the development are designed as 2m wide typically, which meets the minimum requirement of 1.8m widths outlined in Section 4.3.1 of DMURS. Pedestrian crossing points along with associated tactile paving in accordance with the Traffic Management Guidelines are provided at anticipated pedestrian desire lines, while pedestrian priority raised table crossings have been located in line with higher demand crossing locations. Further to this, pedestrian priority will be provided at internal crossroad junctions in the form of raised tables which also serve as a traffic calming measure. Residential shared space homezones with contrasting surface finishes are proposed to encourage lower vehicular speeds and create a more attractive, high quality space for pedestrians.

The public green areas are designed as landscape spaces that offer the opportunity for meeting, walking and formal and informal play. Desire lines through the landscape spaces are reflected in the path layout and integrate with the general street layout to provide a high level of pedestrian permeability. Proposed pedestrian routes provide for connection to the adjoining lands to fully integrate the landscape scheme with the surrounding landscape.

2.4 DESIGN PRINCIPLE 4: MULTIDISCIPLINARY APPROACH

“Greater communication and co-operation between design professionals through the promotion of a planned, multidisciplinary approach to design.”

The design of the layouts involved close collaboration and coordination between the Architect, Structural Engineer, Civil Engineer, Landscape Architect and Mechanical & Electrical Engineer, and takes account of the observations and comments raised by Wicklow County Council and An Bord Pleanála at the pre-application stage of the planning process.

The interaction between the Landscape Architect and the Civil Engineer was of particular importance to design a layout that created attractive spaces for pedestrians and cyclists whilst complying with the key roads design principles for vehicular and non-motorised users.

In addition to this interaction, the Architect and Mechanical & Electrical Engineer provided designs to incorporate lighting and building access to the scheme, which has been integrated into the strategy of the landscaping and desire lines for access and egress to buildings by non-motorised users and reflects the overall multidisciplinary approach taken to the overall development design.

3.0 CONCLUSION

The design proposals submitted to An Bord Pleanála reflect a robust integrated design approach that seeks to deliver safe, convenient, and attractive street networks which promote a sustainable community environment. It is Barrett Mahony Consulting Engineers opinion that the proposed residential development is fully consistent with both the principles and guidance outlined within the Design Manual for Urban Roads and Streets (DMURS) 2019.