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TRAFFIC & TRANSPORT CONSULTANTS

PROPOSED HOUSING DEVELOPMENT AT BALLINDERRY ROAD

MULLINGAR, COUNTY WESTMEATH

DMURS Statement of Compliance

FINAL REVISION E - 18/03/22

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Client: Consdorf Investments ICAV
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1 INTRODUCTION

1.1 Purpose of report

A planning application is being submitted to An Bord Pleanala for planning permission to construct a housing development on a vacant site located on the west side of the L1132 Ballinderry Road in the south side of Mullingar, County Westmeath, as shown in Figure 1. The proposed development consists of 130 dwellings of mixed type. A detailed description of the site location and context is provided in the Statement of Consistency submitted with the application

Figure 1 Site location

Source: Bing Maps

This statement sets out the proposed measures incorporated in the proposed design that are in compliance with the Design Manual for Urban Roads and Streets, DMURS, DoTTA, May 2019. The measures are set out under the following subject headings;

- Section 2 - Connectivity with surrounding network,
- Section 3 - Design of internal network,
- Section 4 – Access for sustainable modes,
- Section 5 – Summary of compliance with design principles 1 to 4 of DMURS.

This statement should be read in conjunction with all drawings and reports submitted to ABP, including the Traffic and Transport Assessment (TTA) prepared by Alan Lipscombe Traffic and Transport Consultants Ltd and the Architectural Design Statement prepared by Coughlan Associates Architects.

The multi-disciplinary design team involved in the development of the proposed layout and connectivity to the existing network includes the following;

Architects and lead designers – Coughlan Associates Architects
Planning consultants – Stephen Ward Town Planning & Development Consultants Ltd
Civils and engineering – SDS Design Engineers,
Landscape architects – Doyle & O'Troithigh Landscape Architecture
Traffic and transport – Alan Lipscombe Traffic and Transport Consultants Ltd.

2 CONNECTIVITY WITH SURROUNDING NETWORK

Vehicle access to the proposed development will be via a proposed junction on the Ballinderry Road as shown in Figure D1 of the TTA. STOP junction markings and signs in accordance with Figure 7.35 of the Traffic Signs Manual, are proposed. The proposed junction includes a 6.0m wide access road and 6.0m junction radii in compliance with geometric requirements set out in Section 4.3.3 of DMURS.

The speed limit on the L1132 Ballinderry Road is 50 km/h, although speeds observed on site exceed the limit with 85th percentile speeds of 70 km/h observed in both directions (69.7 km/h northbound and 71.3 km/h southbound). While it is likely that the extension of the urban environment and new access junction on the L1132 Ballinderry Road following the construction of the proposed development will have a traffic calming effect on Ballinderry Road, the following measures are recommended as mitigation measures;

- The introduction of speed monitoring sign which indicates speed to driver and advises speed reduction when over 50 km/h,
- The provision of 3m x 120m visibility splays in accordance with a 70 km/h design speed as set out in TII Guidelines[1].

The 3m x 120m visibility splays available are also shown in Drawing No C102 Rev PL4 prepared by SDS Design Engineers.

Pedestrian connectivity with the site is provided via footways on either side of the proposed link street running through the site with pedestrians given priority across minor road junctions in accordance with DMURS page 136, and shown in Figure D2 of the TTA. The footways on the link street then link into a new section of footpath proposed on the west side of the L1132 Ballinderry Road that will provide a continuous pedestrian route into Mullingar Town. An informal courtesy type crossing is proposed across the L1132 Ballinderry Road to provide pedestrian connectivity with the existing Newtown Lawns residential development located on the east side of the L1132 Ballinderry Road. The informal courtesy crossing will comprise dropped kerbs and tactile paving and will be undertaken in agreement with WMCC.

The proposed link street will also provide connectivity for pedestrians, cyclists and vehicles to the potential development land located to the west of the subject site, as shown in Figure 2. Footpaths

[1] DN – GEO – 03060, Geometric Design of Junctions, TII, April 2017

linking into the existing residential streets located to the north of the proposed development (Chestnut Drive) provide further permeability with the surround area.

Tactile paving and a raised table will be provided for pedestrians crossing the proposed access road on the western side of the L1132 Ballinderry Road.

Access for cyclist travelling to and from the site will be provided via the proposed access junction off the L1132 Ballinderry Road, followed by the cycle lanes provided on either side of the link street that traverses the site.

Figure 2 Pedestrian connectivity with surrounding network

3 INTERNAL LAYOUT

In accordance with DMURS[2] it is proposed that the link street traversing the site will have a designated speed limit of 50 km/h, while the local roads access the residential areas of the proposed development will have a speed limit of 30 km/h (in accordance with Table 4.1 of DMURS) in order to promote a safe environment for pedestrians and cyclists.

For the local streets the length of straight sections of road are limited in length to self-enforce low speeds in accordance with the TMG[3]

It is proposed that vehicle access to/from and through the site, is provided via a new link street, with footways, cycle lanes and verges that traverse the site providing connectivity between L1132 Ballinderry Road through to the potential development lands situated to the west. Local streets then connect with this road via simple priority type junctions providing access to the main residential areas located in the proposed development. This accords with the purpose and function of the Link Street as set out in the Local Area Plan.

Relevant recommendations presented in DMURS in relation to the design and alignment of the Link Street, and adopted in the design process, include the following;

Carriageway width of Link Street

Vehicle lane widths of 2 x 3m lanes are proposed (as per Figure 4.55 of DMURS).

Horizontal alignment of Link Street

In relation to horizontal alignment, the proposed link street is relatively straight, with gentle deflection provided at 2 locations in the centre of the site. This is in accordance with recommendations set out in section 4.4.6 of DMURS which states the following;

- *"Designers should avoid major changes in the alignment of Arterial and Link Streets as these routes will generally need to be directional in order to efficiently link destinations",*
- *"Major changes in horizontal alignment of Arterial and Link Streets should be restricted to where required in response to the topography and constraints of a site",*

[2] Design Manual for Urban Roads and Streets, Department of Transport, Tourism and Sport
[3] Traffic Management Guidelines, Department of Transport

- *Designers should not rely on curvature alone to reduce speeds. Changes in horizontal alignment should be combined with contextual measures that reduce forward visibility, such as building lines and on-street parking.*

Based on the above it is concluded that the proposed alignment of the link street, with gentle deflection at 2 locations, on street parking and revised building and tree lines, as shown in Figure D3 of the TTA, meets all of these criteria set out in DMURS.

Design of cycle facilities

There are various types of cycle provision that were considered, including options for segregated cycle-ways, one 2-way cycle lane, and cycle lanes provided adjacent to the Link Street. Segregated cycle lanes were ruled out for the following reasons;

- It was considered that divergence of a cycle facility from the alignment of the Link Street through the site would provide unnecessary diversion from the likely desire lines of cyclists, and,
- It was considered that the proposed local street network provides more than adequate connectivity off the link street to all destinations in the development.

The proposed option is to provide cycle lanes adjacent to each side of the road, in strict accordance with guidance set out in the National Cycle Manual (NCM)[4].

Cross-section of link street

The cross section of the proposed link road is as presented in page 138 of the National Cycle Manual, as inserted below.

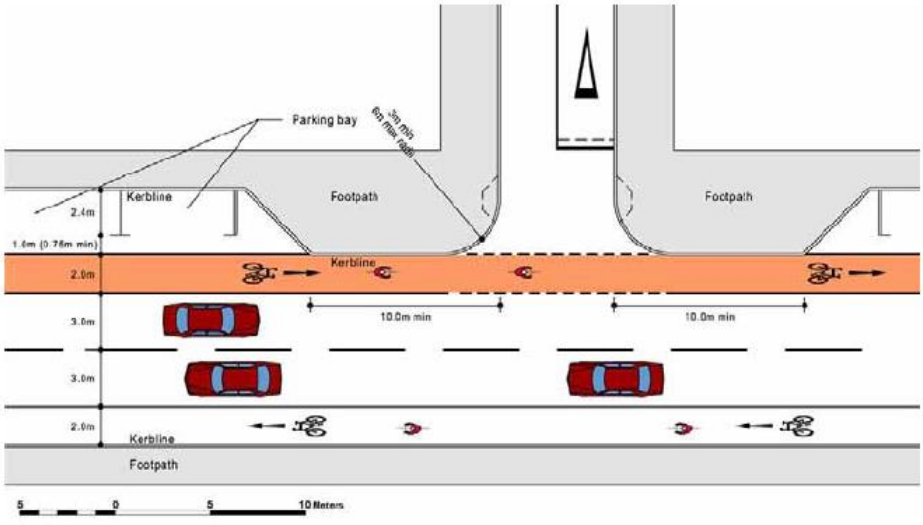
This prescribed layout is considered to be the optimum fit for the proposed link street, taking account of the provision of cycle-lanes in each direction, the class of the roads considered, including junctions with local streets, and the presence of on-street parking.

While details of the cross section are provided in Drawing No C131 Rev PL3 included in the submission prepared by the Project Engineer, SDS Ltd, the proposed dimensions in accordance with the NCM are; 2 x 3m traffic lanes, 2 x 1.75m cycle lanes and at locations where there is parallel parking, a buffer strip between the parking spaces and the cycle lanes of 0.75m to allow for opening car doors. Also in accordance with the NCM, it is proposed that there will be a 50mm kerb segregating the cycle lane from the main carriageway.

[4] National Cycle Manual, NTA

Extract from National Cycle Manual – page 138

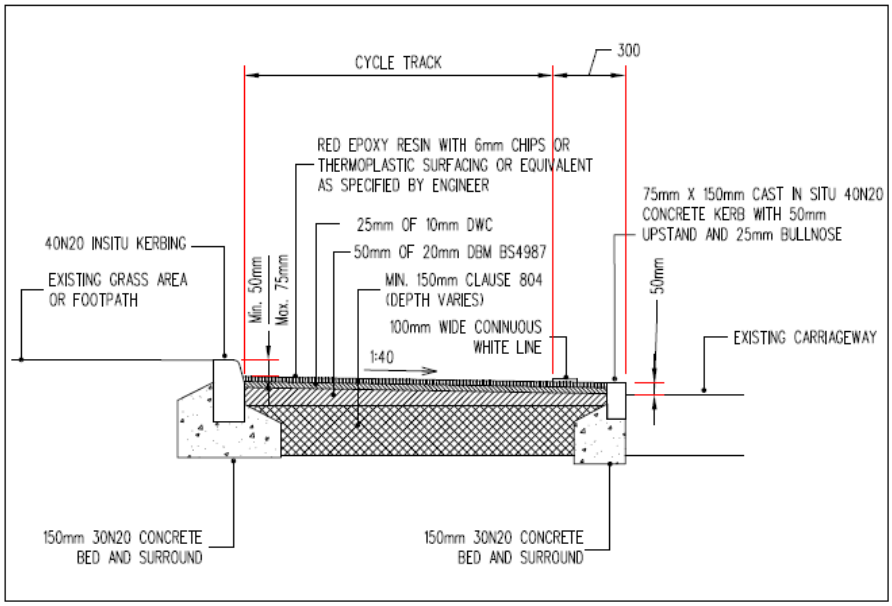
Side Road joining Street with Cycle Lane and Parking



It is proposed that there will be one crossing of the link street which takes the form of a courtesy type crossing with dropped kerbs, with the crossing of the link street at the same level as the carriageway. The location of the crossing is shown in Figure D2 of the TTA.

Extract from National Cycle Manual – page 192

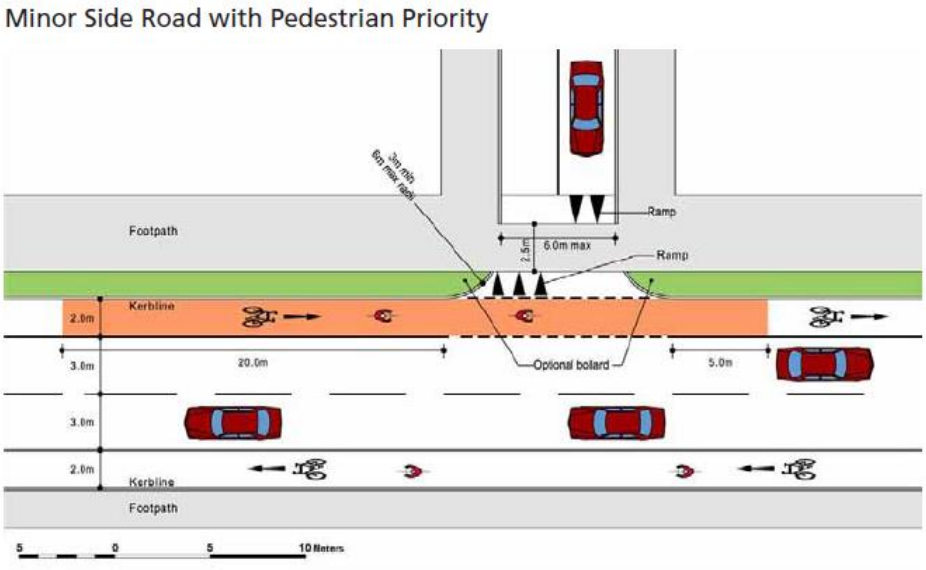
Cycle Lane Construction



Design of internal priority junctions

The internal junctions between the link street and the local streets are simple priority junctions, with 4m junction radii, in accordance with DMURS. It is proposed that pedestrians are given priority across the link streets, in accordance with the layout set out in page 136 of the NCM, as shown in the extract overleaf.

Extract from National Cycle Manual – page 136



Road markings and signage

All road markings and signs proposed for the development are shown in Figure D2 of the TTA, and are in accordance with the Traffic Signs Manual as follows;

Markings and signs at priority junctions are as per Figure 7.35 of the Traffic Signs Manual, including;

- Centreline RM 001,
- STOP line RRM 017, and,
- STOP lettering M114,
- STOP sign RUS 027.

Speed limit signs for 50 km/h (RUS 043) and 30 km/h (RUS 044) are provided on the links street local streets respectively.

Cycle lane markings and signs (RUS 009) are provided along the length of the cycle lane with an END sign (PO101) provided where the cycle lane ends at the junction with the L1132 Ballinderry Road.

Other design features in line with DMURS are as follows;

- All footpaths and pedestrian crossings are a minimum of 1.8m wide,
- All crossing points on the local street network have buff coloured tactile paving and dropped kerbs, or raised table,
- The width of the link road is 6m in accordance with Figure 4.55 of DMURS, with all other internal roads reduced to 5m,
- Junction radii for the link street / local street junctions are 4m.

Visibility splays at internal junctions and forward visibility requirements at bends on the local streets are shown in Figure D3 of the TTA. They include visibility splays of 2.4m x 45m in accordance with the 50 km/h speed limit on the link street, and splays of 2.4m x 23m at junctions in the local street network where a 30 km/h speed limit applies. Forward visibility of 23m is shown at bends on the local street network. These splays shall be kept clear of all obstruction over 1.05m in height in accordance with visibility design guidelines.[5]

A swept path analysis was undertaken to test the turning requirements of a refuse vehicle, a large delivery vehicle, a fire tender and a large family car. Figures E1 to E8 included as Appendix E show that the turning movements for each of these vehicles are accommodated in the proposed layout. It is noted that larger vehicles are required to cross the centre-line at junctions, which is permissible for infrequent movements, as set out in DMURS.

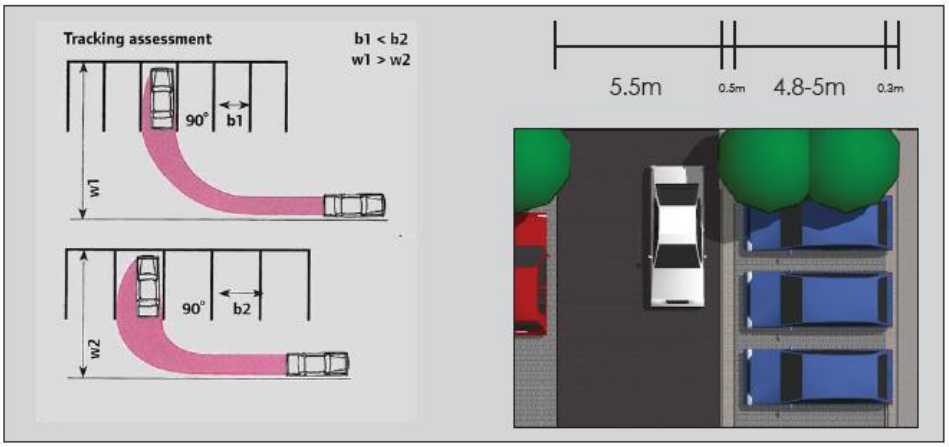
Design of parking spaces

All parallel parking spaces are 6.0m long in accordance with DMURS.

All perpendicular parking spaces are 2.5m wide and have a minimum of 6.0m of carriageway available in order to access and exit the spaces, in accordance with Figure 4.82 of DMURS.

[5] DN – GEO – 03060, Geometric Design of Junctions, TII, April 2017

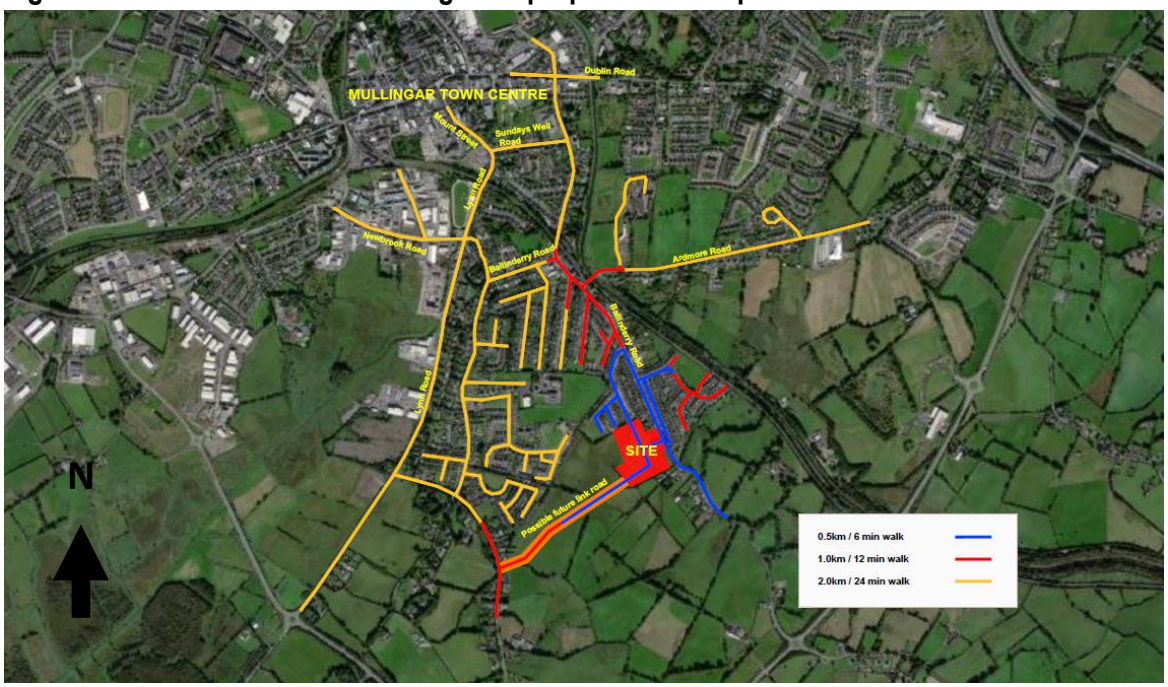
Extract from DMURS – Figure 4.82



4 ACCESS FOR SUSTAINABLE MODES

Isochrones radiating from the site are shown for 0.5km, 1.0km and 2.0 kms in Figure 3. The figure indicates that there will be a continuous pedestrian link with Mullingar Town Centre and much of its amenities (including schools) which are within 2.0kms, or 24 minutes' walk from the proposed site. It is noted that local shops are located within 1.0km, or 12 minutes' walk, with a crèche located within 0.5 km, or 6 minutes' walk.

Figure 3 Isochrones radiating from proposed development site



As discussed previously in this note, and set out in the TTA, high quality pedestrian connections are provide to/from, within, and through the development site with continuous links provided to all of the proposed 130 dwelling. In addition, pedestrians are allocated priority across all proposed priority junctions by means of raised tables.

Access within the site for cyclists is provided via the cycle lanes on either site of the link street.
As set out in the Architectural Design Statement, a total of 79 secured covered bicycle parking bays are provided, based on the following requirements set out in Table 9.1 of the Mullingar Local Area Plan 2014 - 2020;

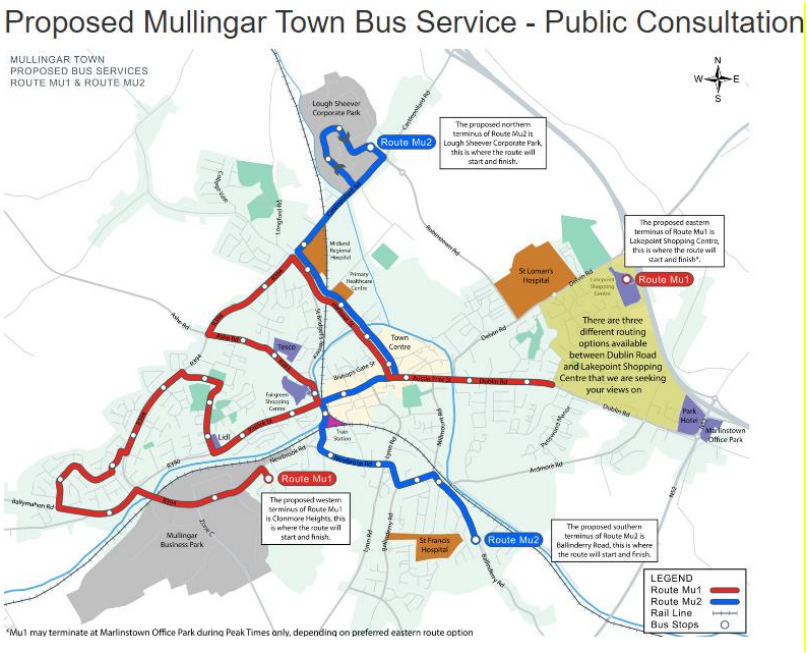
- 2 spaces for every 100m^2 of residential development, for 3061m^2 = 61 bays
- 1 visitor spaces for every 2 apartments (36 apartments) = 18 bays
- Total = 79 bays

These 79 spaces relate to the duplex/apartments and additional spaces are available on-curtilage for the houses. Additional cycle parking bays can be readily provided and the applicant would welcome a condition in this regard should An Bord Pleanála consider it appropriate.

Based on the above it is considered that walking and cycling are both viable and attractive modes of travel for trips generated by the proposed development, in accordance with the principles set out in DMURS.

While there are currently limited local bus services within the town of Mullingar at present it is noted that the National Transport Authority and Westmeath County Council are proposing to introduce 2 cross-town bus routes, with one of the routes terminating on the Ballinderry Road adjacent to the proposed development site. The introduction of this service would provide an attractive public transport option for residents and visitors to the proposed development and is fully supported by the Applicant.

In the event that the proposed development is constructed together with the potential development lands located to the west, the proposed link street and the proposed junction with the L1132 Ballinderry Road will provide an ideal opportunity to extend the blue route to the south to serve this new population. It is noted that the proposed development will contribute towards the critical mass that will improve the viability of this bus route.



5 SUMMARY OF COMPLIANCE WITH DESIGN PRINCIPLES 1 TO 4 OF DMURS

The 4 key design principles set out in DMURS, and the nature in which the design process and resulting design for the subject development is compliant, is summarised as follows.

DMURS 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.*

Access to the site is off the L1132 Ballinderry Road, which is an arterial route radiating from Mullingar Town Centre, is via a priority junction and the link street that provides access to the proposed development. The local street network then provides access to the 130 residential units comprising the proposed development. The proposed pedestrian network and cycle lanes provide a legible and quality environment for sustainable modes, which are given priority over motorised forms of travel where appropriate.

It is considered that access to/from the proposed development from the L1132 Ballinderry Road and the permeability through the site is clear for drivers, cyclists and pedestrians.

DMURS Design Principle 2*: The promotion of multi-functional, place based streets that balance the needs of all users within a self-regulating environment.*

It is considered that the proposed layout provides a quality environment for all resident, visitors, with all public spaces in public view to encourage passive surveillance. The geometry of the internal local road network is designed to self-enforce low traffic speeds.

DMURS Design Principle 3*: The quality of the street is measured by the quality of the pedestrian environment.*

Producing a quality environment for pedestrians has been at the forefront of the design process resulting in;

- The provision of continuous quality pedestrian routes permeating the site and onto the L1132 Ballinderry Road, neighbouring existing residential development and future development lands,
- The provision of priority for pedestrians across all priority junction,

***DMURS Design Principle 4**: Greater communication and co-operation between design professionals through the promotion of a plan–led, multidisciplinary approach to design.*

It is confirmed that the design of the proposed development was prepared by the lead designers (Coughlan Associates Architects) with continuous input from the other disciplines in the design team over the duration of the 2 year design process. It is also noted that there has been very useful feedback from ABP and Westmeath County Council that has fed into the design process.

It is concluded from the above assessment that the proposed design had been prepared in accordance with the design principles set out in the Design Manual for Urban Roads and Streets.

This statement was prepared by Alan Lipscombe BEng (hons), MIEI, MIHT of Alan Lipscombe Traffic and Transport Consultants Ltd