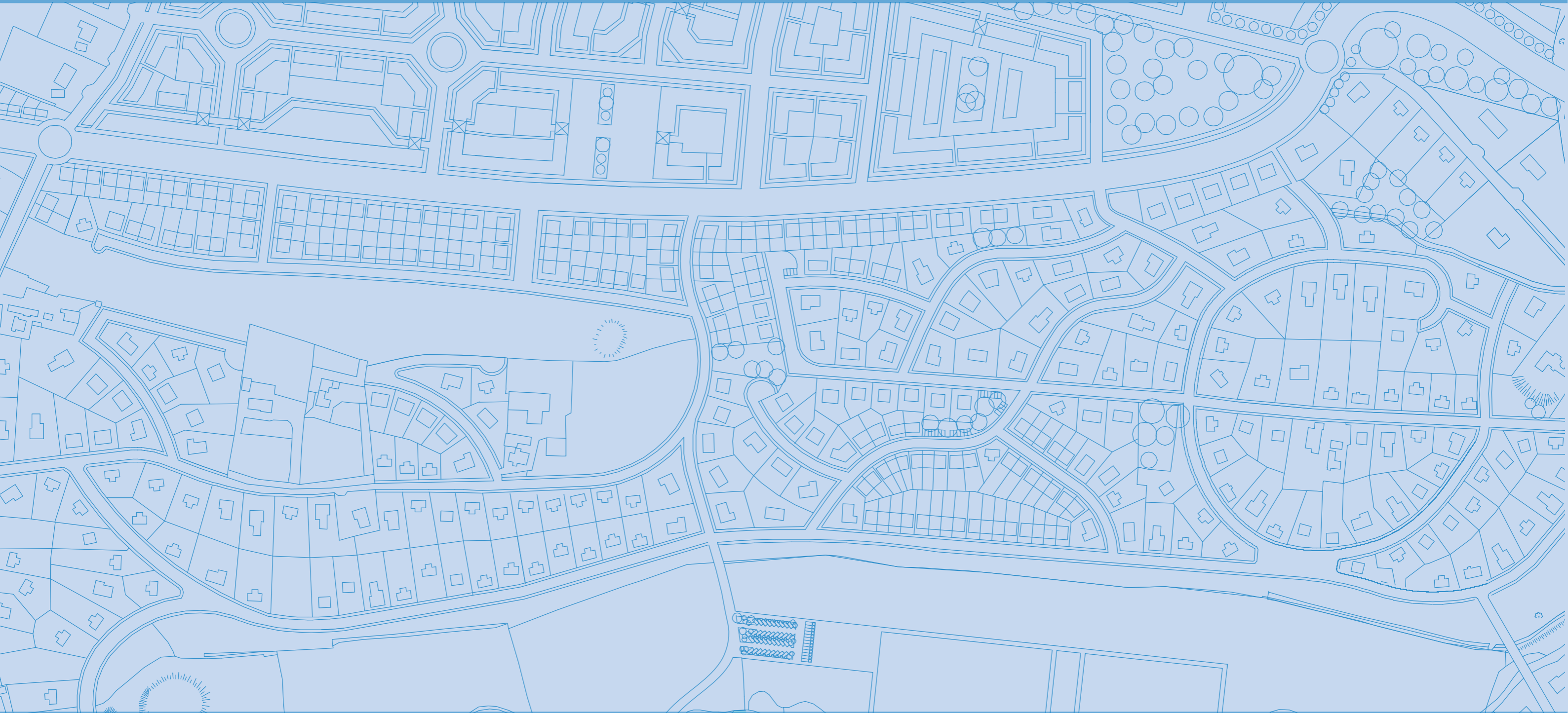


# SLIGO • NORTH FRINGE LOCAL AREA PLAN

2010-2016





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# 1 Introduction

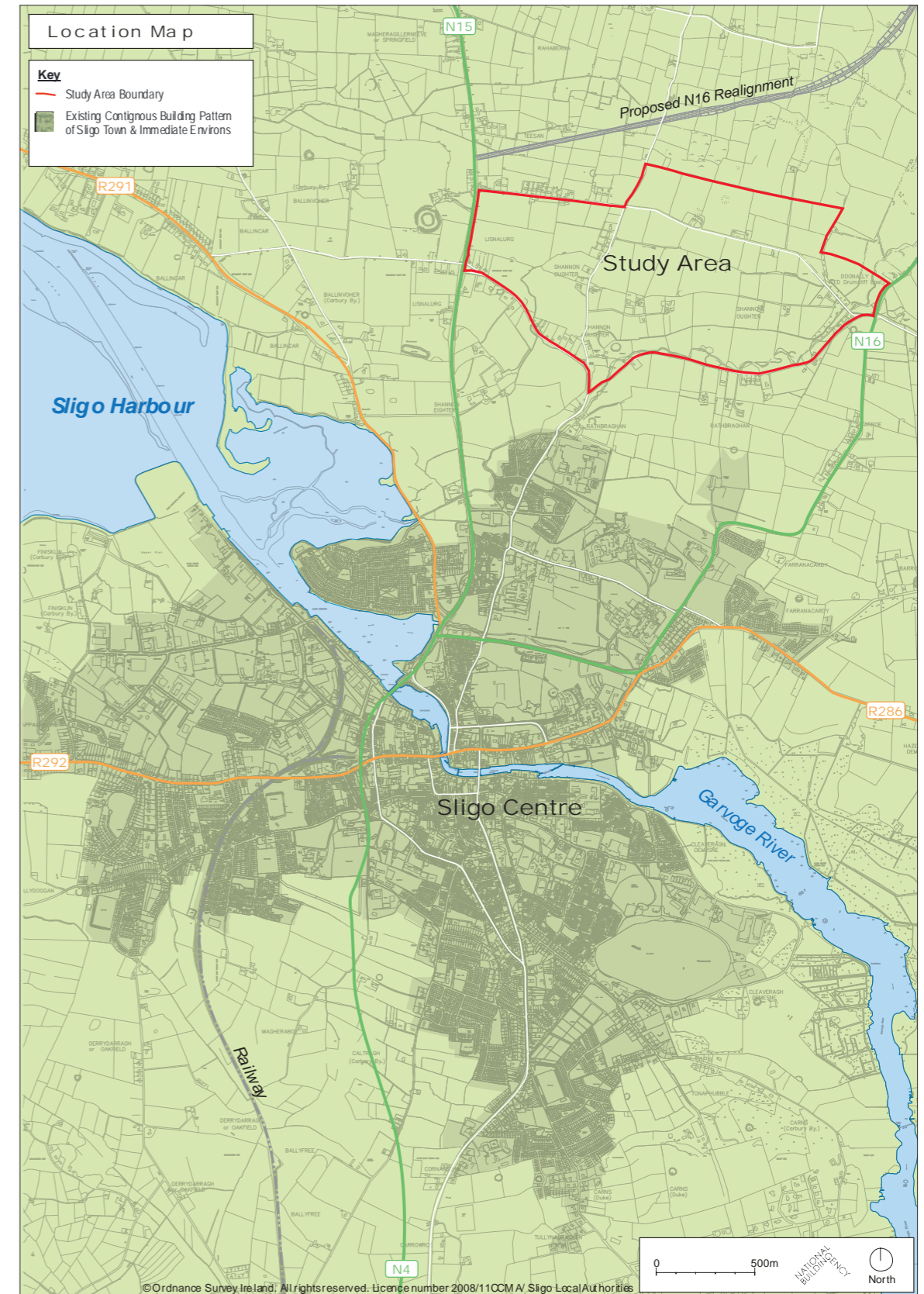
The Sligo North Fringe Local Area Plan (LAP) encompasses land to the north of Sligo City, adjacent to the N15 (see Location Map).

## 1.1 Aims

- 1.1.1 The aim of this Plan is to bring the relevant components together to form an integrated development and design framework and high quality live, work and play community facilitating a mix of accommodation and employment types.
- 1.1.2 A balanced and sustainable community is required combining amenities in a relaxed environment, sensitive to and in harmony with its natural and cultural setting in North Sligo.
- 1.1.3 It is intended that the framework study should be flexible and coherent in respect of strategic and local policy and should enable the promotion of local identity while encouraging a sense of pride and involvement by the local community.
- 1.1.4 The proposed development is likely to take a number of years to be fully realised, over which time market conditions may change significantly. The framework study is therefore intended to be sufficiently adaptable to allow for the expansion/contraction of different elements in accordance with changing market requirements.
- 1.1.5 The configuration of land in this area is somewhat constrained by the typology of the site, archaeological features and natural boundary treatments consisting of hedgerows and significant tree groups. On this basis the proposed framework is to take account of neighbouring land uses and landuse patterns, natural environmental features, community structure, circulation patterns, zoning objectives and design characteristics.
- 1.1.6 The strategic objective of this Plan is to create a vibrant urban quarter, providing for housing, educational needs and employment opportunities with good access and internal links.

## 1.2 Surrounding Context, Character and Landuses

- 1.2.1 The site is located in the townlands of Lisnalurg and Shannon Oughter in the Sligo Environs, approximately 2km north from Sligo town centre. The land is within the administrative area of Sligo County Council. The existing land composition is somewhat rural in character and has developed in a loose residential pattern (i.e. with a concentration of ribbon development in specific areas). This area of land could be defined as an outer 'greenfield' site.
- 1.2.2 The Plan covers a total area of 153 hectares incorporating detached dwellings, farms, archaeological sites, natural woodland and river corridors (see Current Landuse Map).
- 1.2.3 The N15 route towards Donegal bounds the west of the site, further west of this lies a number of detached dwellings, a pitch and putt course and a prominent archaeological site. Local roads delineate the boundaries to the north (County Road 265), south and east. The site is bisected by the local road (County Road 350) in the centre running in a north-south direction.
- 1.2.4 Within the surrounding residential areas the majority of housing is in private ownership. The east is characterised by individual detached dwellings within a rural landscape and the north affords views to Benbulbin. The majority of the housing stock immediately to the north, east and west of the site consists of "one-off" type housing constructed at varying times, the majority of which dates from 1970 - 80s. The south is an intervening area of undeveloped lands with some ribbon development that gradually gives way to a more urban character consisting of detached, semi-detached and terraced housing within housing estates, industrial land, and a number of educational institutions including Sligo Institute of Technology. These uses lead in towards the tighter urban grain of the city centre.



### 1.3 Capacity Study

- 1.3.1 In 2002 the average household size in Sligo was 2.68, which is expected to decrease to 2.56 by 2011. The area of the North Fringe is likely to be developed over the next 10 - 20 years; therefore an average household size of 2.5 is to be used for this study. The Development Framework lands could accommodate between a possible 657 - 1,312 dwellings, approximately 1,642 - 3,280 persons. (see Table 1)
- 1.3.2 The appropriate development of this area could accommodate a significant proportion of the projected population growth of Sligo and Environs.

### 1.4 Timeframe

- 1.4.1 The North Fringe LAP is a long-term plan, which aims to accommodate development pressure within a planned framework as it arises over the long term. As stated in section 1.3.1, it is expected that the North Fringe area will be developed over the next 10-20 years. Development of these lands will occur on an incremental basis and each development proposal will be the subject of detailed assessment at planning application stage. In parallel with the development of these lands, the planning authority will ensure that an adequate level of social, transport and environmental infrastructure is available. This infrastructure may be provided by the private or public sector, or indeed a combination of both (see section 5.0 of the LAP).

Table 1: Population Projections & Land Capacity

Categories	Hectares (approximate)	Dwellings/Hectare	No. of Dwellings	Population
Low residential density	18	3 - 19	54 - 342	135 - 855
Low - medium residential density	20	20 - 34	400 - 680	1,000 - 1,700
Mixed Use (max 50% for res development)	(8ha/2) 4	35 - 50	140 - 200	350 - 500
Mixed Use (higher res component 75%)	(2.7@75%) 1.8	35 - 50	63 - 90	157 - 225
<b>Total</b>	<b>(49) 44</b>	-	<b>657 - 1,312</b>	<b>1,642 - 3,280</b>
Open Space	41	-	-	-
Neighbourhood Centre and Civic Square	0.35 0.50	-	-	-
Business, Industry & Technology Park	10	-	-	-
Educational & Community	8	-	-	-
Existing Sites	11	-	-	-
Central Avenue	4.7	-	-	-
Roads and Pathways etc	28.75	-	-	-
Overall Masterplan boundary (incl. roads, etc)	153	-	-	-

Source: Desktop study and calculations, all figures are approximates

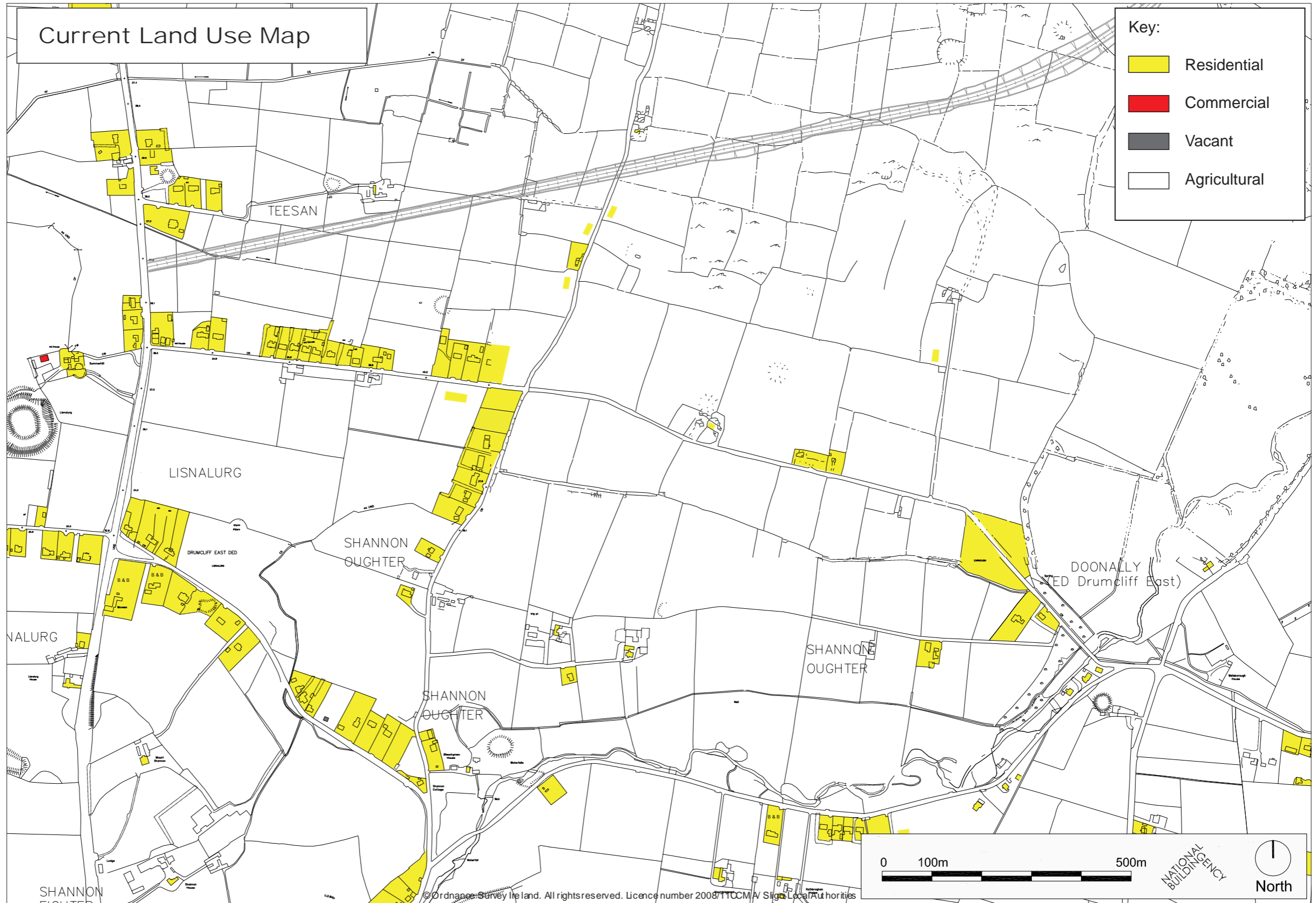
Note: Refer to section 4.2.4.



Northern Fringe Area, Sligo, with views across to Benbulbin



Northern Fringe Area, Sligo



## 2 Environmental Considerations

### 2.1 Natural Features

2.1.1 The current land use within the North Fringe LAP is chiefly agricultural in nature providing grazing for cows and sheep.

2.1.2 A significant portion of the site is elevated with a strong ridge line transecting it from east to west, at a height of 50 - 55 metres OD. The land on either side slopes down in the south to 25 metres and in the north to 35 metres OD. There are no listed views or prospects identified in the *Sligo & Environs Development Plan* that affect this area, however there are views south across the city, Garvogue River and Sligo harbour to Knocknarea and Queen Maeve's Grave in the distance and to the north the dramatic backdrop of Benbulbin gives the site an impressive setting. The form and scale of development proposed takes account of the gradients involved and aims to maximise the potential of this asset in terms of design and character - namely by providing a strong east-west open space framework (see Topography Map).

2.1.3 The site does not contain any areas of scientific interest as defined by the Department of Environment, Heritage and Local Government (DoEHLG) under the Irish Wildlife Amendment Act (2000) and European Habitats directive. The old-field patterns are mostly still evident, enclosed by hedgerows. Many of the hedgerows are physically and visually weak, however there are some that are strong and would be worthy of retention (within the footprint of future development), this would aid in assimilating the development into the landscape and simultaneously acting as wildlife corridors. The hedgerows predominantly comprise of hawthorn/whitethorn, bramble, holly and alder. Species of Ash, Beech, and Yew were also noted along certain sections.

There are a number of significant trees, which are located within the North fringe area to the south and east of the site. There is a wide tract of land adjacent to the southern boundary zoned for open space that includes stream corridors, an archaeological site, significant tree groupings, hedgerows and wetland areas. The majority of this area is to be kept as a natural parkland setting incorporating walking and

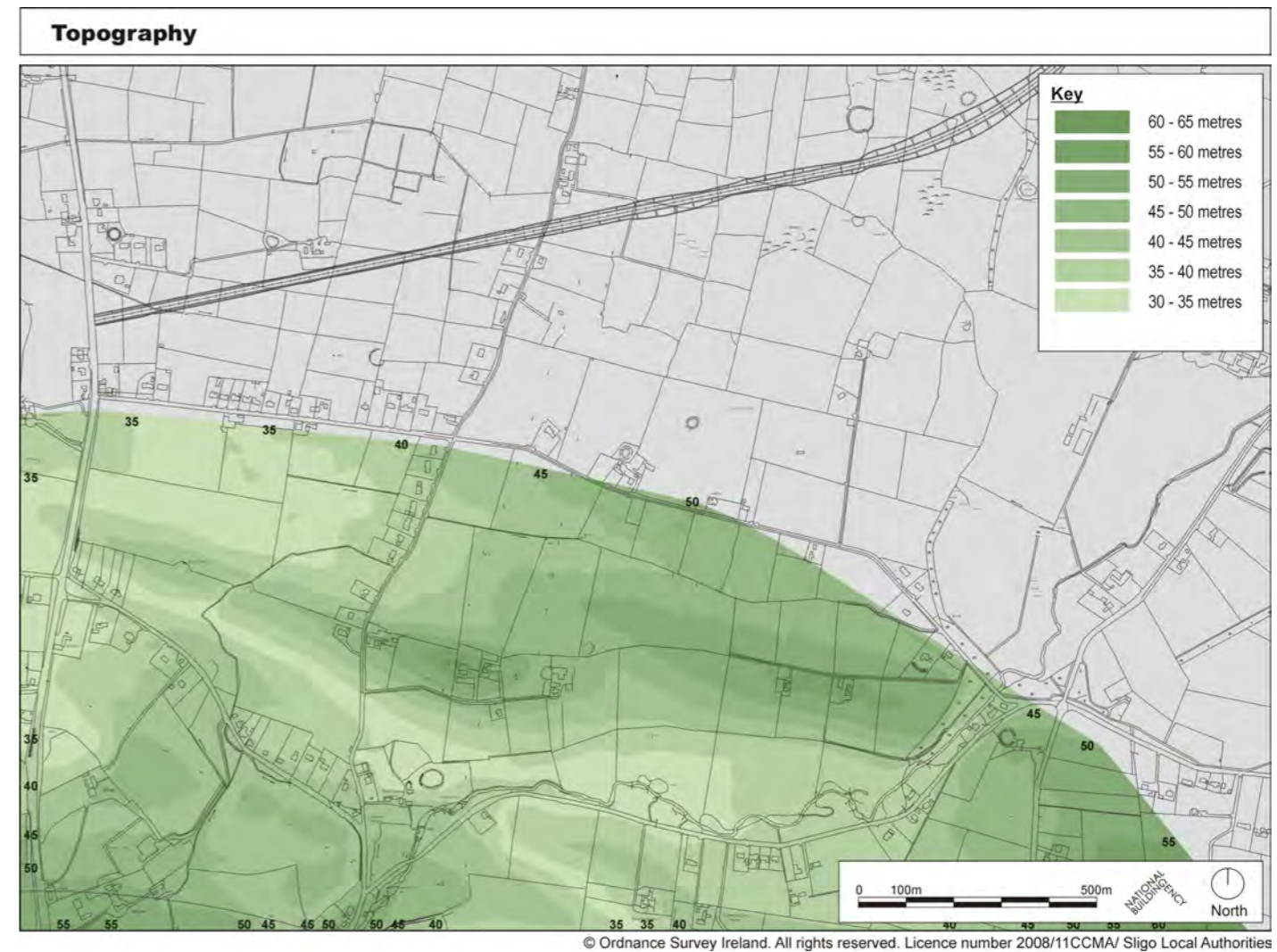
cycling trails, with some provision for active amenity playing fields.

2.1.4 A number of drainage ditches run through the site some of which are to be retained and incorporated into the development as storm water retention features aiding with the control of surface water run-off (see Aerial Photography Map).

### 2.2 Man-Made Features

2.2.1 There are a number of stone boundary walls, which could be incorporated at certain points into the scheme recognising the texture and character of the existing area. These are identified on the Environmental Parameters Map.

2.2.2 Five known archaeological sites have been identified within the North Fringe area according to the statutory Record of Monuments and Places (RMP) as compiled by the DoEHLG, (SLO14 - 017, SLO14 - 019, SLO14 - 020, SLO14 - 021 and SLO14 - 022). Two of the sites are situated along the ridgeline, one to the west, an enclosure, and one to the centre-east, a cashel. A pair of stone pillars is evident on the western enclosure site. These sites are to be incorporated into the overall open space network, keeping the ridge top free from development, and allowing access and in-situ preservation. A third archaeological site, a ringfort, is situated within the area zoned for open space adjacent to the stream corridors to the south of the Plan area. This site is also to be incorporated within the open space network, ensuring access and awareness. Two of the known and recorded archaeological sites are located within the Educational and the Business, Industry and Technology Park. These sites are to allow for a development exclusion zone of 30 metres in diameter permitting intervisibility between sites (see Environmental Parameters Map).







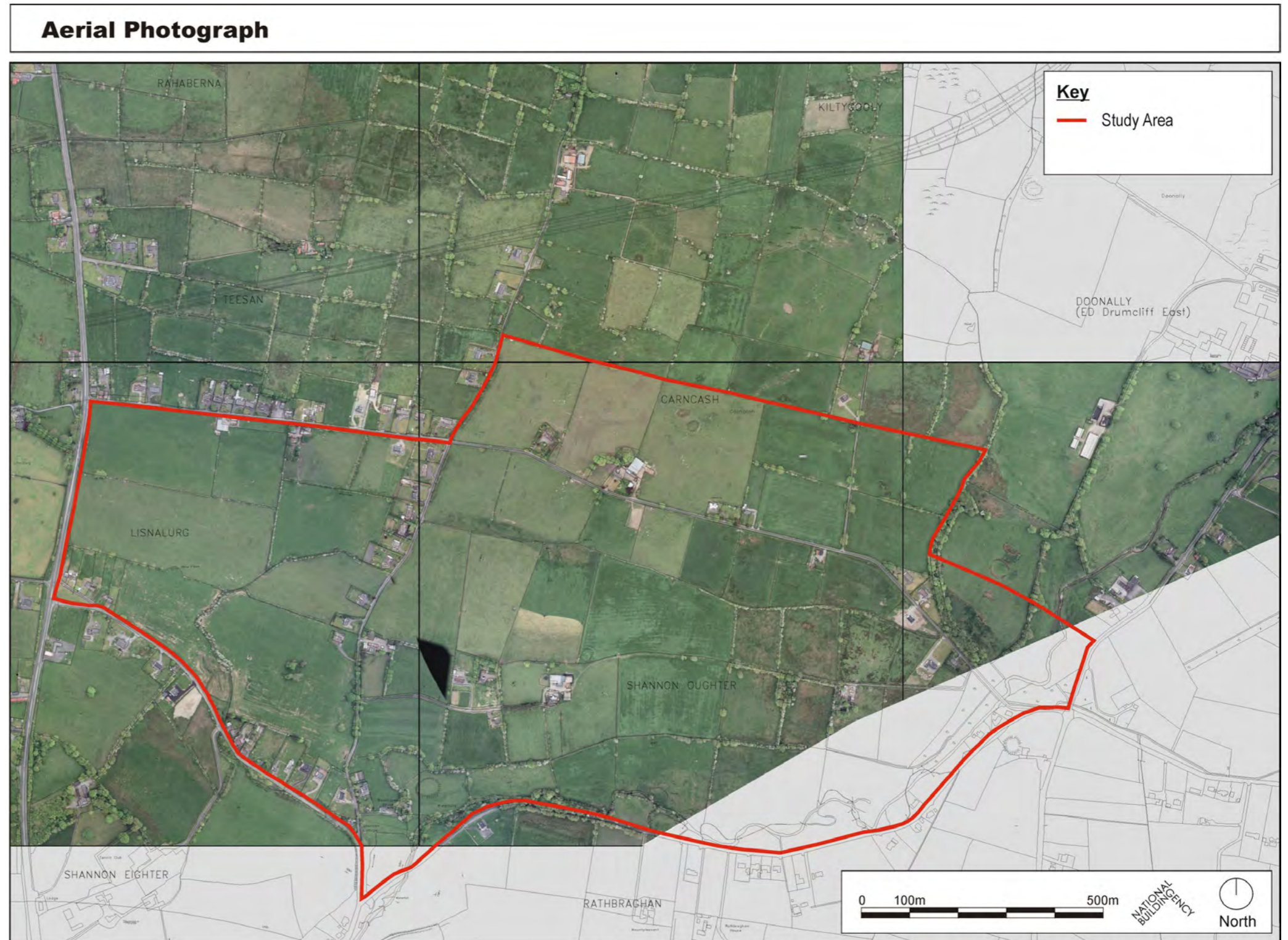
Stone Pillars, Northern Fringe, Sligo



Mature trees & stone boundary walls, Northern Fringe, Sligo



Stream Corridor, Northern Fringe, Sligo



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Stone boundary walls, Northern Fringe, Sligo

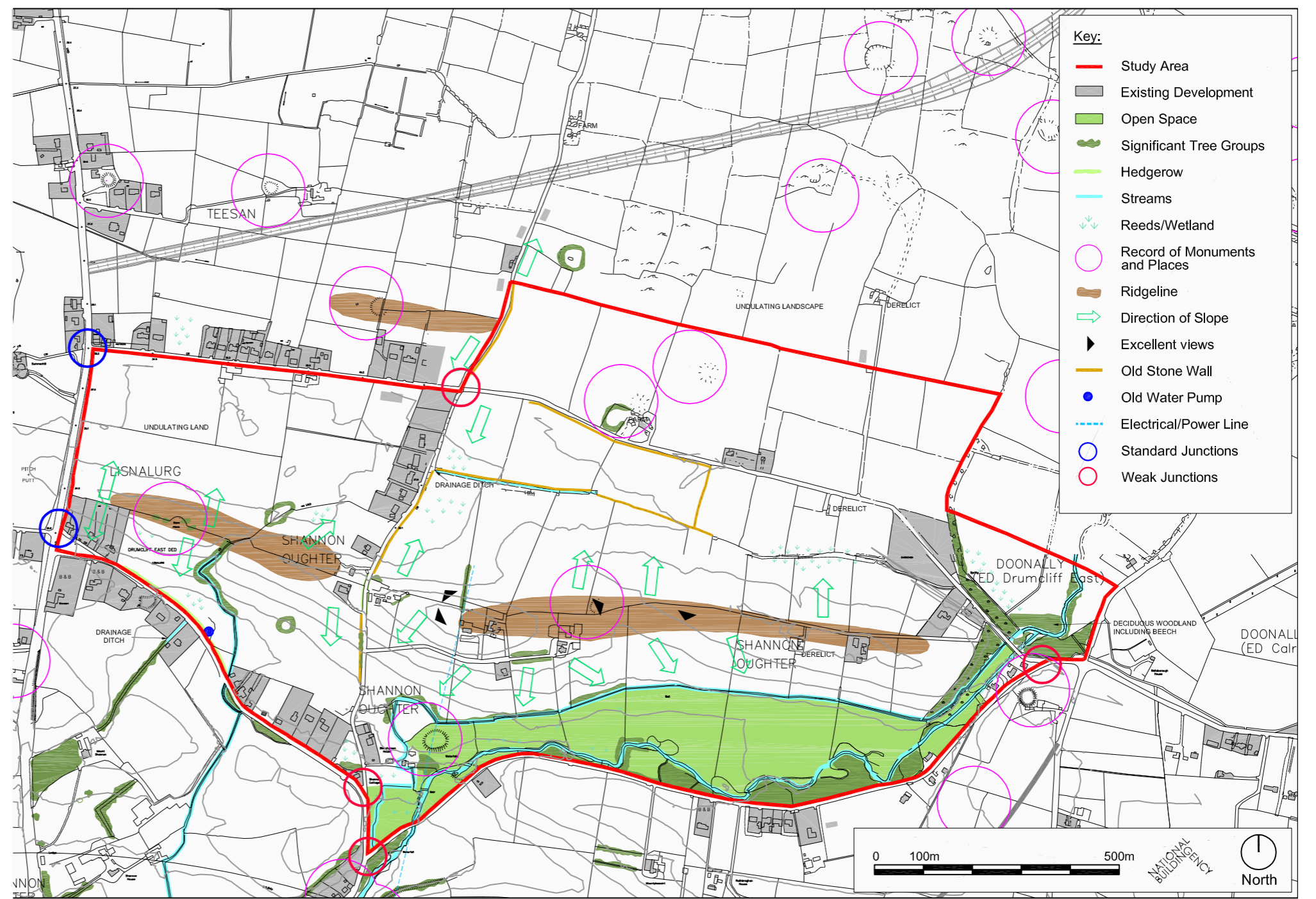


Trees running along ridgeline, Northern Fringe, Sligo



Benbulbin, Northern Fringe, Sligo

## Environmental Parameters



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## 3 Infrastructural Considerations

### 3.1 Public Utility Considerations

3.1.1 The land within the North Fringe area is currently unserved. However a drainage scheme for the Teesan-Lisnalgurg area is currently underway and this will adequately respond to the future population needs in terms of water quality and sewerage supply.

3.1.2 There is no surface water drain out of the area of Shannon Oughter and Lisnalgurg north of the ridgeline. In order to mitigate against the build-up of surface water run-off, storm water retention facilities are to be incorporated into the overall design. Any design issues involving surface water containment and filtration are to have reference to 'Sustainable Urban Drainage Systems' best practice manual, CIRIA. A storm water retention facility is also to be incorporated into the linear park to the south of the Plan area (see section 4.4.5)

3.1.3 It is preferential to divert any existing overhead ESB cabling underground. There are 38Kv and 10Kv overhead powerlines in the centre of the North Fringe area running in a north/south direction. It is possible to underground such lines to suit the layout of future developments subject to the establishment of a legal easement (or burden on the owner's title) giving ESB a 2 metre wide, in regards to 38Kv lines and 1 metre wide, in regards to 10Kv lines, full right of way and unrestricted access to carry out all necessary works.

3.1.4 In consultation with service providers (such as water supply, drainage network, electricity, telecoms and I.T) grouped service strips should be utilised to help minimise maintenance disruption avoiding features such as trees. (e.g. along open space provisions where applicable).

### 3.2 Energy

3.2.1 All new buildings must comply with Part L of the Building Regulations, 2007 on the Conservation of fuel and energy of new dwellings. All designs for new buildings should be founded on a sustainable ethos, manifest and measurable in the use of energy sources. In this regard, the use of innovative materials and architectural designs to improve the environmental

performance and energy efficiency of buildings will be encouraged.

3.2.2 Renewable energy can come from natural, inexhaustible sources such as the sun (solar), wind, and the earth (geothermal heat pumps). (see Appendix A for examples of Renewable Energy Sources).

3.2.3 In order to ensure a more sustainable approach to development, especially within low-density residential areas, it is proposed that the Council adopt a range of sustainable building requirements so as to ensure energy efficiency, healthy and low environmental impact buildings.

3.2.4 As outlined in Part L of the Building regulations 2007 each building's energy performance calculation must be demonstrated on the basis of an approved method (e.g. EN 832) carried out by a qualified or accredited expert.

3.2.5 In addition to these requirements, it is expected that some of the following principles will be considered:

- That the buildings will be designed to ensure passive solar gain or adopt the principles of the passive house;
- High insulation standards and draft proofing;
- That consideration be given to the use of natural and recycled materials;
- That the houses collect their own water or adopt water conservation measures (grey water systems used for toilets - rainwater harnessed and directed into toilets for flushing);
- Solar water heating;
- That consideration is given to the electricity generation from photovoltaics (which uses a semiconductor in order to convert sunlight to electricity) and/or ground source heating pumps to provide some of the water heating requirements;
- Harnessing the use of biogas, which are wood pellets used in a burning process;
- Where appropriate, developments should provide storm water attenuation;
- Ecological principles are adopted for the site design and landscaping (eco-landscaping; permeable paving, etc.).

3.2.6 For most or all of these principles to be successfully applied - particularly for the more advanced ecological design principles (i.e., earth sheltered buildings), reasonably sized plots and space for sunlight are appropriate and a gentle southward-facing slope is ideal.

3.2.7 District heating consists of heat from generating plants and specially built facilities being piped to local homes. The establishment of district heating networks in appropriate locations would bring significant social and environmental benefits. District heating systems often consist of two types of units: those that only produce heat, and those that produce both heat and power, called combined heat and power units. When designing and installing a district heating scheme a back up system must be provided to ensure minimal disruption to heat supplied to the consumer.

Where applicable the developments within the BITP (Business, Industry and Technology Park) should consider implementing a CHP scheme (combined heat & power). The rejected heat could be used to heat the adjacent housing scheme or educational facility. The end user should be provided with a distribution system and heat meter (i.e. pay pal system).



Wind Energy



Example of Solar Panelling



Green building, Temple Bar, Dublin

## 4 Urban Development Framework

The urban development principles outlined in this section are concerned with the physical and social nature of space and its connectivity and continuity within the extended urban hierarchy.

### 4.1 Area and Setting

4.1.1 In establishing a development framework for the area, the following basic principles have been considered:

- Consideration for the existing land use pattern in the area.
- Protection and integration of key environmental and landscape features - such as significant tree groups and hedgerows.
- Identification of suitably located sites for meaningful open space areas.
- Provision of a road hierarchy to allow for ease of access and circulation thereby avoiding unnecessary cul-de-sac development contributing to additional vehicular movements.
- Integration of land use and transportation, by ensuring that the future land use strategy has consideration for the future provision of public transport, facilitating modest increases in residential density that will support and sustain an efficient service.
- Identification of a suitable site for the provision of educational facilities that can provide the necessary services to support the proper development of the area.

4.1.2 The North Fringe area covers 153 hectares of land combining residential, educational, sporting, open space, mixed use, and business. The mixed-use area is concentrated to the northwest along the access route to Sligo City. This provides a gateway entrance to Sligo allowing for high impact building design. There are a variety of residential neighbourhoods/enclaves extending further south and east, which are defined by their densities and open space elements i.e, the ridge, the river corridor etc. The residential development adopts a linear east-west form that echoes the ridgeline. An area to accommodate Business, Industrial and Technology development has been identified to the northeast allowing for direct access to the proposed realignment of the N16. An educational campus is proposed adjacent to this area allowing for a number of educational levels and sporting facilities.

4.1.3 A fully integrated neighbourhood needs to cater for

people of different ages and income groups. The creation of separate enclaves of private, social and affordable housing should be resisted. Neighbourhoods that provide a mix of residential types, both in terms of tenure and economic characteristics, produce rich social settings. The most successful urban settings tend to be characterised by patterns of mixed use, mixed tenure and mixed economy. The proposed framework for development allows for these elements to be stitched together incorporating work, live and play areas.

### 4.2 Development Cells

4.2.1 There are a number of basic principles espoused in urban design -

**Permeability** - by this we mean the ease with which people can move about their environment and get to their destinations. This is achieved by creating strong circulation links, for vehicular car movements, public transport corridors and allowing for pedestrian and cycling east-west and north-south links and desire lines to areas of interest such as the neighbourhood centre and open spaces.

**Legibility:** Creating an environment that is clearly understood and useable by both resident, employee and community. This is achieved by creating strong and distinctive character areas - places that are memorable and attractive, such as the parkland setting to the south; boulevards or key landmark buildings.

**Amenity:** Creating an area of high visual and environmental amenity by respecting varying contour levels, surrounding views, open spaces, natural features, streams and waterways and providing for high quality landscaping.

**Flexibility:** Creating a framework that facilitates various development scenarios, such as the division of commercial and business units, over the period of site development to maximise commercial responsiveness to changing markets.

**Accessibility:** Creating purposeful routes, making clear connections and providing the maximum choice for how people will make their journeys whether by car, foot, bicycle or public transport.

**Image:** Creating unique, clearly identifiable and memorable areas, in order to establish a strong place identity and identifiable market position.

4.2.2 Housing in the area is likely to consist of private, affordable and social. This will aid in the achievement of social integration of the area and should be assisted by the provision of link routes as opposed to segregated or exclusive housing around individual cul-de-sacs.

4.2.3 It is envisaged that the majority of residential development within the residential zones will be two storeys in nature allowing for three-storey development at corner sites.

4.2.4 It is proposed that the buildings within the mixed-use areas can lend themselves to a higher elevation, 3 - 5 storeys along the west side acting as focal structures on the N15 approach road and decreasing to 2 - 4 storeys in the east. This would provide variety and legibility leading to a sense of enclosure created by the buildings, boundary treatments and squares. The topography of the land on the western edge of the development area allows for an elevated height to be achieved without leading to significant overlooking and overshadowing of neighbouring land uses.

4.2.5 Seven development cells have been identified within the North Fringe area. The development cells are characterised by their zonings, densities and linkages (See Development Cells Map).

Cell 1 The Mixed Use Development Cell is situated to the northwest of the North Fringe area. This cell is to cater for commercial (non-retail), Residential (maximum 50%), Leisure, Employment and Enterprise Opportunities (e.g. offices, hotels, health & Fitness, education, medical, etc). The residential densities proposed within this cell, range from 35 - 50 dwellings per hectare (see section 4.5).

A small enclave of residential 2 storey housing has also been identified allowing future development to successfully integrate within the existing development structure along County Road 350 in terms of interlocking backgardens. Residential development to the east should generally be two storeys in nature relating to the existing development with the strip in the south being of 1 - 2 storeys taking account of the contours in this area (see section 4.5).

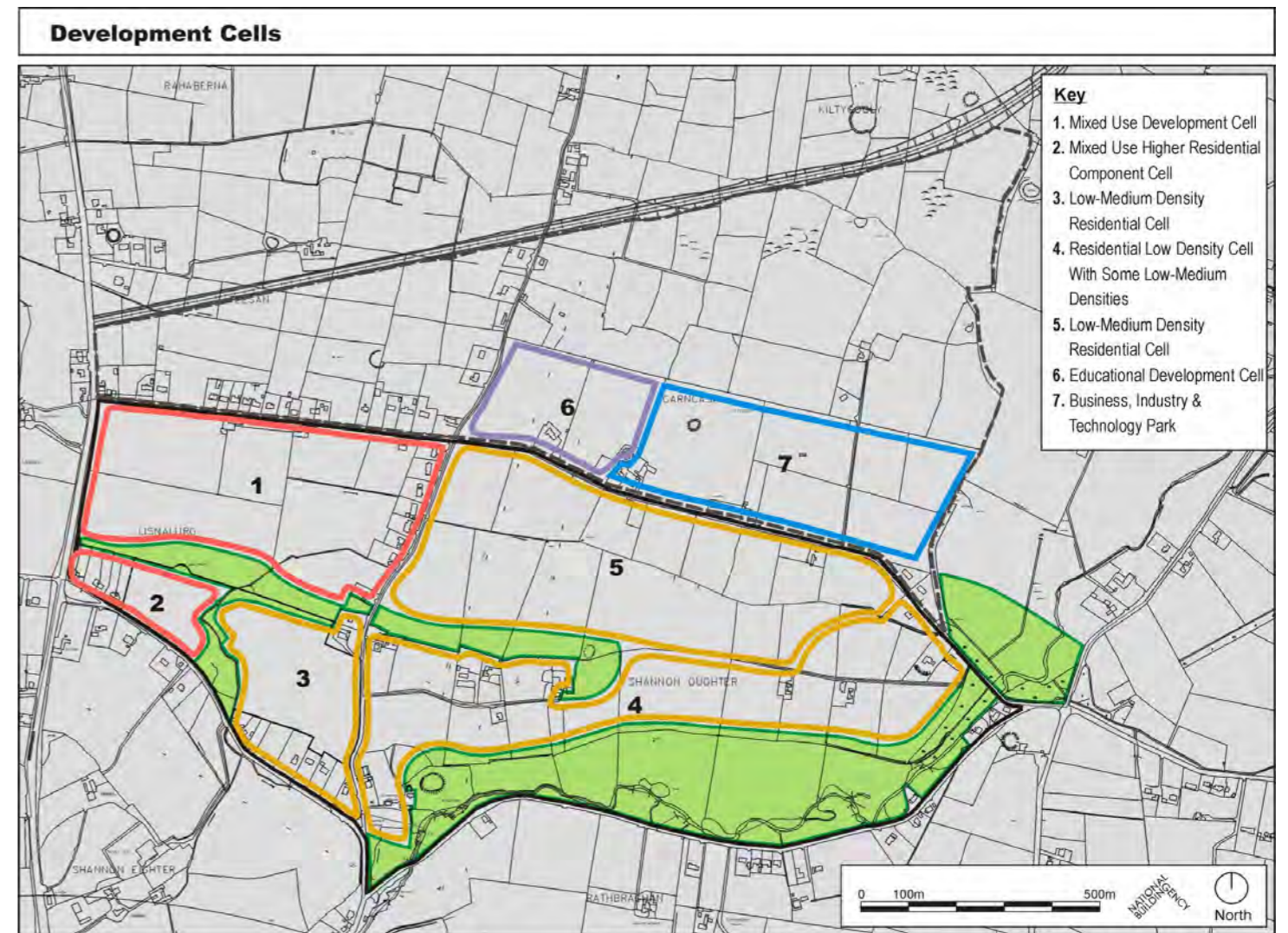
A site for a crèche/community building has been identified to the southeast of the mixed use area adjoining the linear stream corridor & ridgetop open space.

Cell 2 This cell is zoned for Mixed Use Development however in contrast to Cell 1 it is envisaged to allow for a higher percentage residential component (maximum 75%), as the configuration lends itself to a more residential enclave, adjacent to existing residential development to the west and open space to the north and east. The residential densities proposed within this cell range from 35 - 50 dwellings per hectare. (see section 4.5.5).

Cell 3 The characteristics of this cell consist of a Low - Medium Density Residential enclave separated from cell 1 and 2 by an open space corridor which allows for pedestrian and cycling connectivity. The open space is to be overlooked on all sides providing security and promoting activity. The residential densities proposed within this cell range from 20 - 34 dwellings per hectare (see section 4.6).

Cell 4 Cell four is to consist primarily of Residential Low Density development. It is proposed to allow for some medium density residential development within the low density zone. Thereby allowing for a mixture of development and a more interesting and varied development framework.

It is considered an environmentally sensitive area being bound by the continuous ridgeline to the north and the Doonally stream corridor to the south. The residential densities proposed within this cell range from 3 - 19 dwellings per hectare with an enclave of medium density at 20 - 34 dwellings per hectare. The development is to contain mainly detached and/or semi-detached housing allowing for breaks in the building line providing glimpses and views. Buildings are generally to front onto the parkland setting to the north and south taking advantage of the south-facing aspect.



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Cell 5 Cell five is to accommodate Medium Density Residential development. This hillside landscape will allow for an interesting residential layout and form, affording views north to Benbulbin. Also the future population will have ease of access to the new proposed educational campus, strategic areas of open space and the facilities & services offered at the mixed-use zone.

A tree-lined avenue is to run through the site allowing for a strong building line and building block pattern. An additional neighbourhood centre is needed within this area, as any existing or proposed NC's do not cover this catchment area. Therefore a limited amount of retail development, conducive to a neighbourhood centre, will be allowed. The maximum threshold for the neighbourhood centre at this location is 1,500sq. metres, with a single convenience food store not exceeding 300 sq. metres in size. Open space is to be integrated in the form of a linear ridgetop corridor, pocket parks, facilitating passive and active use, and high landscaping quality. The residential densities proposed within this cell range from 20 - 34 dwellings per hectare (see section 4.6).

Cell 6 The Educational Development Cell is proposed to be located to the northern boundary of the North Fringe area. It is primarily to consist of a cluster of educational facilities and sporting amenities, situated adjacent to the BITP cell. This cell is to provide for primary, secondary and adult education uses with sporting pitches. The pitches are to be under shared public/community use. It is envisaged that the heights of the school buildings will range from 2 - 3 storeys.

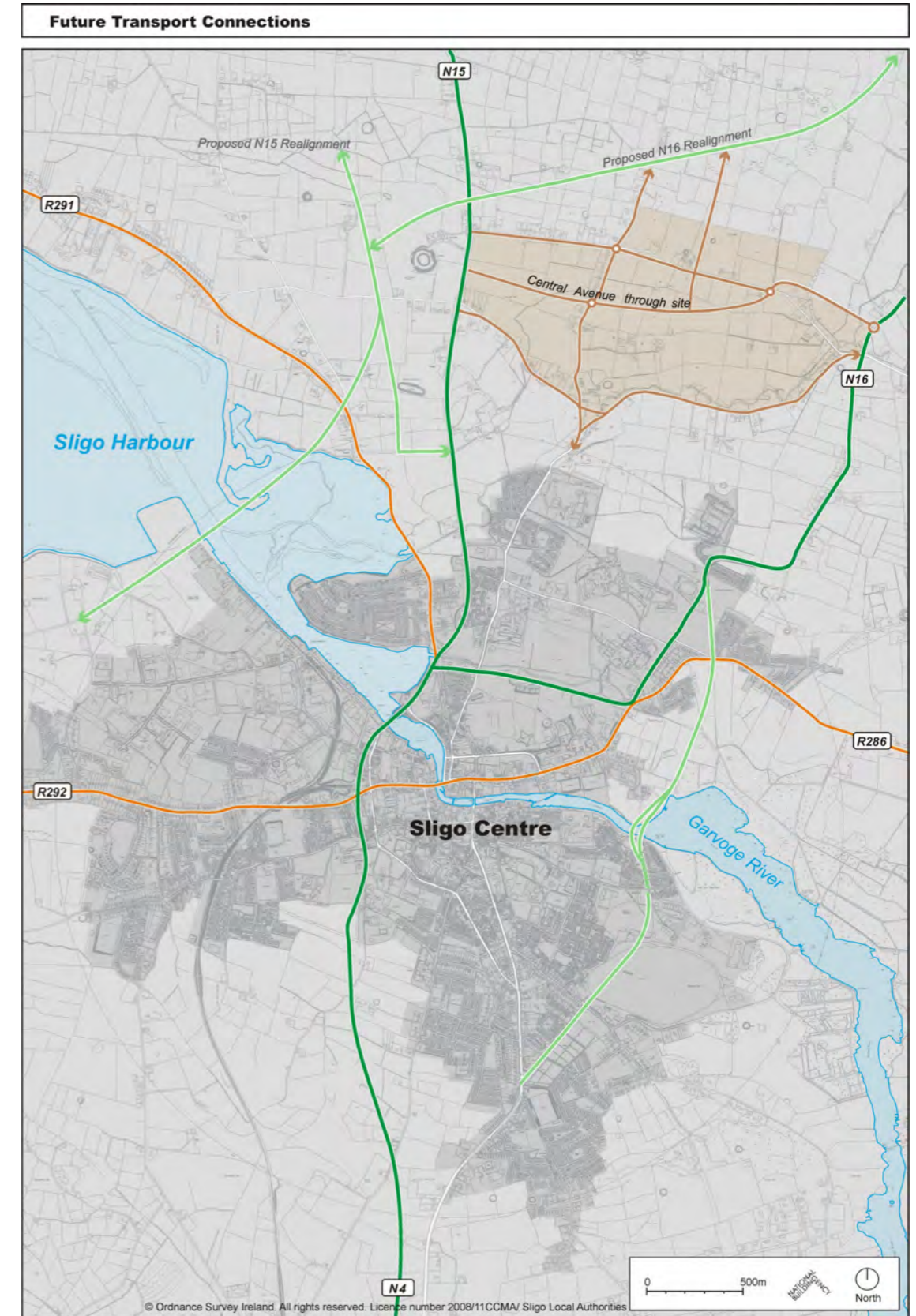
Cell 7 This cell is proposed to be zoned for Business, Industry and Technology Park (BITP). The contour levels and gradients are relatively level within this area and will therefore be conducive to larger scale developments and building footprints. This zone will allow for conference and enterprise centres, enterprise units, general and light industrial use, media recording, science and technology based industry, small scale manufacturing and storage depot, etc. This cell also has the potential to accommodate a retail warehouse park of no more than 5,000sq.m net retail floor space. It is envisaged that heights will typically range from

2 - 4 storeys with a landmark building possibly rising to 5 storeys. The higher range may be appropriate so long as they are part of a co-ordinated design layout. Random distribution of higher buildings would be inappropriate. There is to be a feeder street running through the site allowing for direct access onto the proposed realignment of the N16. Parking including service delivery and loading bays is to take place to the rear or side of buildings preferably through shared secondary service access streets. Overall the area is to be strongly defined within a high quality landscape setting (see section 4.8).

### 4.3 Circulation Framework

- 4.3.1 The North Fringe strives to achieve the aims of the 'Traffic Management Guidelines' (prepared by the Department of Transport, Department of Environment and Local Government, Dublin Transportation Office, May 2003), in that 'the design and layout of roads needs to be integrated into the development in a way that is sensitive to the local development rather than to dominate it. The development plan and development control processes should also ensure that new developments are highly permeable in terms of the ability of public transport modes such as buses, and pedestrians and cyclists being able to move through and between adjacent developments'.
- 4.3.2 The National Route (N15) bounds the west of the site with the remaining roads, which bound and transect the site being of a local nature. In order to facilitate future development additional routes are proposed and existing routes will be upgraded (see Future Transport Connections Map).
- 4.3.3 There is one proposed direct access link on to the proposed realigned N16 from the North Fringe area, west of the existing County Road 350, allowing for a good circulation network and direct access to the proposed BITP. Access points and an indicative road layout have been identified for this area linking in with the detailed layout design and surrounding connections (see Transport & Circulation Routes Concept Map).
- 4.3.4 The North Fringe area is well serviced by the surrounding road network. The N15 provides the area with a strong link directly to Sligo's city centre and the proposed N16 will provide quick access to the northeast (Enniskillen). The Sligo Bypass is in the early stages of route selection, however, it is possible that part of the route will run further west of the existing N15. This will have implications for the future planning of the area as in future years the existing route of the N15 may not be the only main access route to Sligo city centre. It is the policy of the local authority to protect the carrying capacity, operational efficiency and safety of the existing national road network pending the completion of any future upgrading works. Development proposals will therefore be restricted and assessed in accordance with the policies and criteria set out in the SEDP 2010-2016.

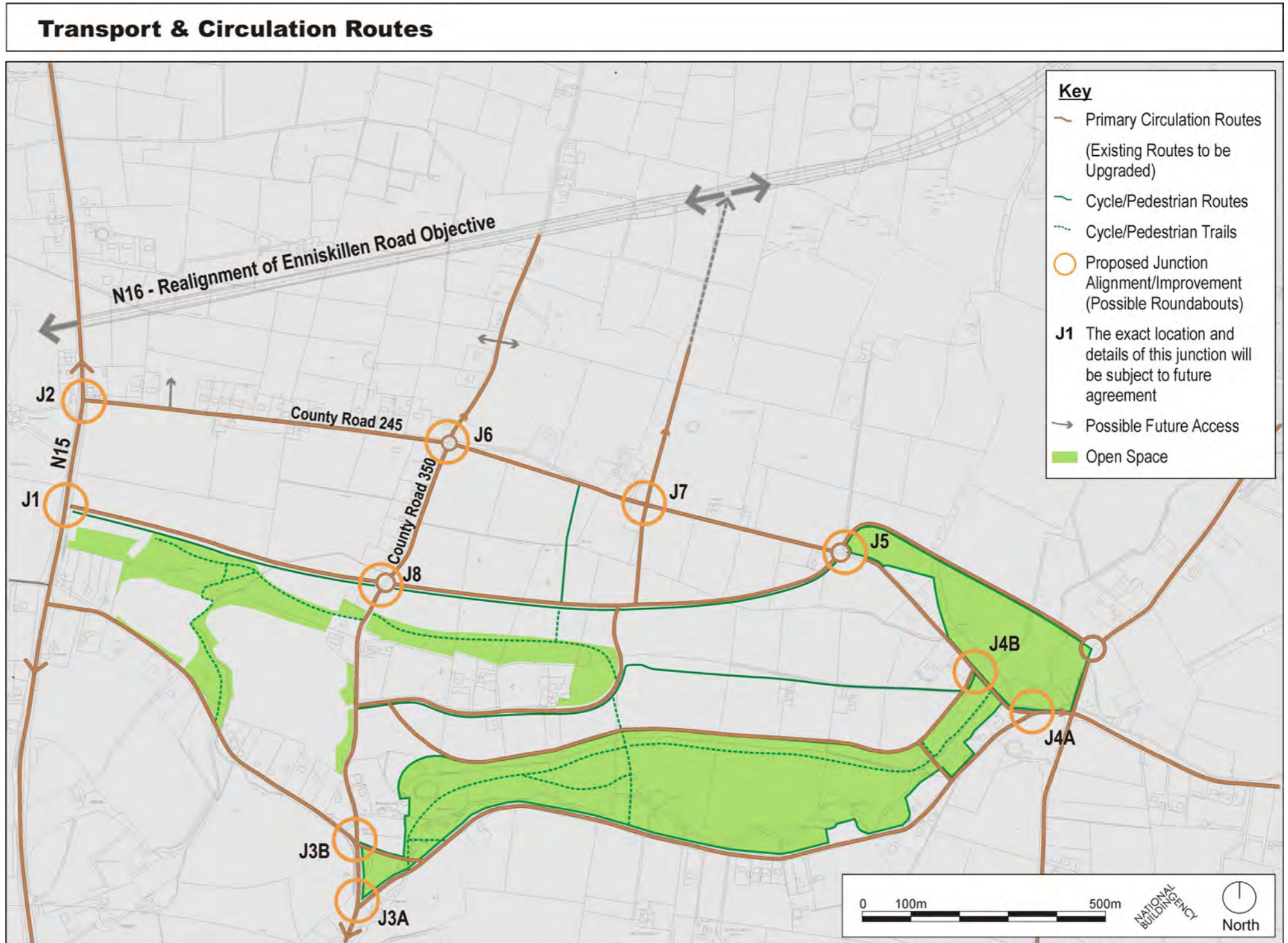
- 4.3.5 The internal route structure allows for circulation and permeability. The existing routes running east/west and north/south are to be utilised and will act as primary circulation routes. The existing route bounding the south of the area is to act as the principal access route and therefore is to be upgraded. A central avenue route is proposed running through the centre of the site in an east-west direction and will act as the circulation route for the surrounding houses, educational facilities and mixed use areas etc. The existing County Road 350 running north/south is to be realigned to allow for additional traffic circulation. However, the mature trees on the southwest part of the route are to be protected and retained. Other routes will act as feeder and minor access roads through the varying development areas.
- 4.3.6 The North Fringe is to be accessed from a number of points; (refer to Map on following page: Transport and Circulation Routes).
- The primary access from the west will be off the N15, via a new or improved junction layout (J1), which will accommodate the Central Avenue. The location and design of this junction will be subject to future consultation and agreement at planning application stage. A secondary access point will be located at the northwest boundary of the North Fringe area (J2).
  - There is a sub-standard junction at the south-centre section of the Plan (J3A) and a narrow masonry bridge just northeast of here. It is proposed to realign a short section of the Rathbraghan road, providing a new bridge and appropriate junction treatment with county road 350 (J3B). The masonry bridge could then be retained as an amenity feature by opening up a path to the river and providing a pedestrian underpass at the bridge to link in with the linear park.
  - The junction at the east corner of the Plan is also sub-standard (J4A) and would not be able to safely accommodate an increase in vehicular movements. Therefore it is proposed to widen this junction and also provide a new junction and realignment further northwest of this (J4B). This realignment is to access the new residential area and span across the east corner of the linear park providing a direct connection with the existing road to the east. However, part of the existing route running south west from this junction (County Road 245) is to be closed to through vehicular traffic to allow for the incorporation of a central avenue further west and safe access and



egress from this. Pedestrian and cyclist access will be facilitated.

- A further new junction, incorporating a three armed roundabout (J5) is to be positioned transecting the Central Avenue and the County Road 245. The Central Avenue will then lead off to the east and connect to the N16. This will aid safe traffic flow.
- Two primary circulation points are proposed to the north, one at the existing four-way junction along the county road 245 (J6). Improvement works are to be carried out at this junction in order to accommodate the planned development of the area with the possible incorporation of a continental style roundabout. A further access point is proposed east of this to facilitate the movement of vehicles through the BITP (J7).
- There are a number of proposed access points along county road 350, however the principal point allowing for primary circulation of the site is to be located just north of the ridgeline allowing for a four-way junction, possible roundabout, between the existing road and the proposed Central Avenue leading to the development areas on either side. (J8)

4.3.7 New developments whether residential, office, industrial or mixed etc. should seek to create high quality areas with a sense of local identity and community. Developments should encourage walking, cycling and easy access to public transport links. The long-term success of a newly created urban setting can rely on establishing good access and circulation by clearly defining routes and establishing safe movement patterns for pedestrians and cyclists.



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4.3.8 A road hierarchy structure to allow for legibility, safety and coherency has been identified within the urban development framework as follows:

**Central Avenue:**

This road is to act as the primary circulation route within the North Fringe servicing part of the mixed-use, educational and residential areas of the development.

The Avenue is to include wide footpaths incorporating green verges with a parallel parking zone and dedicated cycle lane along each side and a green median strip in the central aisle. This gives this area a uniformed and defined edge reflecting its formal layout and character. (see cross section: Central Avenue).

The Avenue could also facilitate, if necessary, bus pull-in areas at certain points along its route.

The measurements of the Central Avenue are:  
 29 metres width in total  
 6m wide footpath (with green verge incorporated),  
 2m wide parallel parking zone,  
 1.5m cycle lane,  
 3.5m standard carriageway,  
 3m wide central green median,  
 and symmetrical arrangement on the other side of the median.

**Mixed Use Streets** These roads service the mixed-use, retail warehousing area, allowing for wide footpaths promoting pedestrian circulation and interaction. The 18 metres width also allows natural light to penetrate this built environment reducing the negative effect of shadowing. (see cross section: Mixed Use Street).

The measurements of the Mixed Use Street are:  
 18 metres width in total  
 7m carriageway allowing for 2.0m car parking on each side.  
 3.5m pedestrian pathway on either side.

**Industrial Streets** The internal streets within the BITP area are to accommodate the circulation of larger vehicles such as trucks etc while also allowing for a landscaped buffer zone between the industrial and public space. (see cross section: Industrial Street).

The measurements of the Industrial Street are:  
 39 metres width in total (19m street & 10mX2 of buffer zone)

10m carriageway allowing for 2.0 metre car parking on either side.  
 2.5m pedestrian pathway on either side.  
 10m landscaping buffer on either side.

**Feeder Streets** Feeder streets are proposed to allow for the primary circulation through the medium density residential area. (see cross section: Feeder Street).

The measurements of Feeder Street are:  
 22 metres width in total (16m public space & 6m private space - front garden)  
 7m carriageway.  
 2m on-street car parking on one side.  
 3.5m pedestrian footpath on each side possibly combining cycle ways.  
 3m front garden on each side - private space.

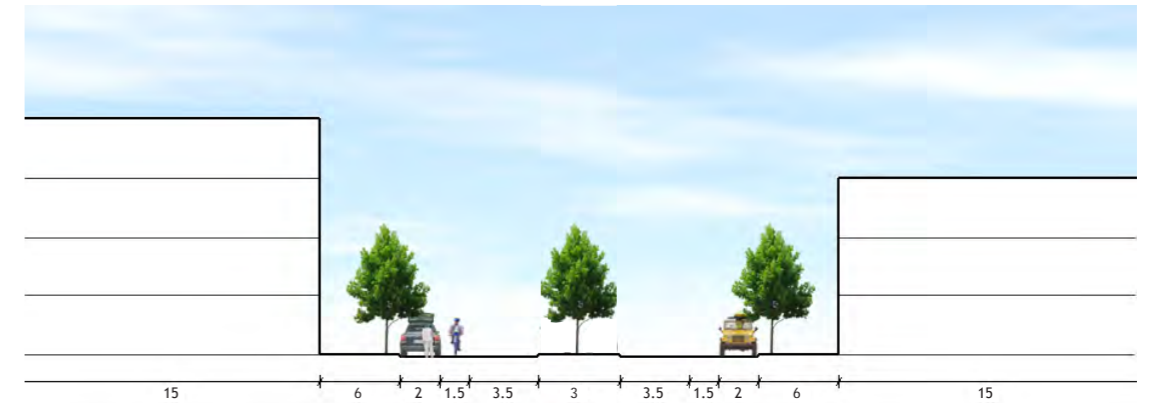
**Residential St. (Type A)** Type A Residential Street is to be mainly located within the low-medium density residential developments. (see cross section: Residential Street - Type A).

The measurements of Residential Street Type A are:  
 17 metres width in total (13m public space & 4m private space - front garden)  
 5m carriageway  
 2m on-street car parking on each side  
 2m pedestrian footpath on each side possibly combining cycle ways.  
 2m front garden on each side - private space.

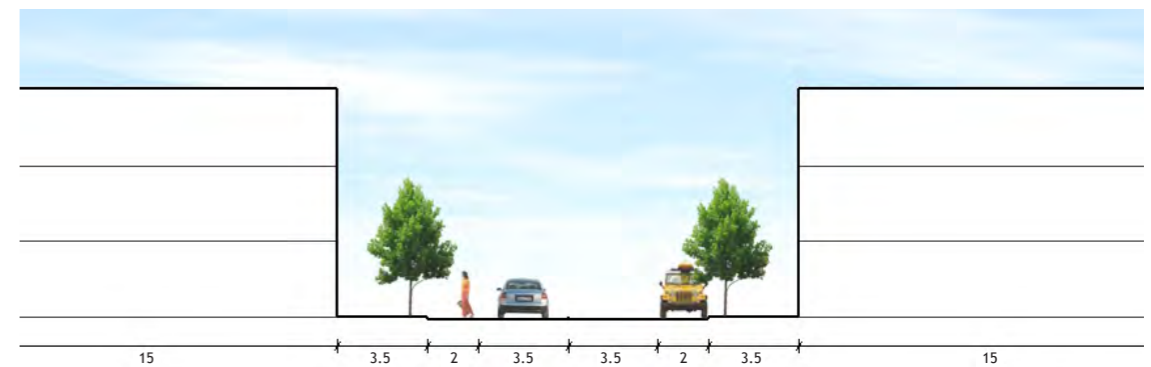
**Residential St. (Type B)** Type B Residential Street is to be mainly located within the low density residential areas. (see cross section: Residential Street - Type B).

The measurements of Residential Street Type B are:  
 10 metres width in total (with front gardens varying in length)  
 5m carriageway.  
 5m combined pedestrian footpath on each side with grass verge and possibly cycleway option.  
 3m - 5m front gardens - private space with off street car parking.

4.3.9 Pedestrian and cyclists movements are further prioritised by identifying and providing pedestrian and cycle trails through the established linear parks thereby connecting the various development cells, especially north and south of the ridgeline.



Avenue with parking incorporated along outer edge  
 Total width of street enclosure: 29m  
 Building height: 3-4 storeys (9-12m approx)



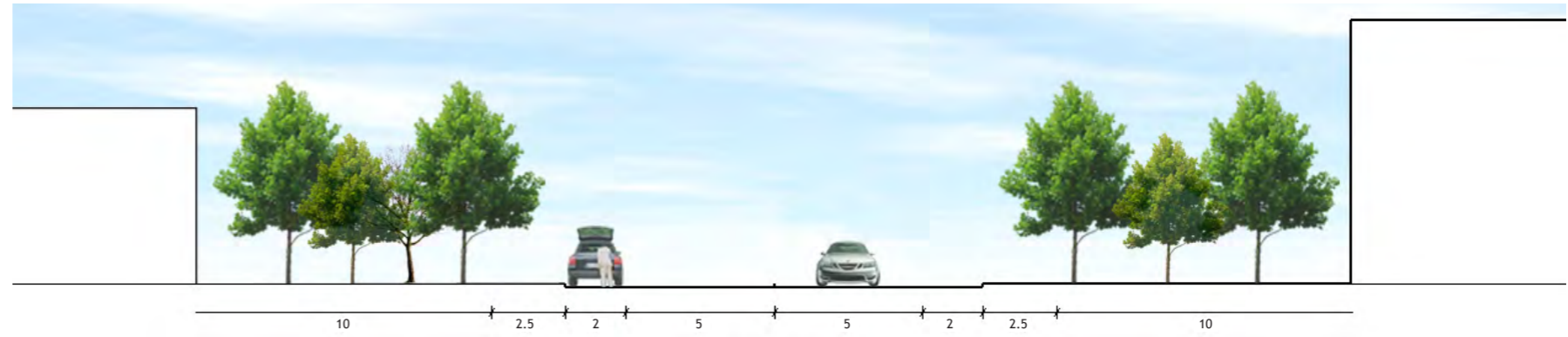
Mixed Use street  
 Total width of street enclosure: 18m  
 Building height: 3-5 storeys (9-15m approx)



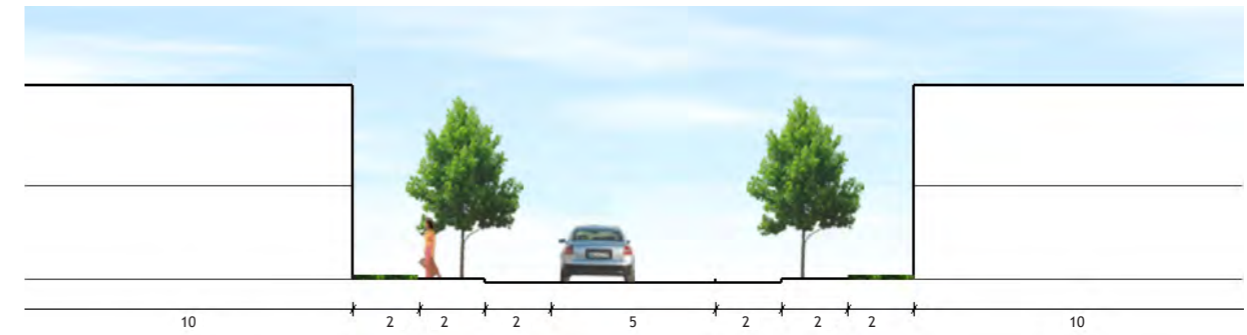
What not to do - Blank facade walls creating a sterile, inhospitable environment



Good example of a strong tree-lined street incorporating cycle lanes & bus pull-in bays



**Industrial street**  
 Total width of street enclosure: 39m (19m street+  
 10m x 2 of buffer zone between industrial & public  
 space )  
 Building height: 3-4 storeys (9-12m approx)



**Residential street - type a**  
 Total width of street enclosure: 17m (13m  
 street+4m private space)  
 Building height: 2 - 3 storeys (approx. 6 - 9m)



**Residential street - type b**  
 Total width of street enclosure: 10m (front gardens  
 vary)  
 Building height: 2-3 storeys (6-9m approx)

**4.4 Open Space and Landscaping Network**

4.4.1 A number of distinctive open space areas are proposed within the North Fringe each one interconnecting with the other. The open spaces contribute to the overall balance between the built and natural environment, integrating the new development within the existing landscape and providing important ecological and physical linkages. Pedestrian and cycling linkages and connections (green-routes) are encouraged between development cells to allow for natural desire lines (see Open Space Strategy).

4.4.2 The principal open space area is the Riverside Park to the south, this is a large area of land which is zoned for open space due to its high amenity potential incorporating some significant tree groups, stream corridors and associated wetlands and archaeological sites. This natural setting and open space is to be retained and trails are to be created through the area having regard to the sensitivity of the site. Playing fields are also to be incorporated allowing for active open space amenity.

4.4.3 The Linear Ridgetop Corridor (east/west) along the eastern part of the Plan straddles the low-medium and low-density residential development areas providing a buffer between these two cells and simultaneously protecting the ridgeline from undue and unsightly development. This linear park will also provide a good amenity trail, retaining views and vistas for the general public and surrounding community to enjoy (see Views Map).

4.4.4 The Linear Stream Corridor & Ridgetop follows the stream north/south and encompasses the wetland area and an archaeological site in the western part of the Plan area. Walking and cycling trails are to be provided connecting the various cell areas. The open space is to be overlooked by residential uses fronting onto it. A children's playground area could be incorporated into this space adjacent to the proposed crèche/community building.

4.4.5 Within Cell five a number of Pocket Parks have been identified allowing for some passive and also active open space to take place. Also to the east of this, an area to facilitate possible storm water retention has been identified. This area will not only act as an environmental engineering solution, controlling the build-up of surface water run-off, but also as a passive recreational area for the surrounding resident population. A Linear Park buffer zone has been identified to form the north edge of this cell area, approximately 10 metres in depth, which allows for landscaping and planting between the residential area and the BITP zone further north.

4.4.6 Within Cell Seven two archaeological sites are visible, a 30m buffer zone has been identified encircling the two sites.

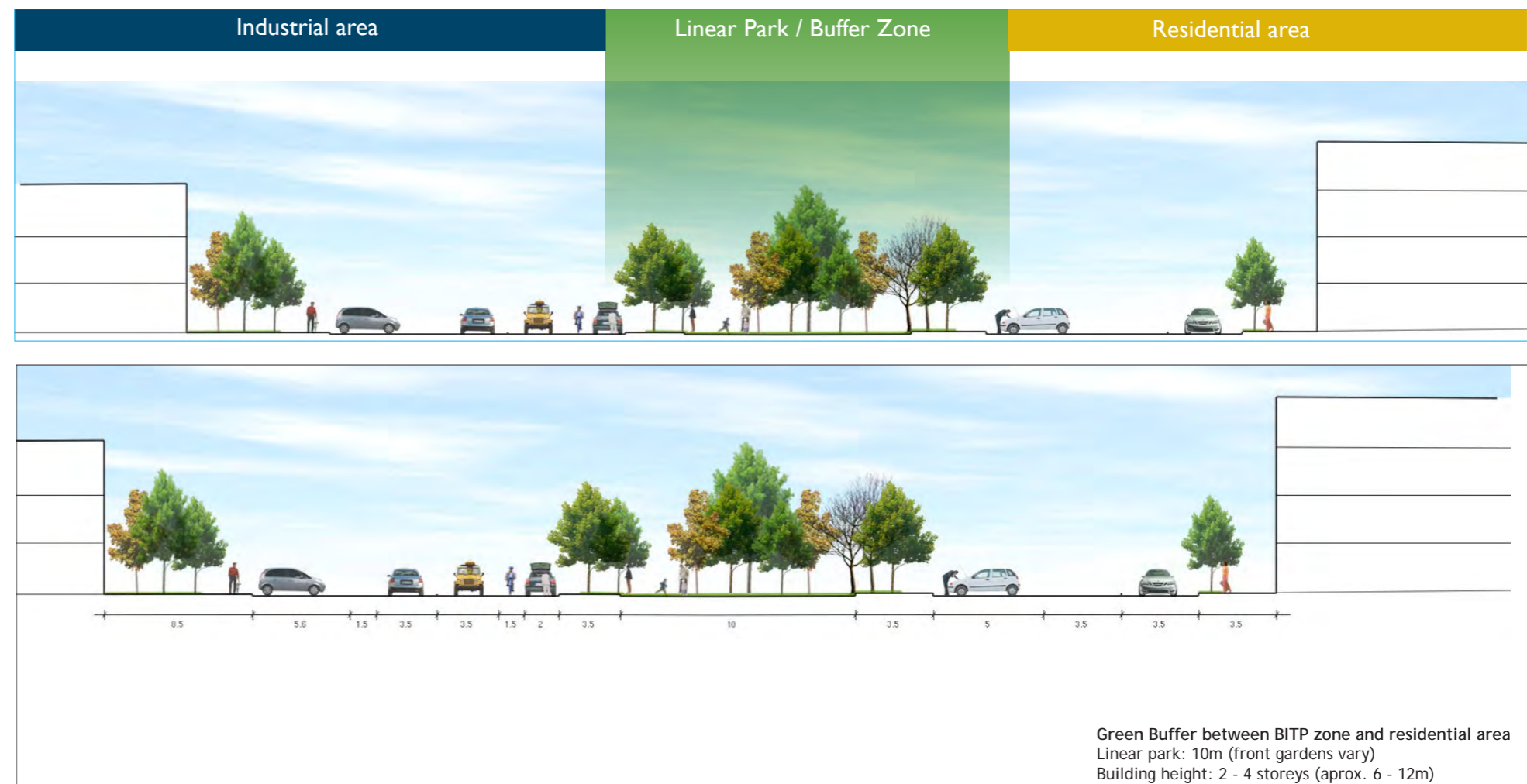
4.4.7 The active open space is to be concentrated within the educational development cell allowing for dual usage between the school and the community. Public use is to be facilitated after regular school hours. The active space includes provisions for, a soccer pitch and a number of basketball or kick-about courts. Also changing facilities, which can be open to the public, are to be provided. Additional active open space in the form of playing fields is to be located within the Riverside Park.

4.4.8 Approximate areas of Open Space

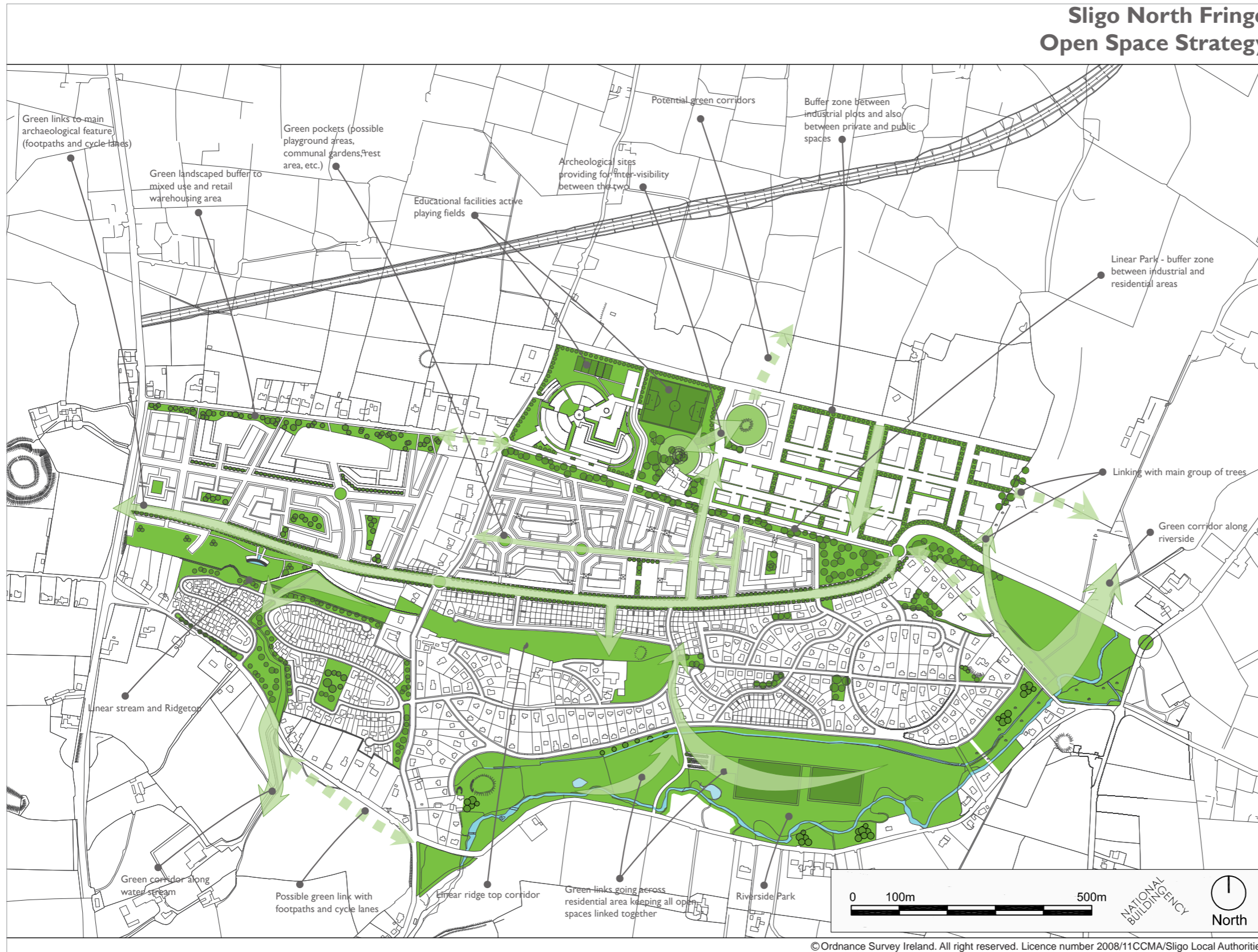
1) Riverside Park	26 ha
2) Linear Ridgetop Corridor	3.0 ha
3) Linear Stream & Ridgetop	5.0 ha
4) Pocket & Linear Parks	1.7 ha
5) Linear Park Buffers	3.0 ha
6) Archaeological Sites	2.0 ha
7) Landscaping	0.6 ha
Total	41 ha
8) Active Open Space	(Incorporated within Educational Cell and the Riverside Park)

4.4.9 The North Fringe proposes a higher proportion of open space than the minimum standard of 15% of the total land area. This is due to the configuration of the site in terms of ridgelines, stream corridors, ecologically significant parklands and required buffer zones around sites of archaeological interest identified on the Record of Monuments & Places (RMP), which all aid in creating meaningful, appropriate areas of open space.

4.4.10 All open space is to be overlooked creating safe, secure places in which people can recreate. Also pedestrian linkages through areas of open space are to follow desire lines so as not to cause undue obstacles to pedestrian flow.



## Sligo North Fringe Open Space Strategy



# Sligo North Fringe Views



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#### 4.5 Mixed Use

- 4.5.1 The mixed-use cell is to contain a combination of perimeter blocks, terraces and stand-alone blocks. The general building typology is to be consistent in terms of overall building form (building lines, building heights, etc) while permitting a variety of different uses within this zone. The ability of the North Fringe to be flexible to accommodate and respond to a dynamic market and innovative employment generating proposals is crucial to the successful development of the area and fulfilling Sligo's Gateway status. In response to this, the design of buildings is to encourage adaptation for a range of uses over time (particularly at ground level where a generous floor to ceiling height should be provided).
- 4.5.2 The buildings should frame the outer edges of the new proposed blocks, creating strong road frontage delineation. The inner area can comprise of a courtyard type setting and/or secure car parking for the business, commercial or residential element. Heights in this cell are envisaged to range mainly between three - four storeys with possibly up to six-storey landmark buildings demarcating the entrance to the Central Avenue acting as distinctive and memorable entrance points. These structures should be designed to the highest quality, enhancing the overall image and impression of the area.
- 4.5.3 To ensure variety within blocks, plot widths should range from a minimum of 5 metres in width to a maximum of 15 metres (see section 4.2.4).
- 4.5.4 The depth of the buildings range from 13 - 20 metres and the alignment of wide streets will allow for maximum light penetration. (see section 3.2 on energy efficiency options).

Cell 1. Mixed Use Development Cell	
Character Area	Mixed-use development area allowing for a mix of work, and live units, catering for commercial (non-retail), Residential, Leisure, Employment & Enterprise opportunities). An urban design statement is to accompany all planning applications within the mixed use area.
Gross Mixed Use Area including inner courtyards	8 hectares
Building Height	Mainly 3 - 5 storey
Max Landmark building height	6 storey
Building type	Perimeter blocks, which can be sub-divided into plots (5 - 15m widths) for individual buildings or facilitate larger building(s) around a central courtyard setting.
Building Depth	13 - 18 metres
Building Width	5 - 20 metres
Street type	Strong frontage on principal streets and spaces, some on-street car parking.
Landscaping	Landscaping to define edges and soften the effects of hard surfaces
Residential element type	Terraced, town houses, apartments, multi-family
Density per hectare	35 - 50+ dwellings per hectare
Min - Max total dwelling units (max 50% Res)	140 - 200+ dwellings
Min - Max resident population*	350 - 500+ persons
Car parking	On-street and internal surface parking; possible underground & multi-storey/ multi-level, if feasible and appropriate.
Creche / Community Centre	To be located to the south east of the mixed use area adjoining the linear stream corridor and ridgetop open space.

\*Using the average household size of 2.5 (see section 1.3.1)



Mixed use courtyard development, Sandyford, Dublin



Mixed use fronting out onto the public domain, North Cross, Dublin



Example of varying heights and scale of mixed use buildings. A lower scale would be more appropriate for the Northern Fringe area.



Good example of central avenue with buildings creating a defining entrance. There is scope in the North Fringe for a significant landmark building to provide a new urban design gateway for Sligo



Mixed use courtyard development, North Cross, Dublin

4.5.5 The Mixed Use Development (higher percentage residential component) situated in the southwest of the North Fringe area covers an area of approximately 2.7 hectares and is to allow for 75% residential coverage of the site in the form of terraces, duplexes, townhouses and some apartments. (see section 4.2.1)

Cell 2. Mixed Use Development (higher percentage residential component) Cell	
Character Area	Residential development with some mixed-use elements.
Gross area	2.7 hectares
Building Height	Mainly 2 and 3 storey
Building type	Mixed Use and Residential terraces, duplexes, townhouses and some apartments.
Building Depth	Approximately 10 metres
Street type	Building setback to allow for front gardens and landscaping, short streets with minimum speed levels.
Landscaping	Some of the development will overlook the linear stream corridor & ridgetop.
Density per hectare	35 - 50+ dwellings per hectare
Min - Max total dwelling units (max 75% Res)	63 - 90+ dwellings
Min - Max resident population*	157 - 255+ persons
Car parking	A mix of on-street, front garden and internal courtyard.

\*Using the average household size of 2.5 (see section 1.3.1)  
(see Sligo North Fringe Development Framework Map).



Mixed use development, Sandyford, Dublin



Mixed use development blocks, Santry Demense, Dublin



Interface with public realm, North Cross, Dublin



Example of appropriate scale to be used within Cell 2

#### 4.6 Residential Development

- 4.6.1 Within Cell 3 & 5 - Low-Medium Density Residential the configuration of developments is to form a strong building line incorporating mainly terraced and semi-detached structures giving this development a tight urban framework.
- 4.6.2 A local neighbourhood centre is to be incorporated within Cell 5 (see Neighbourhood Centre Map).



Examples of appropriate scale and type of residential development for the low-medium residential densities in Cell 5.

Cell 3, some of 4 & 5. Low-Medium Density Residential Cell	
Character Area	Residential development, low - medium density
Gross area	Cell 3: 5.5 hectares Cell 4 & 5: 14.5 hectares Total: 20 hectares
Building height	Mainly 2 with a possible 3 <sup>rd</sup> /4th storey at corner locations
Residential type	Terraced and semi-detached
Building depth	10 metres
Residential form	Tight urban frame.
Neighbourhood Centre (within Cell 5)	Max threshold 1,500 sq. metres, single convenience food store not exceeding 300 sq. metres. Civic square approx. 0.5ha.
Public open space	Linear stream corridor park, linear ridgetop corridor and pocket parks.
Landscaping	Existing mature trees to be retained at the entrance to cell 3 and incorporated into the design, some of the existing stone walls and drainage ditches to be incorporated into the landscaping design of cell 5.
Density per hectare	20 - 34 dwellings per hectare
Min - Max total dwelling units	400 - 680 dwellings
Min - Max resident population*	1,000 - 1,700 persons
Car parking	On-street and in-curtilage, shared courtyard parking

\*Using the average household size of 2.5 (see section 1.3.1)

- 4.6.3 A loose building layout has been realised for Cell 4 - low-density development incorporating an enclave of medium density development (as can be seen in 4.6.2 above), in the southern hillside area creating a natural form by following the flow of the contours. The building line if set too rigid could create a monotonous roof profile, therefore less uniformity is essential, allowing roofscapes to rise and dip. The continuous repetition of large monoplane roof-pitches will not be acceptable in this area or along hill-side locations - variety should

be introduced through either incorporating gables; split levels; hipped roofs; or roofs that correspond with more irregular floor plans. A terrace building form would not be appropriate as this could restrict views from the ridgeline open space links. There should be breaks in the building line to capitalise on the views to the south.



Example of tree lined park adjacent to main routeway



Within this residential zone, somewhat higher than average densities can be achieved with reduced front garden size. Privacy to principal living rooms can be provided by stepping up the ground floor level with possible provision of basement underneath.



Example of traffic calming street



### Sligo North Fringe Neighbourhood Centre



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The North Fringe layout is to allow for Residential internal courtyards with shared car park.

The Principles of which are;

- Rear courtyard supplemented by on street parking encourages activity to street.
- Access to courtyard through archway creates defensible space.
- Small scale courtyards encourage a sense of ownership and allow for better overlooking from surrounding properties.
- Good quality materials, detailing and lighting encourages a sense of ownership to the courtyard.
- Low walls to rear of gardens encourages surveillance of the courtyard.

Examples of internal courtyards with shared car parking to the rear of buildings



Poundbury, Dorset, UK



Broughton Square, Milton Keynes, UK



Dukes Rise, Somerset, UK (Award winning scheme)

Cell 4. Residential Low Density Cell (incorporating some enclaves of medium density)	
Character Area	Residential - Low-density with some medium density
Gross area	18 hectares
Building height	Single and 2 storey; split levels
Residential type	Semi-detached and detached
Building depth	10 metres
Residential form	Loose urban framework; irregular building pattern would suit hillside location, with strong interspersed tree planting and landscaping.
Public open space	Dwellings to overlook Riverside Park and Linear Ridgetop Corridor.
Landscaping	Natural setting incorporating existing mature trees and significant hedgerows; suburban garden designs with an emphasis on native, naturalised and indigenous species.
Density per hectare	Low density: 3 - 19 dwellings per hectare
Min - Max total dwelling units	54 - 342 dwellings
Min - Max resident population*	135 - 855 persons
Car parking	Within curtilage.

\*Using the average household size of 2.5 (see section 1.3.1) (see Sligo North Fringe Development Framework Map).

General Design Issues:

4.6.4 A number of design issues should be adhered to when realising the development potential of all residential cells. Corner buildings should be specifically designed or orientated to address both streets onto which they front. In other words, they should have façade designs that include windows and other openings (such as doors), which provide natural surveillance and overlooking onto each street (Blank facades or gable ends should not face onto public spaces). In general, down pipes and similar service elements should not be openly displayed on the front facades of buildings. They should be either designed as an integral element of the building or they should be provided to the rear of the building, out of the general public view.

4.6.5 The residential cells will not be singular entities in themselves functioning in isolation, but rather will depend on the services within the surrounding area such as the proposed mixed-use area, neighbourhood centre, educational facilities and employment within the BITP zone.



Example of low density housing. Setting in keeping with environmental surrounds



Within the southern hillside area the building typology should follow the natural form of the contours. The roof profile should be varied allowing for an 'organic' rise and dipping pattern to emerge. This will be achieved through a combination of varied road patterns, varied building lines, and individually designed dwellings. The continuous repetition of large monoplane roof-pitches will not be acceptable in this area and significant tree planting and landscaping will be required.



4.6.6 Whilst piecemeal development of the area will be discouraged, proposals for rural-generated one-off housing (as defined in section 7.2.5 of the SEDP) on residential-zoned lands will be accommodated, subject to demonstration that any such proposal would not compromise the achievement of the overall Development Framework. An excessive concentration of such proposals will be discouraged however, and individual site sizes will be limited to a minimum in the interests of achieving recommended densities.

4.7 Educational / Institutional

4.7.1 Taking into account the existing surrounding population (approx. 850), the proposed population within the Masterplan site (approx 1,642 - 3,280) and the proposed residential population outside the site boundary currently zoned but undeveloped (approx. 1,232 - 1,763) there is a need for the provision of a primary and secondary school within this area (see Appendix B - Educational Provision).

4.7.2 The complex is to allow for a primary school and secondary school, interlinking with shared gym and hall facilities. Both the primary and secondary is to have its own separate hard play area with combined use of the sporting pitches located to the east of the complex. Evening adult education can be facilitated within one of the buildings without having to open up the entire centre thereby diminishing security issues and saving on electricity and heating. This educational multiplex is to be a Centre of Excellence.

4.7.3 Dual usage of the sporting facilities by the public and surrounding community is also to be encouraged during non-school hours. Sports clubs may pay to use facilities such as basketball/indoor courts and all weather pitches, thereby generating revenue for the school and paying for day-to-day maintenance and upkeep.

4.7.4 The complex can be up to three storeys consisting of covered linkages between the varying facilities. Tiered glass to the front of the structure would make for a very striking build and maximise on the buildings passive solar gain.

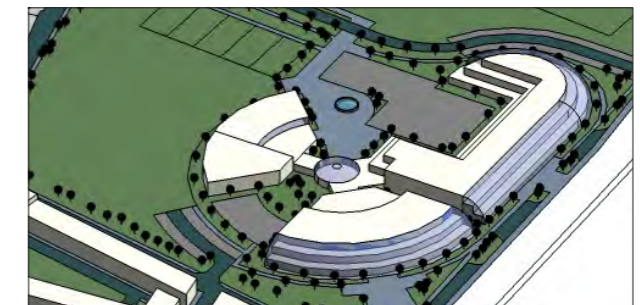
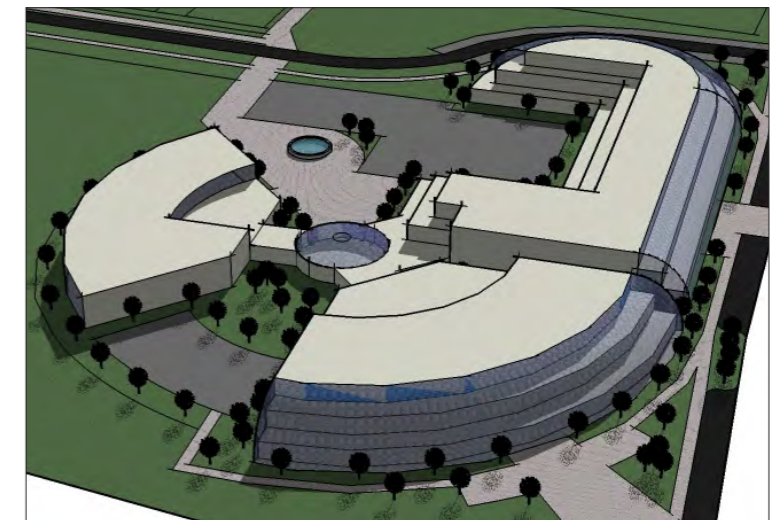
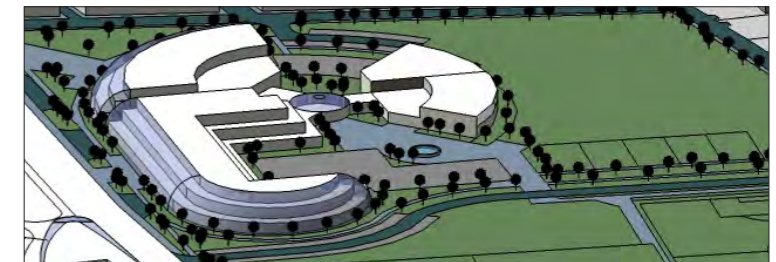
4.7.5 On-site car-parking is to be provided within the complex allowing for 1 space per teacher, 25 visitor parking spaces and room for evening adult education parking. Bicycle spaces are provided at a rate of one in four for the secondary school and 1 in 5 for the primary with some additional stands for the public using the sporting area. Bus and car set-down areas are provided to the front of the complex facilitating both primary and secondary uses.

4.7.6 A number of energy saving options including the use of passive and active solar heating, photovoltaics and green-roofs etc. are to be encouraged and would be appropriate for use within this development. (see section 3.2).

Cell 6. Educational Development Cell	
Character Area	Educational multiplex incorporating sports facilities.
Gross area (excluding main routes)	7 hectares
Primary school ground level area	4,000 metres squared
Secondary school ground level area	6,500 metres squared
Dual Hall and Gym ground level area	2,500 metres squared
Educational Building Height	2 and 3 storey.
Building type	Free-standing, educational cluster development with covered linkages to the various sectors of the school.
Built Facilities	Primary school including library and hard surface play facilities, Secondary school including library, canteen and hard surface play facilities, dual usage gym and hall.
Number of students - primary school	Up to 250 students
Number of students - secondary school	850 - 900 students
Outdoor Sporting facilities	Soccer pitch, basketball & all-weather astro-turf courts.
Landscaping	Casual open space has also been provided to allow for possible future expansion needs and passive recreation. Trees and a landscaping buffer are to be used for the boundary treatment.
Car parking	On-site parking - provision of spaces throughout the site and 25 public spaces to facilitate the sports grounds.
Bicycle parking facilities	On-site bicycle stands - provision for stands located in clusters throughout the site.
Creche/Community Building	2 storeys in height (0.6ha)

(see Sligo North Fringe Development Framework Map).

3-D Imagery of indicative Educational Campus



4.8 Business Industry Technology Park (BITP)

- 4.8.1 Cell 7 presents an opportunity to establish large-scale facilities on the site and hence generate economic growth. It is therefore a requirement that large plots of land be retained for potential developments that require a large building footprint. The allocation of individual sites for these developments should take into account future additional tenants and maximize the flexibility for a diverse range of building types and sizes.
- 4.8.2 The zoning provides flexibility for a range of industry and employment types, such as office developments, general/light industrial uses, scientific & high-technologies, manufacturing, small to medium enterprises, etc. There is also the potential to accommodate retail warehousing of up to 5,000 sq.m. net retail floor space. The final design and layout will be market driven. General design guidelines will seek to ensure compatibility in road layouts, standard building set-backs, a common approach to landscaping and car-parking, while otherwise permitting buildings and varying design and layout.
- 4.8.3 High quality landscaping is necessary in this area creating a visually attractive area, providing calm surroundings for employees and integrating the development into the existing landscape context.
- 4.8.4 Good access with turning circles, loading bays and strong linkages to the National road network have been provided in order to facilitate traffic flow and movement. Internal service roads have been provided to the rear and side of buildings to allow for car/truck parking, delivery and loading.
- 4.8.5 The majority of the layout has allowed for a 10-metre setback in order to accommodate landscaping and provide appropriate screening, where necessary.

Cell 7. BITP	
Character Area	Business, Industry and Technology Park creating an employment zone
Gross area (excluding internal roads)	10 hectares
Building Height	Approximately 9 -15 metres - number of storeys is not a particularly good guide to building height, in more industrial areas where mini-crane and forklifts may have to operate, or where additional roof heights may be required for ventilation.
Building type	Free-standing and Perimeter blocks, which can be sub-divided surrounding courtyard settings.
Building Depth	Approx. 20 - 60 metres allowing for a range of sizes and footprints (depending on exact nature of business).
Building Setback	10 metres
Landscaping	High quality landscaping to define edges and soften the effects of hard surfaces.
Car parking	The majority of parking is to the rear of buildings.

(see Sligo North Fringe Development Framework Map).

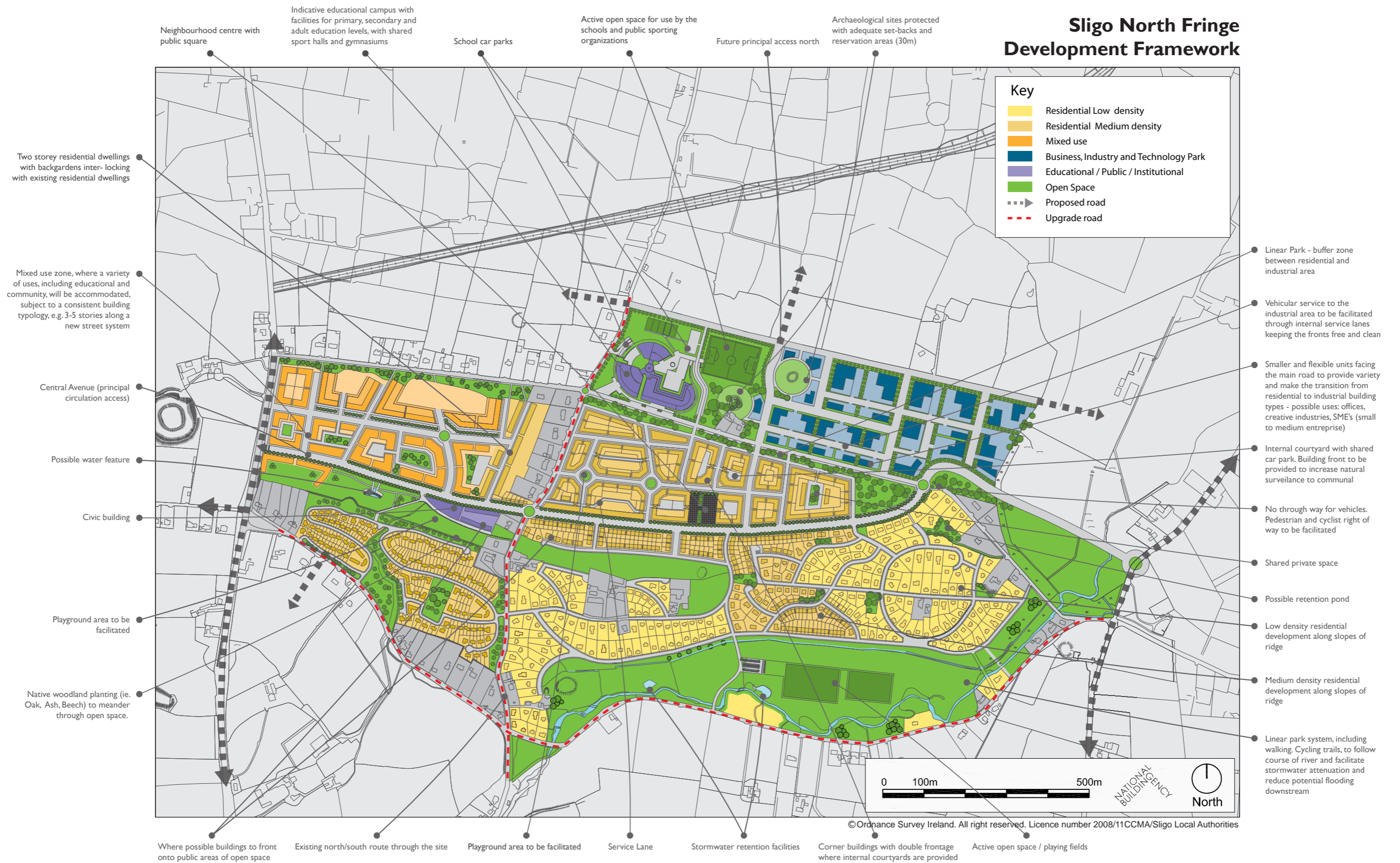


Example of business units, Santry Demense, Dublin



Example of business units, Santry Demense, Dublin

# Sligo North Fringe Development Framework



## 5 Implementation

The Planning Authority will require developers to incorporate the objectives of this Plan into any future development proposals for the North Fringe area. Other objectives, particularly key infrastructural elements will require government funding and support. Where appropriate and feasible, the local authority will seek financing from specified sources and programmes, including EU programmes and grants. Additionally, the local authority will exercise all legal powers to ensure that objectives are implemented.

### 5.1 Development Contribution Scheme

Under the Development Contribution Scheme, specific objectives will be implemented where appropriate, via conditions and appropriate levies placed on development proposals. The commitment of development levies can apply to the provision of public infrastructure and facilities benefiting development in the area of the Planning Authority, such as open space provisions, which may be provided, or are intended to be provided, by or on behalf of a local authority (Part 3, Section 48 of the Planning and Development Act, 2000).

### 5.2 Bonds

To ensure development that is undertaken by private developers is satisfactorily completed the Planning Authority will impose, as a condition of the planning permission, that a security bond or other acceptable security be lodged with them. This bond is to ensure that all roads, footpaths, open spaces, lighting, and other services within a development be completed to an acceptable standard. The amount of the security bond will be based upon the estimated cost of the development works and this bond shall remain in place until all prescribed works are satisfactorily completed or until the development is taken in charge of the local authority.

### 5.3 Partnerships and Public Private Partnerships (PPP)

A PPP involves a partnership agreement between the public and private sector for the delivery of specific projects relating to public services and infrastructure, such as education, health, housing, public transport, roads, waste treatment, water/wastewater and other services. It is usually reserved for large-scale projects that require quite significant investment. The approach can ensure a commitment to funding due to interlinked public and private assistance and aims at ensuring the most economically efficient delivery of development. Sligo County Council can consider options for PPPs as a means of implementing key elements of the plan.

Other partnership approaches may be pursued with other state and public organisations, such as the Irish Sports Council (under an initiative to create a new national network of sports partnerships to meet the needs of sport at local level), Bord Failte and the Arts Council.

### 5.4 Additional Funding Sources

Ireland's current National Development Plan, 2007 - 2013 'Transforming Ireland - A better Quality of Life for all' sets out a roadmap to Ireland's future.

As for all of the Operational Programmes, funding is generally open to both private and public sector projects and an independent consultancy company carries out evaluations. It is hoped that the completion and adoption of the North Fringe Masterplan should strengthen any bid for funding under the forthcoming programme.

Additional national and EU funding programmes include the NeighbourWood Scheme, National Lottery Facility Funding, Community Support Framework, etc., as well as funding from various government departments subject to varying criteria. These will be reviewed for opportunities.

# North Fringe Appendices

## APPENDIX A: ENERGY EFFICIENCY

### Some Renewable Energy Methods:

Passive solar architecture is a design approach rather than the active use of a specific technology or device. The fabric, orientation and layout of the building are manipulated to achieve maximum solar gains and minimise the need for artificial lighting, heating and ventilation.

Active solar technology involves the installation of a solar collector device, which is typically a metal box structure containing an absorber. The solar collector absorbs the sun's heat, which can in turn heat water for the building.

Solar energy can also be harnessed through the use of photovoltaic technology using semiconductor materials to convert sunlight to electricity. These can be integrated in building structures.

A green roof system is an extension of the existing roof which involves a high quality water proofing and root repellent system, a drainage system, filter cloth, a lightweight growing medium and plants. This benefits of this system are numerous including savings on energy heating and cooling costs, sound insulation benefits, potential to reduce or eliminate roof drains, potential to assist with stormwater management, provision of amenity space, aesthetic appeal and improved air quality.



**APPENDIX B: EDUCATIONAL PROVISION**

Educational Provision and Population Projections:

Average Household Size - In 2002 the average household size in Sligo was 2.68 expected to decrease to 2.56 by 2011.

The area of Sligo North Lisnalurg is likely to be developed over the next 10 - 20 years, therefore an average household size of 2.5 is to be used for this study.

A) Existing Residential / Population:  
Number of existing residential units within a 1km radius and surrounding rural environs is approximately 339 units (Conservative estimate)

(Barton's standard of 1,500 - 2,000m catchment area has not been implemented, as there are existing schools within this catchment area to the south).  
Existing estimated population = 850 persons

B) Proposed Residential / Population within the Masterplan Site Boundary:  
R1 (3 - 19d/ha) 20ha  
Min: 63 dwellings 150 persons  
Max: 399 dwellings 950 persons  
R2 (20 - 34d/ha) 20ha  
Min: 400 dwellings 1,000 persons  
Max: 680 dwellings 1,700 persons  
C3 (35 - 50d/ha) 50% Res = 3.25ha  
Min: 114 dwellings 284 persons  
Max: 162 dwellings 405 persons  
C3 Higher Res (75%)(35 - 50d/ha) 1.6(75%) = 1.2ha  
Min: 42 dwellings 105 persons  
Max: 60 dwellings 150 persons  
Totals:  
Dwellings Min: 616  
Max: 1,282  
Population Min: 1,539  
Max: 3,205

C) Proposed Residential / Population outside site boundary currently zoned but undeveloped:  
R1 (3 - 19d/ha) 26.36ha  
Min: 79 dwellings 198 persons  
Max: 501 dwellings 1,252 persons  
R2 (20 - 34d/ha) 13.33ha  
Min: 267 dwellings 666 persons  
Max: 453 dwellings 1,133 persons  
C3 (35 - 50d/ha) 28.21/2(50%) = 14.10ha  
Min: 493 dwellings 1,232 persons  
Max: 705 dwellings 1,763 persons

Totals:	
Dwellings	Min: 839 Max: 1,659
Population	Min: 2,096 Max: 4,148

D) OVERALL TOTALS:	
Dwellings	Min: 1,794 Max: 3,280
Population	Min: 4,485 Max: 8,203

CSO statistics

In 2002 the total amount of population in the State was 3,917,203 with the total number of secondary school's receiving departmental aid for the year 2002/03 at 746. Therefore it may be assumed that the average catchment population for secondary schools in Ireland for the year 2002 was a population of 5,251 for every secondary school.  
 $3,917,203/746 = 5,251$

The total number of students in secondary = 339,231, which was 8.66% of the total population.

Barton (2003) recommends a catchment population of approximately 1:7,000 - 15,000 for secondary schools. However this was based on an UK model and as Barton states 'catchments may vary from place to place over time.

'In an increasingly privatised economy it is often not possible or appropriate to define specific catchments for specific services. The principles of consumer choice, the fact of high mobility, means that local people may or may not choose to use local facilities.'

