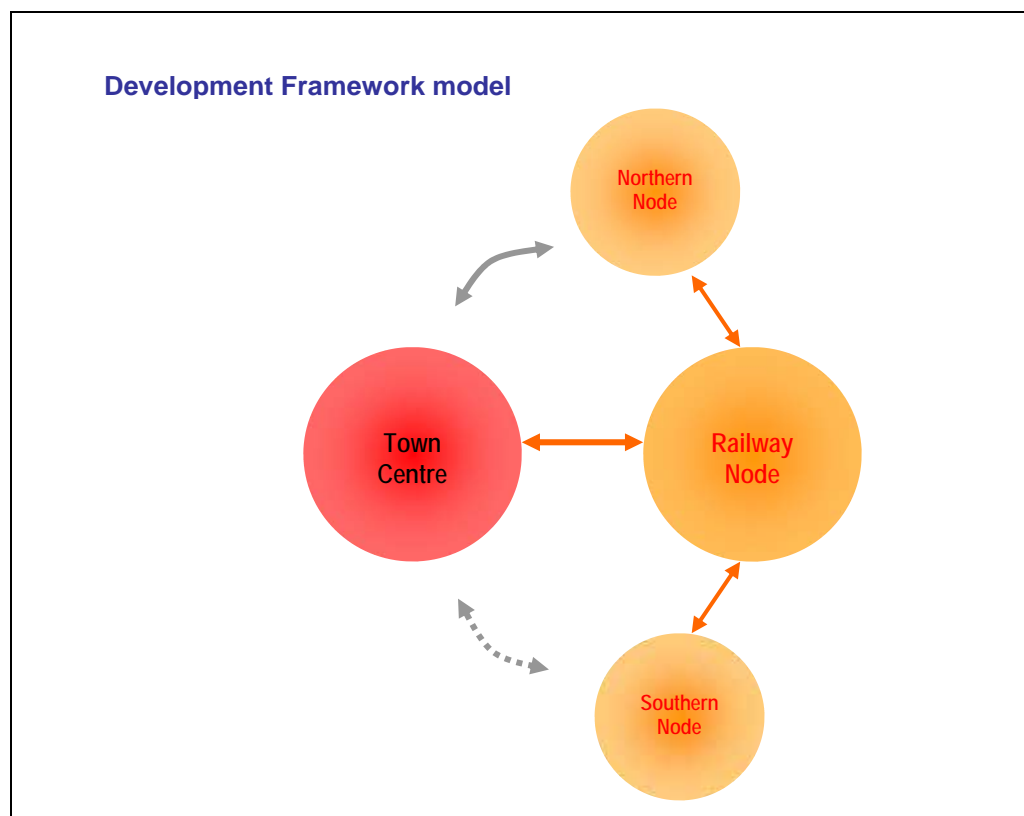


7.0.0 DEVELOPMENT FRAMEWORK

7.1.0 The Development Framework

7.1.1 The development is framed around the concept of a main public transport hub and two complementary neighbourhood nodes supplying a range of services and community facilities to support the proposed residential population. None of the nodes compete with the town centre and are in fact complementary to it as is the proposed transport hub. This is indicated Figure 7.1.1.1 below.

Figure 7.1.1.1 Development Framework Model

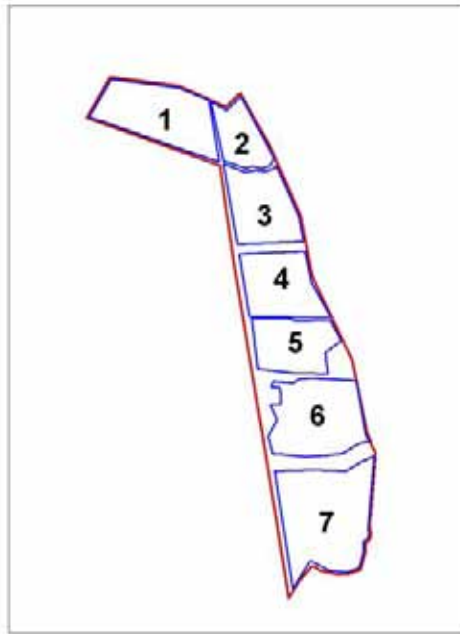


7.1.2 The objectives and terms of the brief have been refined into a development concept and strategy for the development of the IAAP area. To assist in the articulation of the concept and strategy the IAAP area has been broken into a number of development cells. Each cell has its own characteristics and development potential. The identification of cells will greatly assist in phasing development so that it is within existing infrastructure capacity constraints.

7.1.2 The division of the IAAP area into cells is shown in figure 7.1.3.1 below. Whilst each cell is to be developed in its own context it must also be developed according to the overall concept and strategy. Each cell has been created with a view to:

- Creating a sense of place
- Established a clearly defined and complementary relationship to existing urban form.
- Providing maximum permeability and movement within and between lands;
- The landform and historical context of each cell;
- An adequate spread of services and facilities in appropriate locations;
- Providing a hierarchy of open space and for each cell to have access to quality open space;
- Providing legibility to an overall layout for development of the whole IAAP area;
- Assisting in the phasing of development consistent with existing infrastructure constraints and the delivery of roads, public transport and other infrastructural provision.

Figure 7.1.3.1 Division of the IAAP area into Cells



7.2.0 Local and Neighbourhood Centres

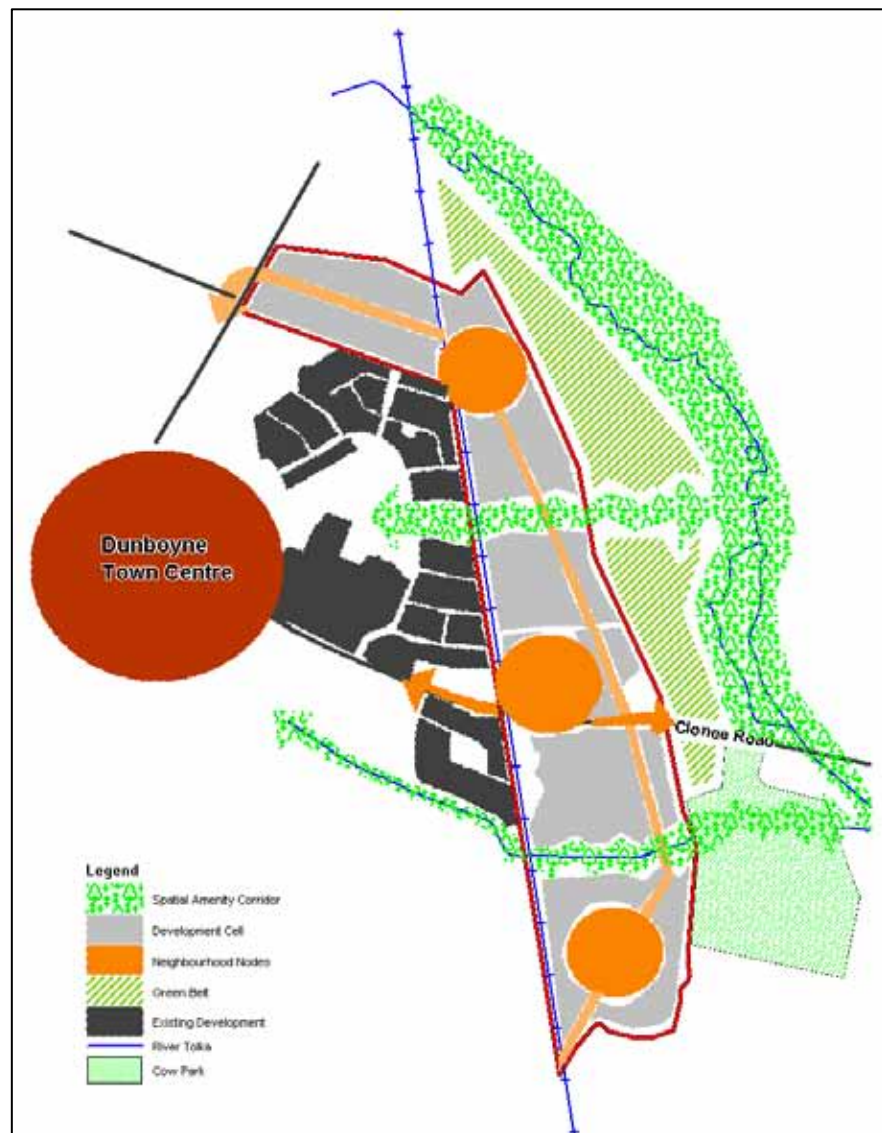
7.2.1 It is unsustainable from the perspective of the amount of residential development within the IAAP area proposed and from a maximising development potential point of view for only a single land use (residential) to be proposed.

7.2.2 One local centre is proposed to be located in cell 5, centred at the rail station in close proximity to Clonee Road. This local centre would likely comprise approximately seven or eight local shops, a larger supermarket unit and commercial uses including offices. Ancillary uses

could include medical and community including crèche. The land parcel defined as cell 5 is central to the entire IAAP area, making it the most appropriate location for key community uses. Individual sites proposed for a bus station, primary school and a community facility building are identified in figure 7.3.1.1. The site identified for the school is linked by the amenity corridors and existing playing fields to the complex of existing schools in Dunboyne.

- 7.2.3 The larger of the two remaining centres would be located in cell 2 and would comprise 4 or 5 retail units and one larger shop unit. It is unlikely to have any commercial use attached although it may also have medical or health facilities including crèche.
- 7.2.4 The third centre and smaller of the two neighbourhood centres would be located in cell 7 to the south of the Clonee Road. This would comprise no more than 2-3 local or corner shops to meet local needs. It may also have a crèche. These centres are illustrated in figure 7.2.4.1 showing the strategy context, development cells and relationship of development to the town centre.

Figure 7.2.4.1. Strategy Context & Development Cells



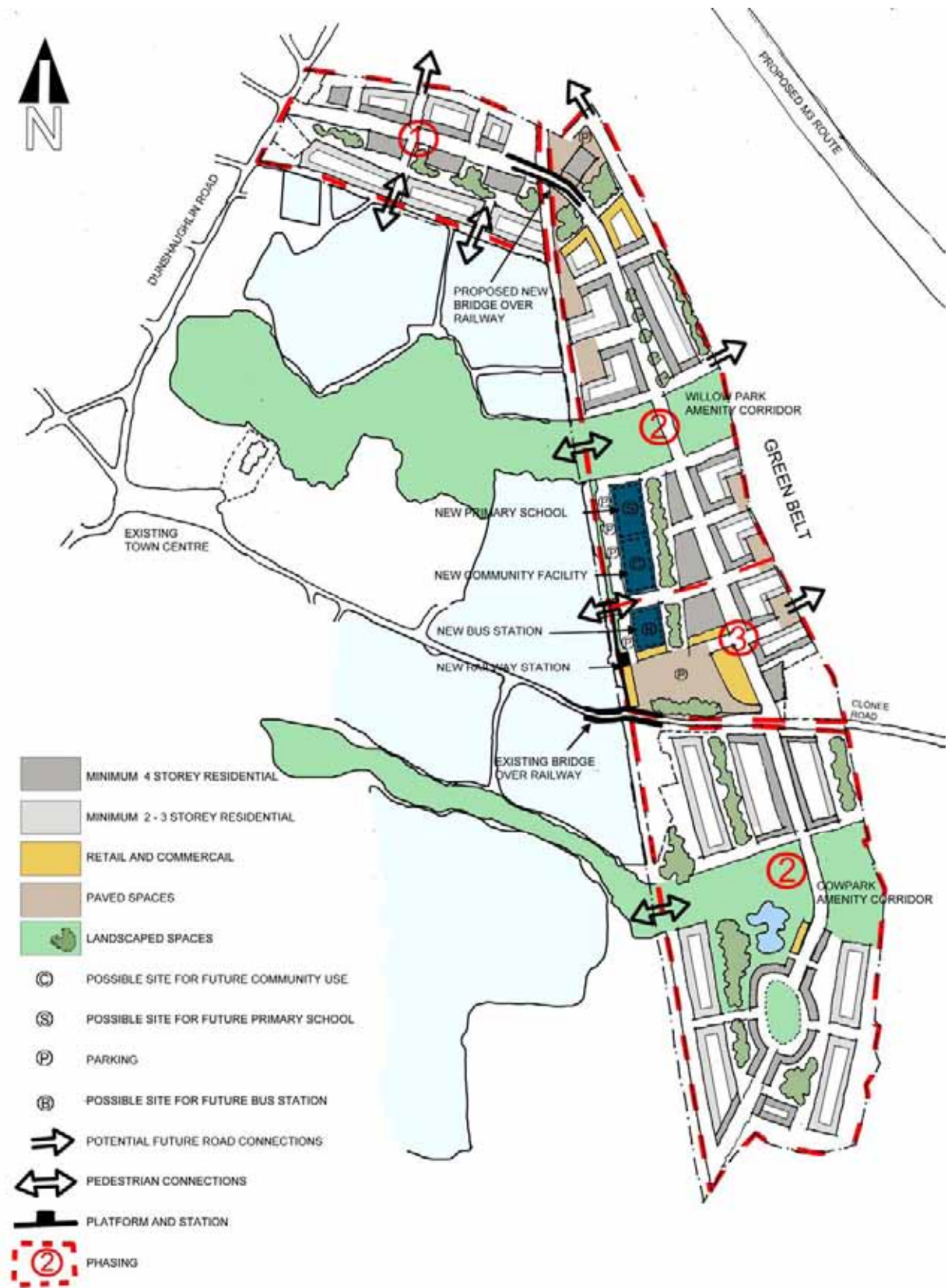
7.3.0 Development Components

The major components of development are set out below. Detailed development guidelines are provided for each component in Chapter 8.

7.3.1 Masterplan

The Masterplan for the action area is enclosed as figure 7.3.1.1. The main spatial components of the masterplan are a central avenue/ Eastern Distributor Road, a local centre, 2 no. neighbourhood nodes, 2 no. amenity corridors, linear parks and courtyards/mews spaces.

Figure 7.3.1.1 Concept Masterplan



Central Avenue/ Eastern Distributor Road

- 7.3.2 The Central Avenue is the spine of each cell and of the entire development. It is proposed as the main vehicular route (with bicycle lanes) through the IAAP lands from which the secondary road network is accessed. As a continuous route it will connect the Dunshaughlin Road with the Clonee Road and will continue further south through cells 6 and 7. It will facilitate future local bus services between the IAAP lands and Dunboyne village.

- 7.3.3 The central avenue should have a continuous width, building height and sense of enclosure for its entire length and it is intended that development along this shall contain appropriately scaled gateway buildings at key locations.

Local Centre

- 7.3.4 A local centre is proposed in cell 5 at the rail station. In providing retail and office uses arranged around an urban square it is intended to serve both the residential population of the IAAP area and the commuting population using the rail station. Further uses including a bus station (in cell 5), community facility (cell 4) and primary school (cell 4) are proposed for sites immediately adjacent to the station square. It is intended that this local centre would not impact on the health, vitality or viability of the existing town centre.

Neighbourhood Nodes

- 7.3.5 Two neighbourhood nodes are proposed for the IAAP area. Each of these nodes provides a central open space at the convergence of vehicular and pedestrian desire routes and is intended as the focal point of the surrounding residential area. The nodes are located in the northern and southern sections of IAAP area, in cell 2 and cell 7, to ensure that every residential unit is within a 5 minute walk of one such node.

Amenity Corridors

- 7.3.6 Two amenity corridors are proposed to link the Green Belt area to the east of the IAAP lands with the green 'heart' of Dunboyne village and the Tolka River Linear Park. Within the IAAP lands, these amenity corridors will contain a range of active and passive open spaces providing high quality recreational amenity for the residents of the IAAP development and the other residents of Dunboyne alike. These amenity corridors are located between cells 3 and 4 to the north of the Clonee Road and between cells 6 and 7 to the south of the Clonee Road.

Linear Parks

- 7.3.7 A number of linear parks are proposed. These are located behind the central avenue and are intended as formal spaces around which a minimum 3-storey residential development should be arranged. These spaces are conceived as being 'street-like' in form, and require a continuous edge along their length and should be contained by

terraced single family and/duplex over apartment units. Parking should be provided on-street rather than within the curtilage of the units.

Courtyards/Mews Spaces

- 7.3.8 A number of courtyard spaces are proposed. These are located behind the central avenue at the edges of the IAAP area. They are intended as intimate spaces around which 2-storey and 3-storey residential units are arranged. These spaces provide sheltered and secure areas that are particularly suitable for elderly people to enjoy and for small children to play in. The size, internal layout and public-private threshold of the surrounding residential units should reinforce the intimate quality of these spaces.

Phasing

- 7.3.9 The development of the IAAP area lands will be undertaken in a logical sequence to ensure that the associated road, water, and wastewater infrastructure is available and, where appropriate, in place to facilitate development in a rational, timely and sustainable manner. While major rail infrastructure is proposed within the IAAP area, development will not be prejudiced by the timescale for its delivery. Phasing will be in three parts and is dealt with in chapter 8.

Land Uses

- 7.3.10 The predominant proposed land use of the IAAP area will be residential supported in specific locations by the provision of ancillary retail uses and facilities including community, recreational, amenity, and where relevant, educational and other uses where identified. The development of commercial and retail uses will only be considered within the context of providing local and neighbourhood scale of provision and will be provided secondary to the existing retailing function of the town centre.

Residential

- 7.3.11 A mix of residential unit types is proposed. Detached and semi-detached units are considered appropriate in cells 1, 6 and 7 only but shall be kept to a minimum in the context of the development of the IAAP area. Elsewhere, 2-and 3-storey terraces and duplex units over apartments are proposed. Developments containing 1, 2 and 3-bedroom apartments and duplexes are proposed along the central avenue, fronting onto the three neighbourhood nodes and the Clonee Road.
- 7.3.12 The development of each cell and the provision of residential development in particular should follow the urban design and architectural philosophy advocated in this IAAP to ensure the highest standard of development. Internal floor areas and private open spaces shall be generously provided in apartment developments and all units should have dual aspect and be protected from overlooking.

Commercial

- 7.3.13 Both retail and office uses are proposed in the development of the IAAP lands and concentrated in the local centre and to a lesser degree in the neighbourhood nodes. The largest quantity of commercial use, 4810sqm, is proposed in the area adjacent to the train station; 1600sqm is proposed in the northern neighbourhood node; and 450sqm in the southern neighbourhood node. It is considered that a large supermarket (approx. 2000sqm) could be appropriately located adjacent to the rail station, while a second smaller supermarket (1,000m²) could appropriately be located in the northern neighbourhood node. Otherwise, it is considered that retail units ranging from 75sqm-150sqm are appropriate in all three centres. Approximately 560sqm (included in the overall figure) of office use is proposed for the station area. With the exception of individual live-work units in residential areas, office use is not considered appropriate elsewhere in the IAAP area.

Community

- 7.3.14 Sites adjacent to the proposed rail station are identified in the masterplan for a primary school and a community facility. These are located in cell 4 between the northern green belt amenity corridor and mixed use development around the 'station square'. It is intended that the community facility can offer a link use between the uses of the station square and the proposed school. It is also intended that the school and community facility can each contain dual uses that will enable a high level of interaction and the maximum use of the facilities and accommodation provided in each.

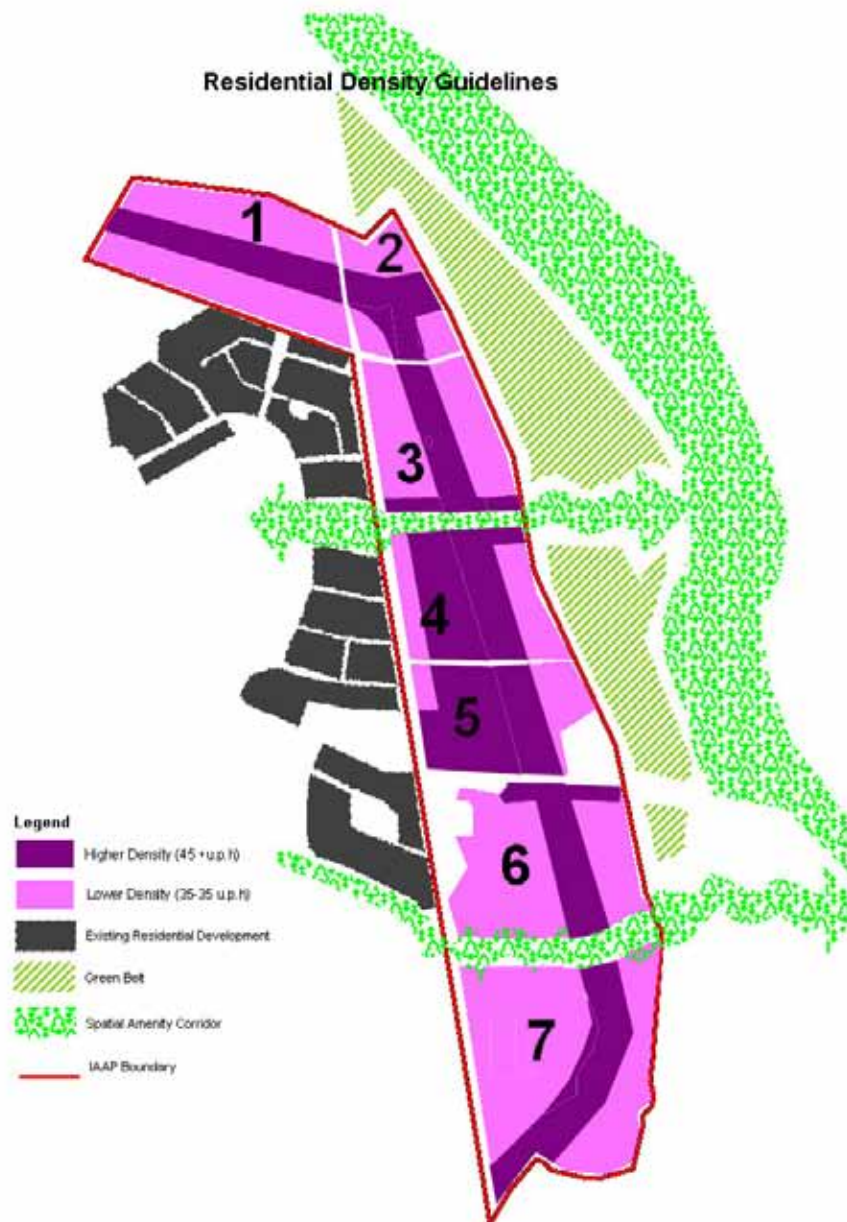
Density

- 7.3.15 It is the intention of the IAAP to achieve a balance between maximising the development potential of the land and providing high quality residential environments. It is noted that higher densities are neither practical nor desirable in all locations. However, the opportunity does exist due to the likely reopening of the rail line and provision of a new rail station, to facilitate significantly higher densities of development than has been undertaken within adjacent residential areas.
- 7.3.16 The appropriateness of the densities proposed is based on the application of the Residential Guidelines for Planning Authorities (DoE 1999). Densities are set out in two categories; higher and lower. The selection of the appropriate density for each development will be based primarily on its proximity to the proposed rail station (within a distance of 350m) or the Eastern Distributor Route, proximity to services and facilities, and finally proximity to open space. Buildings immediately adjoining these spaces are identified for higher density. It is recommended that a lower density be applied to development behind these blocks so as to prevent overlooking and to protect the amenity of the existing residential development to the west of the railway line.

7.3.17 Lower densities will be applied to land which falls outside these locations and will be based on qualitative considerations, the need to protect the residential amenity of and integrate sympathetically with existing residential developments. This approach to densities will not only facilitate the provision of increased number of units and reduce the need for private travel, but will also enable the provision of a variety of dwelling sizes, and enable a more varied and interesting form of residential development to be provided throughout the Action Area. The 2 categories of density are set out below.

Higher	45+ units per hectare
Lower	35-45 units per hectare

Figure 7.3.17.1 IAAP area Residential Density Guidelines



Transport and Movement

7.3.18 The principal movement objective is to provide a main movement corridor and ensure a high level of permeability and inter-connectivity within the Action Area and between the Town Centre and existing residential areas where possible.

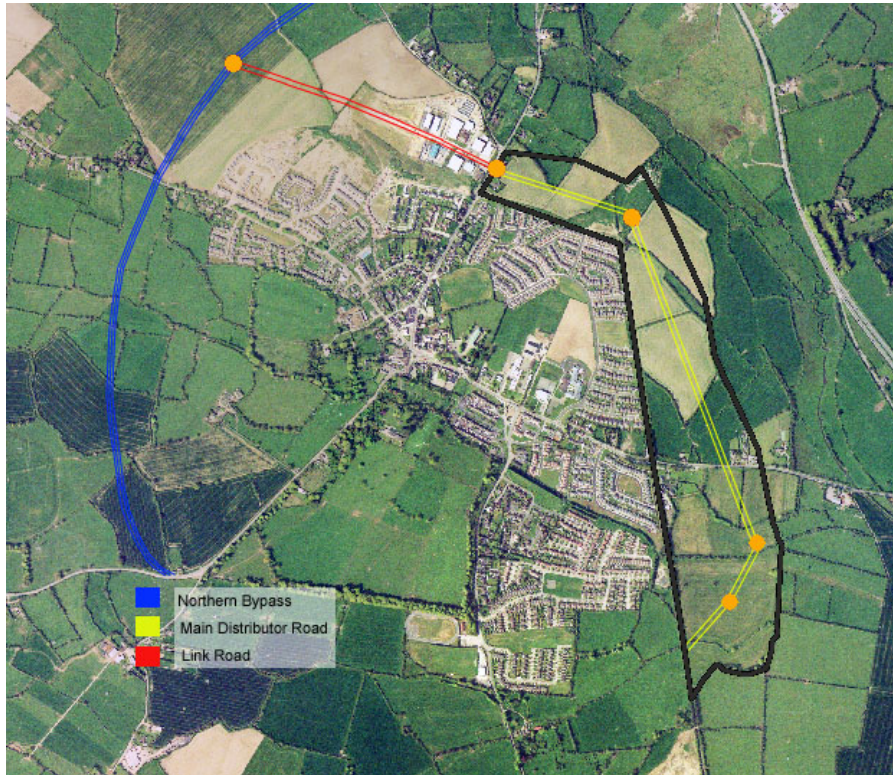
7.3.19 The movement of road traffic will be principally via the main distributor road that runs through the Action Area. This road will connect to the local road network at the R157 (Dunshaughlin Road) and R156 Clonee/Summerhill Road. The main distributor road will be accessed via major access roads that will serve each cell of development. Minor access roads, which may include cul de sacs will connect the major access roads and the developments. The relative widths of these roads will be as follows:

Road Type	Design Speed (kph)	Minimum width of carriageway
Distributor	60	7.5m
Access Road	30	6.0

7.3.20 It is worth noting that under the M3 improvement scheme the R157 (Dunshaughlin Road) will revert to a cul de sac just north of the IAAP area. This will result in a significant decrease in traffic flow along this road. The proposed spine road for the lands served by the AAP would connect the Clonee/Summerhill Road (R156) and Dunshaughlin Road (R157). However, the latter road will be closed up where the M3 passes through it thus making it a cul de sac. Traffic on the development road would therefore have to travel back towards the centre of the Dunboyne in order to travel to the west.

7.3.21 Extending the development road to the west through the existing industrial estate and connecting to the Dunboyne Bypass North would reduce the volumes of traffic passing through the town centre that would arise from the IAAP lands. It would also effectively form an eastern relief road around Dunboyne. The proposed strategic roads hierarchy is shown in figure 7.3.21.1.

Figure 7.3.21.1 Proposed Strategic Road Network



7.3.22 Traffic Impact Assessment of IAAP Land Development

7.2.23 The Traffic Impact Assessment (TIA) was carried out by Michael Punch and Partners. The TIA took account of developments by the following organizations in addition to the IAAP developments: (1) Dunboyne Castle Developments, (2) Kilsaran Concrete Ltd and (3) Padraig Thornton Waste Disposal Ltd. The baseline data used for the TIA was (a) The Traffic Survey 2005 on the R157 – R156 Junction on the village centre, which accompanied the Padraig Thornton Waste Disposal Ltd development and (b) the traffic survey (2001) at the Loughsallagh Roundabout carried out for Preliminary Design Report on the M3. The TIA assessed the impact of the development of the IAAP lands according to the proposed Development Phases and accounted for likely existence or otherwise of the proposed Dunboyne By-Pass and Link Road and the opened railway line. The following assumptions are also made regarding the Development Phases:

- Phase 1 will be completed in advance of the opening of the Dunboyne By-Pass, the Link Road and the reopening of the railway line.
- Phases 2 and 3 will be completed after the opening of the Dunboyne By-Pass, the Link Road and the reopening of the railway line.

7.2.24 The result of the TIA for the R156 – R157 Junction in the village centre is as follows:

Phase 1: The assessment showed that no negative effect on this junction would arise from Phase 1 of the IAAP.

Phase 2 & 3: The assessment showed that no negative effect on this junction would arise from Phase 2 & 3.

7.2.25 The result of the TIA for the Loughsallagh Roundabout is as follows:

Phase 1: Though the assessment showed that this junction did not perform as well as the R156 – R157 junction it is considered not to suffer a detrimental effect due to Phase 1

Phase 2 & 3: The traffic assessment showed that the junction would not sustain a negative effect from Phases 2 and 3 up until the year 2024 subject to upgrading works being undertaken. At the year 2024 it will have reached saturation level. The TIA recommends the construction of a new roundabout connecting to the R156 at this point.

Location of the Proposed Toll Road

7.2.26 The location of the proposed toll road north of the N3 / Northern bypass junction would mean that there would be no rat running along the bypass through the IAAP area and onto the Clonee Road to avoid payment.

Development of the Rail line and Station

7.3.27 The safeguarding of the rail-line is essential for the long term development of national rail infrastructural proposals. The location of the rail line between the existing residential development and the IAAP area lands reduces the potential for the long term inter-connectivity between new development and the town. While there are quite a number of opportunities to provide access to the Action Area via existing residential areas, these will be reduced in number in the long term in the likely event that the rail line will be reopened.

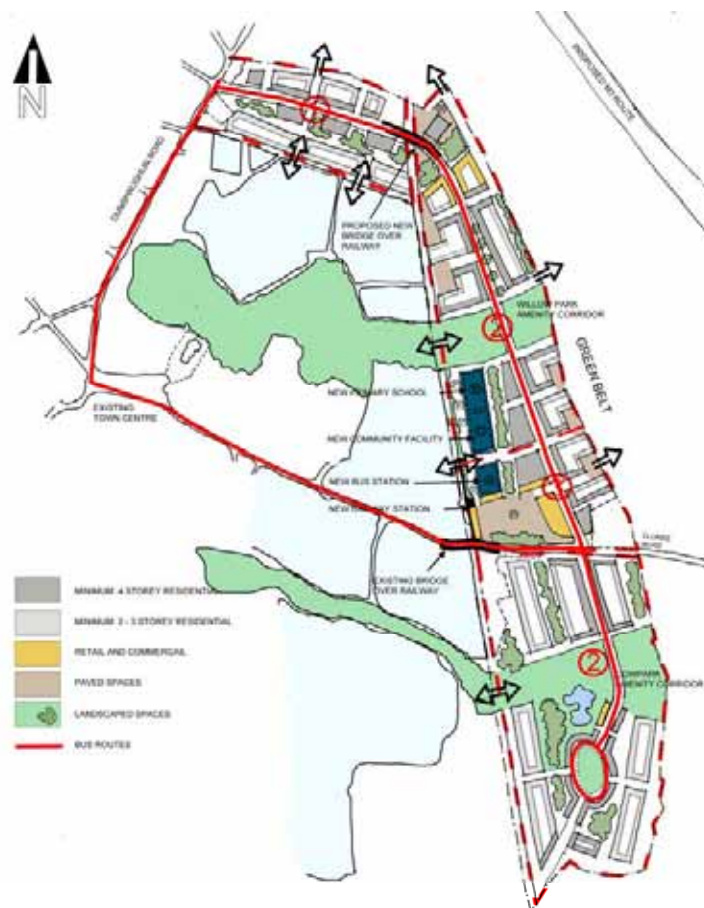
7.3.28 While these options might be informally utilised in the short term, long term access corridors would include the primary movement corridor (Eastern Distributor Road) between Cells 1 and 2 (requiring the construction of a new up-and-over vehicular bridge); the existing bridge on the Clonee Road (R165); the Willow Park Amenity Corridor and Cowpark Amenity Corridor.

7.3.29 It is appropriate to safeguard adequate land for the long term development of the railway line (a 16m wide strip is required for a rail line in each direction) and to reserve land for the rail station (a 174m long by 3-4m wide platform and single storey station with footprint of 16m x 5m) within the IAAP area east of the Bridge and adjacent to the Clonee Road for two reasons; (1) in order to provide adequate land to facilitate the development of a variety of mixed use developments concentrated around the rail station; and (2) to locate the station to the east and away from the bridge which currently acts as a traffic 'pinch-point' on the Clonee Road.

Public Bus Transport

7.3.30 The greatest demand points for the bus are likely to be the rail station, the neighbourhood centres and the village centre of Dunboyne. Therefore any proposed bus route will likely run along the main distributor road. In this scenario no part of the IAAP area is likely to be more than 500 metres away from the bus route. The proposed bus route is shown in figure 7.3.30.1.

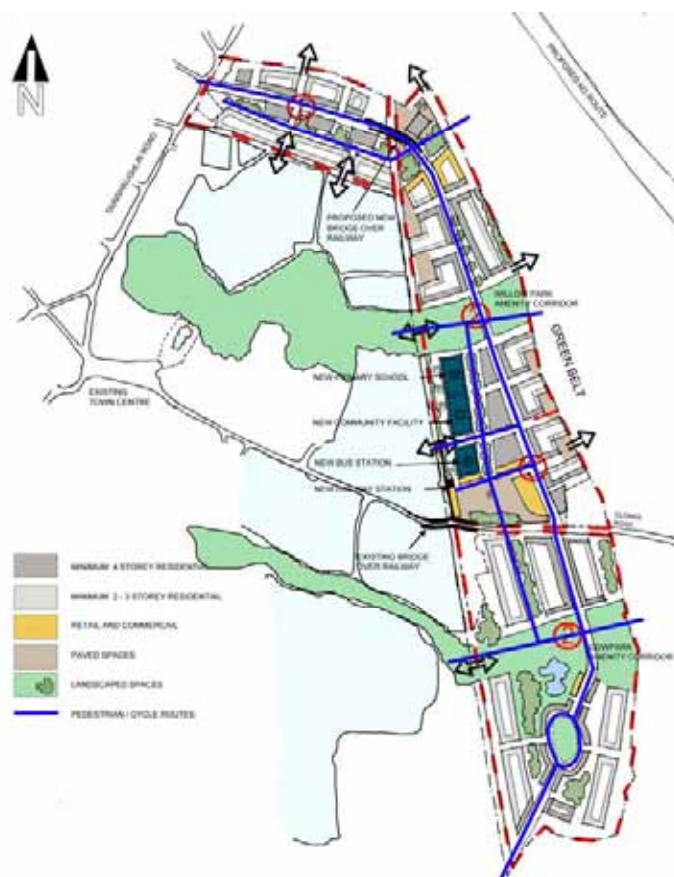
Figure 7.3.30.1 Proposed Bus Route



Proposed Pedestrian and Cycle Route Network

7.3.31 here is an extensive network of pedestrian and cycle routes both existing and proposed outside the IAAP area. Amenity corridors have been identified within the IAAP area to provide linkage between existing cycle and pedestrian routes and both the Tolka Valley Park and the Cow Park. Cycle and pedestrian routes are to be run along these corridors and other transport corridors. The proposed cycle and pedestrian network is shown in figure 7.3.31.1.

Figure 7.3.31.1 Proposed Pedestrian and Cycle Route Network



Improvements to the Railway Bridge

7.3.32 Development of the IAAP land is predicated on improvements to the Clonee Road bridge. The existing bridge over the railway line has a poor horizontal and vertical alignment. It has also been highlighted as needing improvement in terms of safety in the development plan. In the likely event that the rail line reopens, the parapet walls will need to be strengthened and increased in height for reasons of safety. There will also be a need to facilitate cycle and pedestrian access to the IAAP lands under the scheme, which the bridge does not currently cater for. The junction of the access to the development lands has been located on the basis that improvement works are undertaken on the bridge and approaches.

Flooding

7.3.33 The final flooding report was published in November 2003. The flood remediation works identified in phase 1 to prevent flooding in the IAAP are now complete. An insignificantly small area of the IAAP area within cell 7 would marginally fall within the extent of a 1 in 100 year flood. To ensure that development does not encroach into this potentially affected area it is proposed in the Action Area Masterplan to retain this area as open space.

7.3.34 As part of the Final Flooding Report it is recommended that a riparian strip 30 metres wide along the Castle Stream be set aside. This has been taken into account in the proposed master plan.

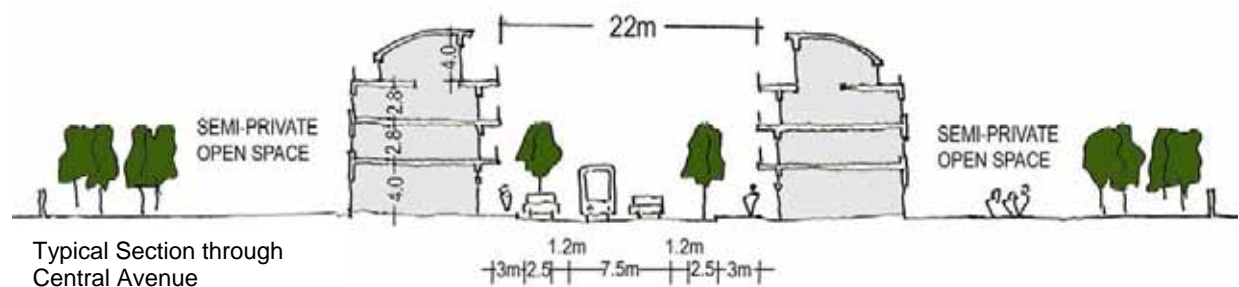
Surface Water Drainage

7.3.35 The Sustainable Urban Drainage System (SUDS) is proposed as it is environmentally sustainable solution to the issues of storm water associated with new development, one that will avoid flooding of areas downstream and will return surface water to the grounds treated and at the same rate of discharge as before construction.

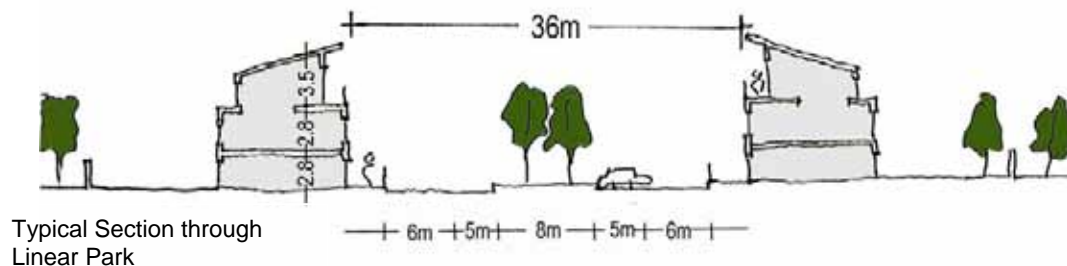
Built Form (Scale, Height and Massing)

7.3.36 The design strategy for the IAAP area sets out to develop a legible, functional, interactive, permeable high quality and dynamic residential environment based on function, movement, spaces and interaction. The following heights and street height-to-width ratios are proposed.

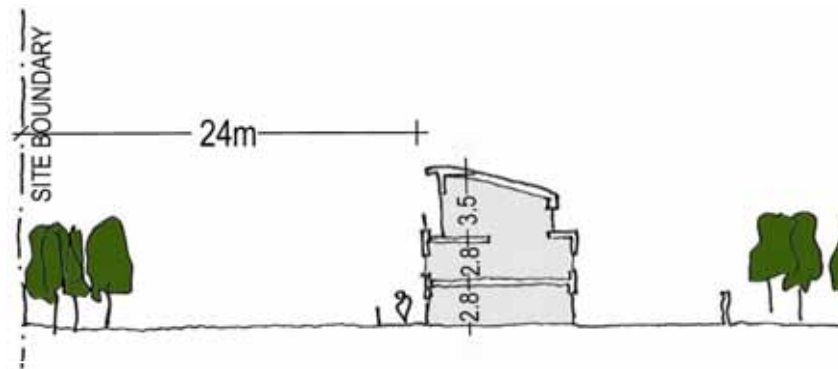
- Central Avenue: Minimum 4 storeys. Building height to street width ratio of between 1: 2 –1:3.



- Linear Park: Minimum 2-3 storeys. Ideal building street height to street width ratio of 1: 3.



- Courtyard Spaces: Minimum 2-3 storeys. Building height to courtyard width ratio of between 1: 4 and 1:5.

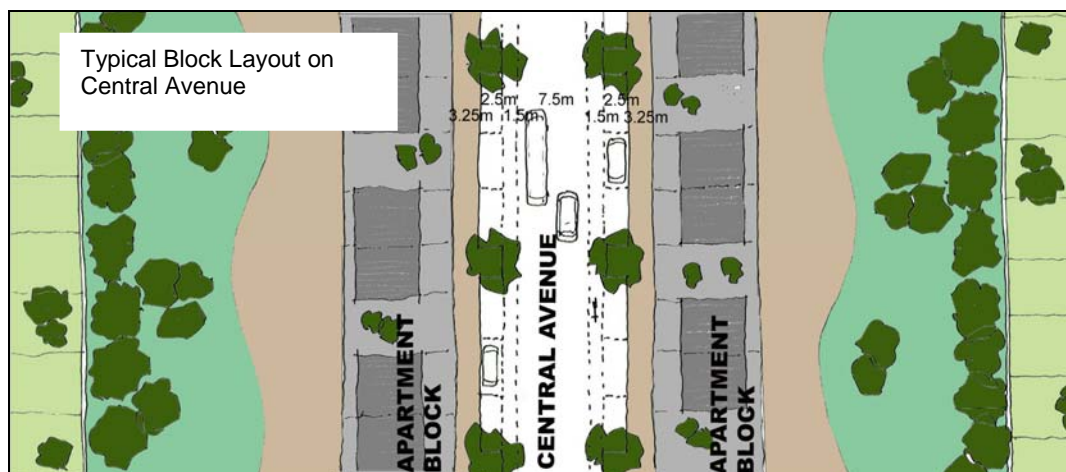


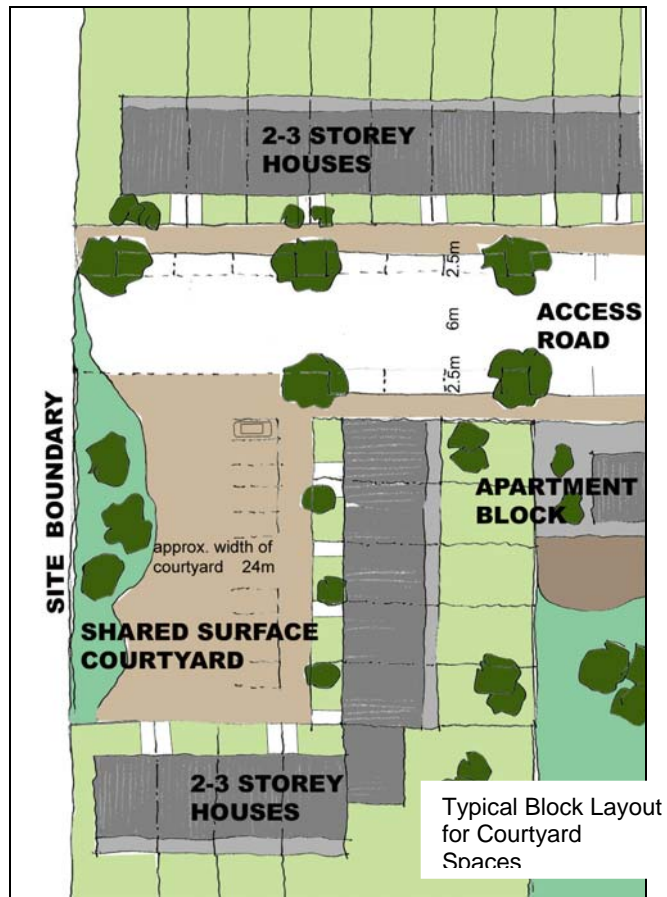
Typical Section through
Courtyard Space

Layout and Grain

7.3.37 Development of individual areas will be guided by the concept and strategy, and the alignment of the main distributor road and the location of neighbourhood nodes of mixed use activity. The objective is to develop a strong building line along the main distributor road and around the designated neighbourhood nodes of mixed use activity. A high level of design and the promotion of variation of architectural innovation, high level of permeability and accessibility, and use of amenity open space as an integral element of the design will be required throughout the IAAP area.

7.3.38 Three indicative block layouts are proposed; typical block along boulevard, typical block adjacent to linear park, and typical block forming courtyard space.



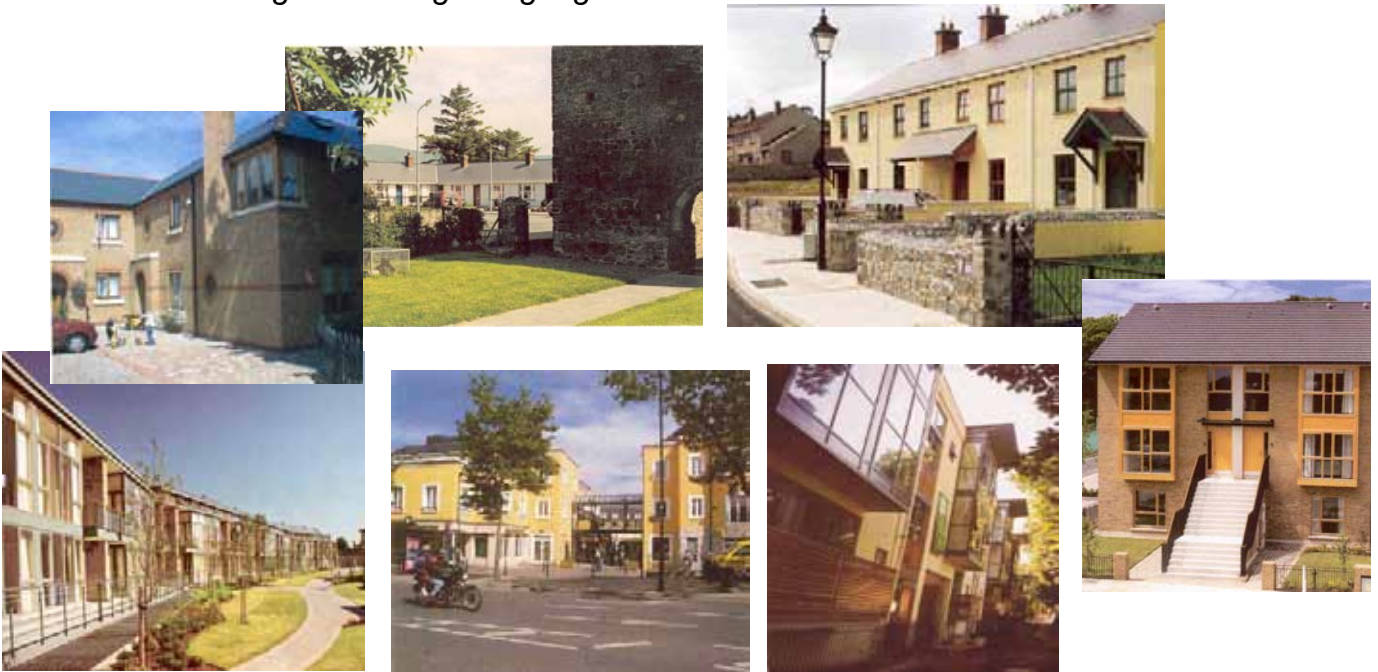


Materials

7.3.39 In order to enhance, complement and repair some erosion of the central character of Dunboyne a limited palette of materials is suggested which should be used constantly throughout the IAAP area. Creative use of this palette and occasional departure at focal points / key buildings will ensure variety in a quality environment. Materials should reflect local vernacular although not necessarily the style:

- Render of buildings in general will be favoured, with stone detailing or brick other than red brick. In general red brick should be avoided in favour of materials that enhance local character rather than import suburban / urban materials that dilute local character. The controlled use of newer materials should also be considered. Examples include coloured fibre cement panels and zinc or other metal cladding.
- Stone
- Iron railings
- Concrete footpaths with kerbs or details in stone.
- Porous paving sets in courtyards and other shared surface areas
- Asphalt roads (including colour pigmented asphalt)
- Classically designed but contemporary street furniture.

Images of Design language and Materials



Scale and Form

7.3.40 A diversity of building heights, building lines, amenity spaces and plot ratios will contribute to visually diverse and interesting residential character. Nevertheless, this can only be undertaken where it would

be sympathetic to the scale and form of contiguous developments and would not interfere with the residential amenity of adjacent properties.

Open Space

7.3.41 The provision of open space will enhance the quality of the residential environment. The development framework identifies a hierarchy of open spaces including a series of amenity corridors which act as both areas of open space and lines of movement through the IAAP area connecting with the existing residential areas of Willowpark, Larchfield, existing open spaces of the Tolka Valley Linear Park, the Cow Park and the playing fields adjoining the existing schools.

7.3.42 The provision of amenity open space (as part of residential development requirements) should not be considered in isolation from the existing amenity areas and amenity corridors of other developments. Rather, open spaces should attempt where possible to integrate with existing amenity areas and with the proposed residential amenity spaces within the IAAP area.

7.3.43 The provision of new open space should be considered as an integral element of residential design and layout. Open space should be provided in a variety of hard and soft finishes, be functional and conveniently located within the development in order to provide an element of passive surveillance and informal security. The reduction of open space requirements for residential developments may be considered in locations adjacent to amenity corridors and linear parks.

7.3.44 Designated amenity corridors will be safeguarded from development and will include appropriate infrastructure to negotiate access across the railway line.

Building Orientation and Aspect

7.3.45 The orientation of buildings should generally seek to face out onto public roads and designated open spaces and should avoid overlooking adjacent properties and facing onto the rear of private amenity spaces of adjacent dwellings. Consideration should be given to orientating buildings to avail of passive solar energy gain and/or to provide a diversity of building orientations where it would contribute diversity and character of individual areas.

Landscaping

7.3.46 Landscaped areas will be considered as an integral part of the development framework. This technique will be employed in order to enhance the character and visual diversity of the development of individual areas, and to inter-relate developments both visually and functionally within the hierarchy of identified open spaces.

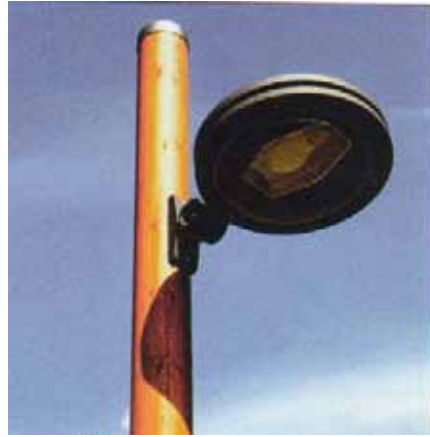
The key landscape components will be:

- Street Trees to include *Acer pseudoplatanus* (sycamore), *Tilia* spp (Lime), *Fraxinus excelsior* (Ash)
- Parkland Trees to include *Fagus sylvatica* (beech), *Quercus* spp (Oak)
- Hedges and shrubs of native or traditional species to structure and soften spaces to include *Fagus sylvatica* (beech), *Ilex aquifolium* (Holly), *Prunus laurocerasus* (Laurel).
- Ornamental planting where appropriate.
- Paving materials using details in stone or similar as highlights in more robust areas.
- Boundary treatments - stone walls, railings and rendered walls.

7.3.47 Two key components of landscape design for the IAAP area are the screening of any reopened rail line and the provision of a high quality tree lined central distributor road similar to a European styled 'Boulevard'.

Images of materials and places:





Height

7.3.48 Developments should include a variety of heights where it would not harm the amenity of adjacent developments. Higher developments should be concentrated within higher density areas along the main distributor route and within the neighbourhood nodes and should be sympathetic to their location and the surrounding spaces.

Character

7.3.49 The character of an area is based on its sense of identity. Visually diverse structures, layouts, details, and orientations that take account of the characteristics of their location all contribute to the character of an area.

Sense of Community

7.3.50 The development will endeavour to create a sense of community by providing a range of community uses and amenities where there can be social interaction, by providing permeability throughout the IAAP area and by providing a high quality environment.