

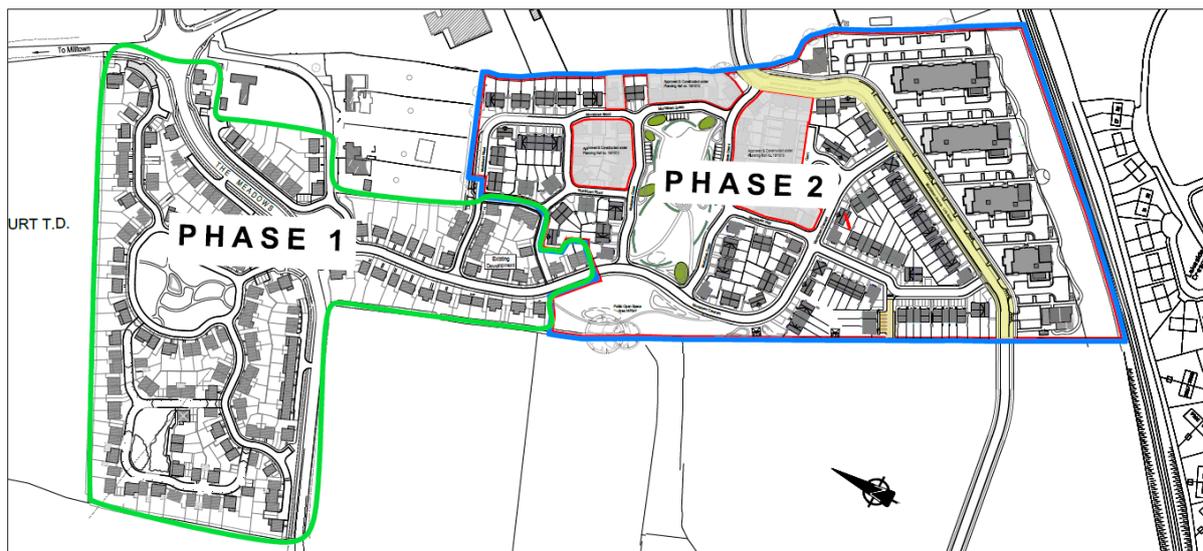
DMURS Design Considerations.

Re: Planning Permission for Phase 2 of Housing Development at Morrinstownbillar and Cornelscourt, Station Road, Newbridge, Co. Kildare for 320 No. Dwellings and 1 No. Crèche.

Background Summary:

The proposed residential development, referred to as The Paddocks, is located immediately south-east of an existing housing development known as The Meadows. While an existing local road known as Morrinstownbillar Road dissects The Meadows estate, both the proposed Paddocks and the existing Meadows are intrinsically interconnected by roads and services.

The original development was submitted as an overall scheme under Kildare County Council Planning Application Reg. Ref. **11/264 & 05/2160** as one large housing scheme. Due to the economic downturn, only part of the original development was constructed – this element is what we refer to as Phase 1 today.



The Applicant, Stenock Limited has been granted retention permission for 39 dwelling units under Kildare County Council planning application Reg. Ref. **16/1013**. These houses are almost complete and are embedded within the overall Phase 2 land holding. The roads and services serving these 39 dwellings are intrinsically interlinked with the remaining Phase 2 lands, the latter portion of the site being the subject of this application.

Design of Routes within the Estate:

As noted above the development originated from a planning application in 2005. The site access is defined from a roundabout on the Morrinstownbillar Road with 2 No. access roads leading through part of the developed Phase 1 lands to the subject Phase 2 site. The Local Authority's Local

Objective during the Applicant's 2016 planning application was for a southwest-northeast link street to traverse the subject lands. The provision of this road has been facilitated within this application. Refer to Fig. 1 overleaf for the position of this road in the overall landholding (i.e. road from A to B on the map).

The arrangement of internal roads was then defined further from the above fixed elements by providing further interlinking estate access roads throughout Phase 2. The development has been designed considering the provision of functional roads throughout the development which serves different users (cars, cyclists & pedestrians) while also providing a sense of place.

A hierarchy of roads have been provided as:

- 1) Link Streets,
- 2) Side Streets &
- 3) Homezones.

The aim is to provide self-regulating streets offering low speed route choices within a high quality residential environment. While there is a hierarchy of road types, all roads through this residential development are provided as slow-moving traffic roads.

With the exception of the Link Street shown overleaf from A to B which has been agreed in principal with the Local Authority, all internal estate roads have been designed with short straight elements, gentle horizontal curves from junction to junction, varying road widths (6.0m, 5.5m, 5.0m & 4.8m), smooth & gentle vertical alignments and numerous interconnections, route options & looped sections keeping speeds low to create a pleasant living environment.

Fast moving traffic is discouraged by the horizontal alignment arrangement. Speed limits of 30km/hr maximum is proposed. Home-zones such as those proposed for "local access only" and short cul de sacs shown below will have lesser speed limits applied, i.e. 10-20km/hr.

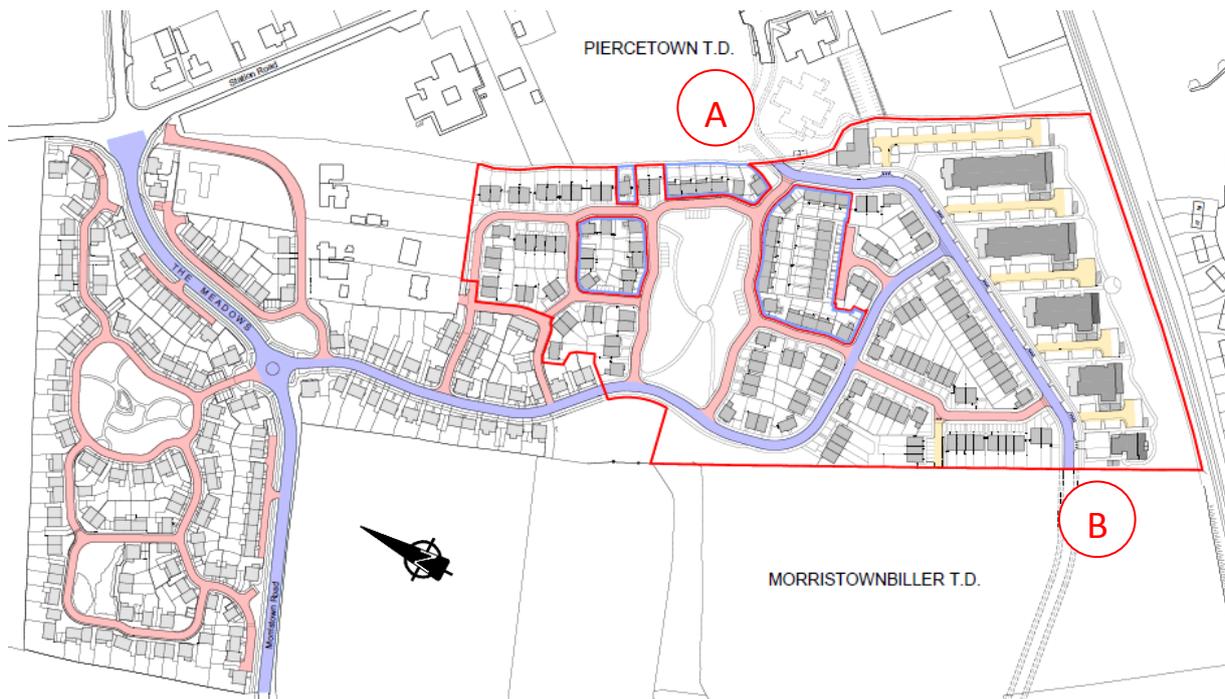


Figure 1 - Road Hierarchy:

- 1) Link Street: shaded blue
- 2) Side Streets: shaded pink
- 3) Homezones: shaded yellow
- 4) Morristownbillar Road (Local Authority Road): shaded cyan.-shown to the left

Phase 1: existing development shown to the left within Fig. 1.

Phase 2: (the subject lands) shown outlined in Red within Fig. 1.

The numerous T-Junctions will assist in frequently stopping the flow of traffic when travelling through the development, which will create quiet side streets used for access by locals only. Homezones promote shared surface uses and are primarily proposed where there is no possibility of “through vehicular traffic”.

The route of the southwest to northeast link street has been agreed with Kildare County Council during course of the aforementioned retention application. The joining of this street with the extension of the adjacent access road within the existing third-party apartment development (to the north-east of the site), has been coordinated with the adjacent landowner to ensure a seamless transition exists at the site boundary.

Within the subject Phase 2 lands, place-enhancement and movement management are influenced by introducing measures to reduce driver speeds such as:

- a) roads with close proximity to buildings,
- b) tighter corner radii provided where appropriate,

- c) shared surfacing in home-zones,
- d) reduced visibility splays,
- e) on street parking where appropriate,
- e) horizontal deflections,
- f) pedestrian activity with numerous interlinking footpaths and crossing points.

The proposed link street is provided with a cycle lane both sides to encourage cyclist permeability and connectivity with the greater Newbridge town area. All roads are provided with adjacent footpaths allowing pedestrian interconnectivity throughout this phase of the development and connection with the existing Phase 1 estate and further connection with the wider network of paths.

The kerb corner radii have been designed through computer programme “swept path” analysis considering traffic safety and practical turning arcs while also considering the guidelines set out within the Design Manual for Urban Roads & Streets. Large vehicles such as waste collection trucks and furniture lorries are allowed for in the design, their frequency of passage is considered most infrequent in comparison to passenger cars. Therefore, the swept paths for these larger vehicles have been analysed to ensure circulation is achievable without overdesigning the kerb radii. Overdesign would result in the negative effect of encouraging car drivers to travel at higher than desired speeds thus defeating the purpose of applying other DMURS standards.

In general, the kerb radii dimensions are between 3m to 6m. There are locations where kerb radii dimensions are larger for road safety considerations. Typically, the radii to the primary roads are larger than those set out for secondary access roads. Horizontal alignment can have large radii to facilitate the placing of adjacent dwellings however junctions set out on these alignments will incorporate small radius bends.

In addition to kerb radii considerations and as the road network throughout the development consists of many interlinked looped routes, the road hierarchy has been considered with appropriately located STOP sign positions. With the numerous stoppage locations, traffic speeds are reduced overall to an acceptable level for driver, pedestrian and cyclist safety.

The layout shown on enclosed drawing reference “D1493-1-D2 – Kerb Radii” shows the road hierarchy, defined routes and road segments within the proposed development (as per Architect’s Road Hierarchy Drg Ref. 16-010-P.1.006).

With reference to carparking, the proposed development incorporates:

- a) Own door carparking within the curtilage of the private dwelling plots
- b) Off street parking for visitors
- c) Carparking adjacent to the link street
- d) Carparking within the homezones which harmonize with the domestic environment that they exist within.

We propose the above in compliance with DMURS guidelines whereby link streets are provided with on-street parking spaces located in a series of bays that are parallel to the vehicular carriageway. Otherwise, within the low speed access roads, perpendicular spaces are provided.

Road surface finishes will be standard tarmacadam with home zone areas being finished in coloured tarmacadam as per Architect's design proposals. We have avoided permeable paving to the areas that are envisaged to be taken in charge by the local authority as such paving is not acceptable for taking in charge. Also Irish Water do not accept their drainage network located below permeable paving hence the use of conventional tarmacadam. Permeable paving surfacing is however proposed for the carparking bays within the private front gardens and homezone's carparking areas.
