

Barnhill

Local Area Plan
February 2019





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Local Area Plan

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EXECUTIVE SUMMARY

INTRODUCTION TO BARNHILL LOCAL AREA PLAN (LAP)

The LAP will be in effect for a period of 6 years (2019-2025), unless otherwise extended, as provided for under the *Planning and Development (Amendment) Act 2010*.

Blanchardstown is designated as a Metropolitan Consolidation Town in both the Regional Planning Guidelines for the Greater Dublin Area 2010-2022 and the Fingal Development Plan 2017-2023. This town is to be developed at a relatively large scale, as part of the consolidation of the Metropolitan Area, and, to ensure that it supports key public transport corridors connecting it to the city.

The LAP lands are located approximately 3km from Blanchardstown Town Centre, 4.1km from Blanchardstown Main Street and 12.4 km from O'Connell Street, Dublin. They are situated directly south of the Dunboyne to Clonsilla Rail Line and Hansfield train station, west of the Royal Canal and the Dublin-Maynooth Railway Line and east of the R149 (Clonee-Lucan road).

ZONING

The LAP lands are zoned Objective 'RA', which seeks to 'Provide for new residential communities subject to the provision of the necessary social and physical infrastructure' in the Fingal Development Plan 2017-2023.

The LAP lands comprise approx. 45.64ha and will provide for a framework for the planned, co-ordinated and sustainable development of lands, the current use of which is primarily agricultural. The proposed LAP is consistent with Fingal's Core Strategy and identifies the quantum, location and phasing of development for the plan period, aligning with the established regional population targets.

VISION

The Vision for Barnhill is to create a place to live that is appealing, distinctive and sustainable, maximising the opportunities provided by the surrounding natural environment for improved amenities and the enhancement of biodiversity. It is envisaged that Barnhill will develop as a sustainable community comprised of new homes, community, leisure and educational facilities based around an identifiable and accessible new local centre which will form the heart of the area.

KEY ELEMENTS IN THE DEVELOPMENT STRATEGY FOR BARNHILL:

NUMBERS OF RESIDENTIAL UNITS:

The number of residential units supported on the LAP lands will be in the range of approximately 900 to 1,150 units. This range is dictated by the varying density throughout the lands with an indicative higher density of approximately 84 units/ha at the rail station, a range of medium density c.35-50 units/ha on the central part of the lands and a generally lower density arrangement of c.24 units/ha on the western part of the lands.

MOVEMENT AND TRANSPORT STRATEGY:

The LAP has provided for the proposed Ongar-Barnhill road, already approved by the Council as a Part 8, which will traverse the western part of the lands in a north-south direction and link the Ongar road to the R149 thereby opening up the Barnhill lands for development. Key aims of the LAP are to improve accessibility and maximise public transport use, taking account of the land's location adjoining Hansfield train station and encouraging use of sustainable transport options such as walking and cycling.

GREEN INFRASTRUCTURE STRATEGY:

The LAP provides for a network of cycleways and pedestrian linkages throughout the lands, which will link the LAP to a new Local Centre, the Rail Station, a proposed new primary school and residential areas. In addition, the cycle and pedestrian network will facilitate access to schools and facilities north of the rail line in Hansfield and Ongar.

These routes are an integral component in the overall movement network, providing a sustainable way of travelling around Barnhill and more importantly integrating the LAP lands with the emerging new neighbourhood in Hansfield.

Arising from the Strategic Flood Risk Assessment undertaken for the Plan, there is a good provision of land given over to open space servicing both active and passive activities. To that end, a minimum of 3.5ha of Class 1 open space provision and all Class 2 open space provision will be delivered within the confines of the LAP boundaries. A centralised public park with concentrated activities including a Multi-Use Games Area (MUGA) and playground will provide a dual purpose of serving both the public and the adjoining school, with more passive activities located in



Green Infrastructure

the areas partially designated within the flood plain of the Barnhill Stream. A proposed Nature Park/Wildflower Meadow will be located south of Barberstown Lane South with managed public access and offering an access point to the Royal Canal Greenway.

COMMUNITY INFRASTRUCTURE STRATEGY:

A School site is designated in the LAP adjacent to and forming part of the proposed Local Centre in Development Area 2. Other facilities will be provided for as part of the local centre. Childcare facilities will be delivered as part of the normal requirements of planning applications.

ECONOMIC INFRASTRUCTURE STRATEGY:

A local centre is proposed in Barnhill adjoining the new primary school and this is intended to serve the local every day needs of the resident population. Retail floorspace here will be limited to neighbourhood centre level. Some small local service provision may also be provided at the train station and there is provision to allow for a café/interpretative centre on an area of land in Development Area 4 adjacent to the Royal Canal to take advantage of its position next to this amenity. It is anticipated that the Royal Canal Greenway once developed will provide the necessary footfall to ensure that a sensitively designed commercial development will flourish at this location.

URBAN DESIGN STRATEGY:

The overall strategy of this LAP is to ensure a high standard of urban design to create a quality environment with a distinct sense of place, physically linked with adjoining developments.

Housing Mix & Design

The LAP seeks to promote the development of new housing which delivers integrated, balanced communities and provides a sustainable social mix with a mix of unit types, sizes and tenure. It is envisaged that within this LAP both the traditional and more innovative models of accommodation be provided in a contemporary style. The new LAP areas will cater for all members of society and deliver a range of house types and sizes, which will provide more opportunities for people to stay and live locally at every stage of their lives. Architectural design will be required to carefully consider the landscape setting and topography of the LAP lands ensuring a sustainable layout to reduce energy needs.

Building Heights

Building heights will vary throughout the LAP. Lands located adjoining the train station and rail line in Development Area 1 will contain buildings which will have a range of building heights,

generally 4-6 storeys, ensuring appropriate densities and heights are achieved which accord with relevant guidelines. Lands in Development Area 2, further south from the rail line, will contain buildings predominantly 2/3 storeys with opportunities for increased heights and densities at specific locations. There may also be opportunities for accommodation at attic level in new residential dwellings, subject to design. Increased heights may be appropriate at locations where higher buildings (Landmark Buildings) would make a contribution to the streetscape or would provide overlooking of open space/recreation areas. Lands to the west of the new Ongar-Barnhill road will generally be in the range 2-2.5 storey however single storey units may be appropriate at certain locations.

PHASING AND IMPLEMENTATION STRATEGY

Sequencing of Development

It is an objective of the Planning Authority to ensure the timely and orderly development of the Barnhill lands in a sustainable manner. The development is likely to occur over a period longer than the 6 years of the LAP, dependent on the level of market demand and the timely supply of infrastructural services. The approach in the LAP is to phase in accordance with a sequential approach southwards from the railway line so that undeveloped land next to the station and public transport routes are given preference. 'Leapfrogging' to peripheral areas will not be provided for unless it can be strongly justified by relevant evidence/data. Any exceptions to the sequential approach must be clearly justified and, where it arises, such justification will form part of the assessment of any planning application.

The LAP has three indicative phases. Phase 1 corresponds with Development Area 1 and includes all the 'RA' zoned land to the north of Barberstown Lane North, south of the rail line and east of the new Ongar – Barnhill Road. Phase 1 includes the development of this new road and any ancillary road infrastructure to meet the quantum of development proposed. It also includes for access to the train station at Hansfield with an associated public space/plaza area at the entrance. Open space will be required to be delivered in tandem with development. In this regard, should justification be provided for development to be delivered out of the preferred sequence, the phasing for phase 1 will be applied to the first and



any subsequent relevant applications.

Phase 2 includes medium density development and the local centre, primary school and café/interpretative centre alongside the canal in Development Area 2. The local centre will be phased for delivery on completion of sufficient units to ensure viability of the centre. Delivery of the school will be dependent on the Department of Education and Skills schools program and the Planning Authority will continue to work with the Department on school delivery. While Development Area 2 includes most of the open space associated with the wider development, the phasing requirements of Phase 1 will require delivery of a percentage of the lands in Development Area 2 as part of the Phase 1 development.

Phase 3 contains the lands situated between the new Ongar-Barnhill road and the existing R149. Open space will need to be provided within this area to serve the development in this phase. Linkages will be provided to the remainder of the development through the proposed underpass on the Ongar-Barnhill road to the north and by the road to the south.

All phases include elements of linear corridors serving pedestrian and cycle routes throughout the lands in addition to smaller pocket parks.

STRATEGIC AIMS OF THE LAP

In support of the Vision for the area, the LAP is underpinned by a series of strategic aims which support the sustainable principles set out as follows:

- Optimise the sustainable use of land through ensuring that development is at an appropriate density particularly adjoining Hansfield train station.
- Maximise opportunities for open space, green connected networks and protection of the natural environment.
- Develop a movement and transport strategy which minimises trip generation and promotes cycling, walking, public transport, and sustainable modes of transport.
- Support sustainable approaches to housing developments through design, layout, specifications and a mix of house type.

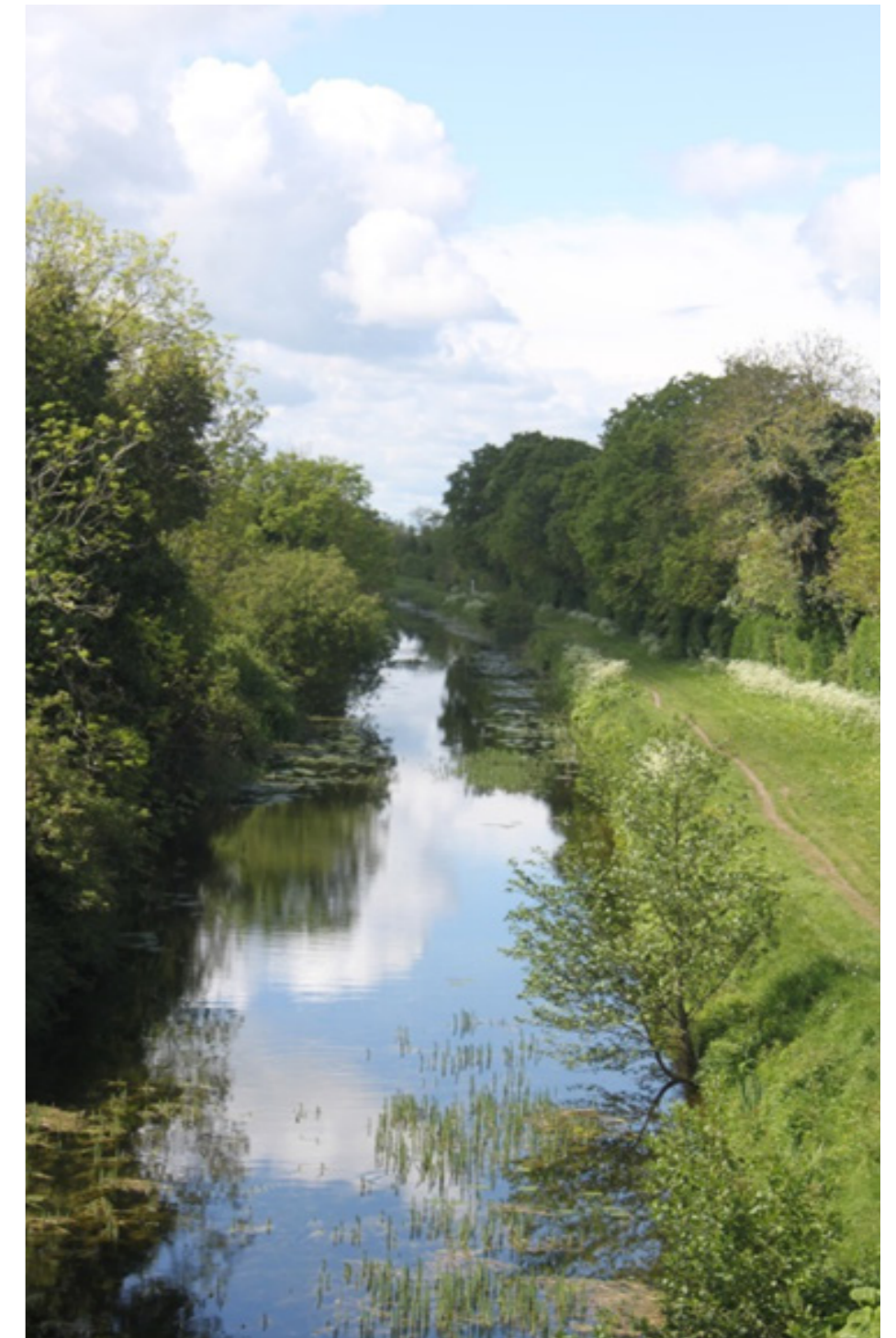
- Promote a high standard of energy efficiency in housing and commercial developments and use of alternative energy techniques.
- Create sustainable communities through the integration of the new community with the community being established in Hansfield and; the integration of social and community facilities in both the developing and established areas to provide people with the services/facilities they need close to their homes encouraging lifetime residency and vibrant communities and places.
- Promote the area’s recreational resources in a sustainable and environmentally sensitive manner.
- Ensure the timely delivery of social, community and physical infrastructure and amenities in tandem with the phased development and residential growth of the area.

ENVIRONMENTAL ASSESSMENTS

A number of assessments were carried out and informed the preparation of the LAP, including a Strategic Flood Risk Assessment and a Sustainable Water Management – Sustainable Urban Drainage Systems (SUDS). Screening was carried out for Strategic Environmental Assessment and Appropriate Assessment. The screening reports concluded that a full SEA and AA was not required for the Plan. These reports accompany the LAP document.

DRAFT STAGE OF BARNHILL LOCAL AREA PLAN

A number of amendments were made to the Draft Barnhill Local Area Plan. In considering the nature and extent of the proposed amendments, in accordance with the criteria set out in the SEA Regulations Schedule 2A Criteria (S.I. No. 436 of 2004), it was determined that the Local Area Plan will not give rise to significant effects on the environment. Similarly following analysis of all draft amendments a Stage 2: Appropriate Assessment was deemed not required.



Royal Canal

1 Introduction

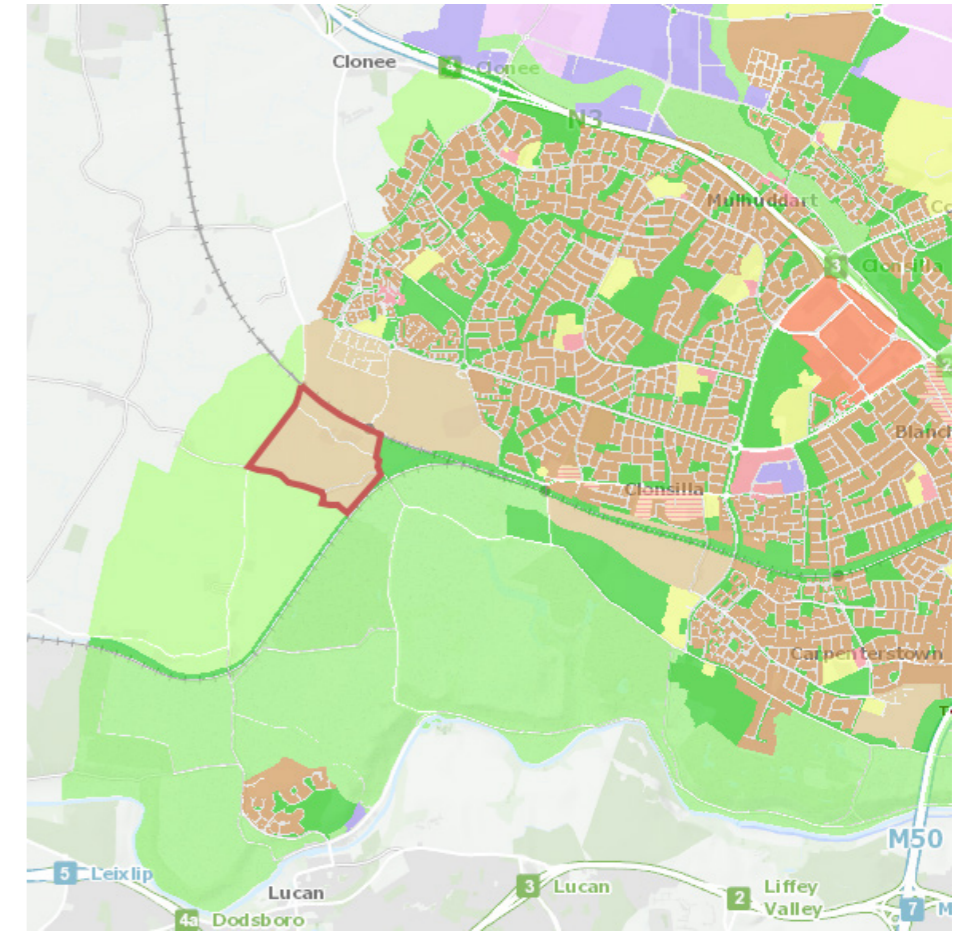
SECTION 1 INTRODUCTION

1.0 Statutory Context

The Fingal Development Plan 2017-2023 has designated a greenfield area of land comprising 45.64 hectares for Local Area Plan (LAP) purposes. The designated area, to be known as Barnhill Local Area Plan, is located at the south-western development boundary of Blanchardstown within the townlands of Barnhill, Barberstown and Passifyoucan. The Fingal Development Plan provides for the zoning objective 'RA' – Residential Area on the LAP lands, which provides for residential development. In the past 15 years, the context of the area has undergone significant change. The impacts of substantial residential and educational development in the Hansfield Strategic Development Zone (SDZ) and the provision of a new railway station have resulted in the creation of a developing urban area in this part of Blanchardstown.

1.1 Geographic Context

The LAP lands are located approximately 3km from Blanchardstown Town Centre, 4.1km from Blanchardstown Main Street and 12.4 km from O'Connell Street, Dublin. The lands are situated directly south of the Dunboyne to Clonsilla Rail Line, west of the Royal Canal and the Dublin-Maynooth Railway Line and east of the R149 (Clonee-Lucan road) . The lands are flat, in agricultural use and characterised by field boundaries comprised of hedging and trees. There are circa 9 no. residential houses and 1 no. industrial building complex located within the boundaries of the LAP. A small stream runs in a west to east direction on the southern part of the lands to a lake in Luttrellstown Demesne, this lake drains into the River Liffey.



Location of LAP Lands

1.2 What is an LAP and how does it work

A Local Area Plan is a statutory document prepared by the Planning Authority in accordance with the requirements of Sections 18, 19 and 20 of the Planning and Development Act, 2000, as amended. A Local Area Plan consists of a written statement and plans that must be consistent with the objectives of the County Development Plan, its core strategy and any Regional Planning Guidelines or Regional Spatial Economic Strategy (RSES) that applies to the area of the Plan.

Section 18(1) of the Planning and Development Act states that a planning authority may at any time, and for any particular area within its functional area, prepare a Local Area Plan in respect of that area. The aim of this LAP is to establish a framework for the planned, coordinated and sustainable development of the zoned lands.



The LAP provides guidance as to how this development can be achieved, what new infrastructure is needed and where public and private resource inputs are required for development proposed in the LAP area.

The layout and content of the LAP have been guided by the *Local Area Plan - Guidelines for Planning Authorities, 2013* produced by the Department of the Environment, Community and Local Government as well as the *Development Plans Guidelines for Planning Authorities, 2007*. The LAP consists of a written statement and associated maps. There are separate accompanying documents such as the Appropriate Assessment and Strategic Environmental Screening documents carried out as part of the LAP process. A Flood Risk Assessment and a SUDS Strategy have been undertaken for the LAP lands and informed the plan. (See appendices)

1.3 Purpose of Local Area Plan

The Barnhill LAP sets out the future development strategy for the proper planning and sustainable development of the plan lands and includes the following elements:

- Indicative layout for the future development of the lands; including, densities, heights, location of public open spaces and green infrastructure;
- Creation of a permeable and legible movement network, for pedestrians, cyclists and vehicles, within the site and surrounding area;
- Objectives for a high quality new residential neighbourhood including appropriate facilities and amenities on the lands that will complement existing development and uses in the vicinity.

The LAP will seek to achieve the successful integration of the new development areas into the existing settlements located in Hansfield and Ongar, and, it will provide for the supporting infrastructure to ensure that Blanchardstown continues to be a successful and attractive place for current and future residents.

The LAP will be in effect for a period of 6 years following its adoption (2019-2025), unless otherwise extended, as provided for under the *Planning and Development (Amendment) Act 2010*,

for up to a total period of 10 years, provided the objectives of the local area plan remain consistent with the Objectives and Core Strategy of the Fingal Development Plan.

1.4 Public Consultation

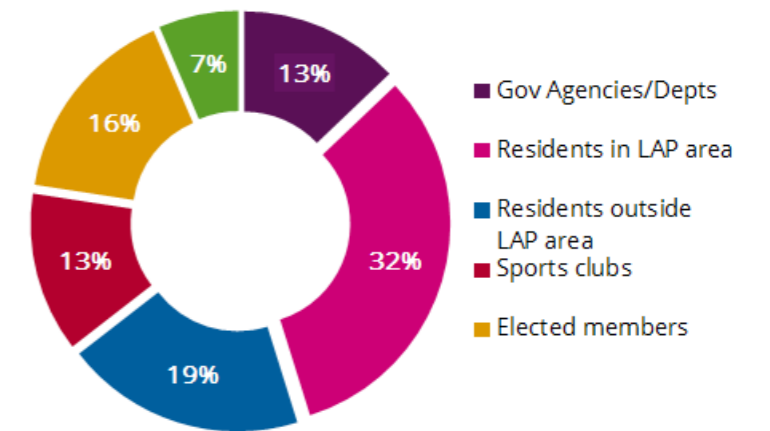
Under the Planning and Development Act 2000 (as amended), the Planning Authority shall take whatever steps it considers necessary to consult the public. To assist in the consultation process the Council published a Strategic Issues Paper entitled 'Having Your Say'. This Paper was published to assist the public in making a submission and invited the local community and various stakeholders to submit their views regarding the shaping of the future development of Barnhill. The observation period was open for 8 weeks between the 19th June and the 11th August 2017. The Issues Paper was available in the Council's offices, Blanchardstown library and Ongar Community Centre. A digital version was also available on www.fingal.ie and through Fingal's web portal.

A total of 20 submissions were received including recommendations from the Environmental Protection Agency and the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. The submissions raised a number of issues, which included:

- Need to provide safe paths and cycleways
- Lands in the area are prone to flooding
- Wildlife needs to be protected
- LAP should provide guidance on urban design, density, building heights etc.
- Currently no existing access to train station from south

The Draft LAP was on display from 23rd October to 5th December 2018 during which time 31 submissions were received. A public information day was held in Blanchardstown Library on 13th November 2018.

Stakeholder Analysis



1.5 Environmental Assessments

EU Directives, Environmental Assessments and/or Screenings are required by law to be carried out to assist the preparation of every Local Area Plan to determine whether the plan is likely to have any significant environmental impacts, specifically, Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA). The Planning Authority also procured consultants to carry out an independent Flood Risk Assessment and SUDS Strategy for the Plan lands.

1.5.1 Strategic Environmental Assessment (SEA)

As part of the preparation of the Local Area Plan, a planning authority must consider whether the Local Area Plan requires SEA. The assessment of this issue is based on the Planning Acts, criteria set down in the SEA Guidelines and Annex II of the SEA Directive for determining the likely significance of environmental effects. The guidelines require screening for SEA to be carried out for all local area plans where the population of the area of the local area plan is 5,000 persons or less. Where the population of an LAP is 5,000 or more, an SEA Environmental Report must be prepared. The estimated population for the proposed Local Area Plan at Barnhill is c. 3,500 persons; therefore SEA is not mandatory.



1 Introduction

As a result of the screening process for the Barnhill LAP the Planning Authority was satisfied that SEA was not required having regard to the nature and characteristics of the lands and overall quantum of development proposed within the plan lands. The SEA Screening Report (Appendix 1) is attached to this LAP document.

1.5.2 [Appropriate Assessment](#)

The EU Habitats Directive, 92/43/EEC, provides the legislative framework for the protection of habitats and species throughout Europe through the establishment of a network of designated conservation areas known as the Natura 2000 network. The Natura 2000 network includes sites designated as Special Areas of Conservation (SACs), under the EU Habitats Directive and Special Protection Areas (SPAs) designated under the EU Birds Directive. In general terms, these sites are considered to be of exceptional importance in terms of rare, endangered or vulnerable habitats and species within the European Community. Together SPAs and SACs form “Natura 2000”, a network of protected areas throughout the European Community.

Screening was carried out as part of an Appropriate Assessment, the purpose of which is to ensure the protection of the integrity of European “Natura 2000” sites, as required under the EU Habitats Directive. The screening exercise for the AA concluded that a full Appropriate Assessment was not required for this LAP. The Appropriate Assessment Screening Report is appended to the LAP, Appendix 2.

1.5.3 [Strategic Flood Risk Assessment](#)

Under Section 28 of the Planning and Development Act 2000, as amended, statutory guidelines entitled *The Planning System and Flood Risk Management Guidelines for Planning Authorities* were published by the DoEHLG (November 2009). These guidelines require planning authorities to introduce flood risk assessment as an integral and leading element of the plan making process. The Barnhill LAP lands were assessed for risk of flooding in accordance with the Planning System and Flood

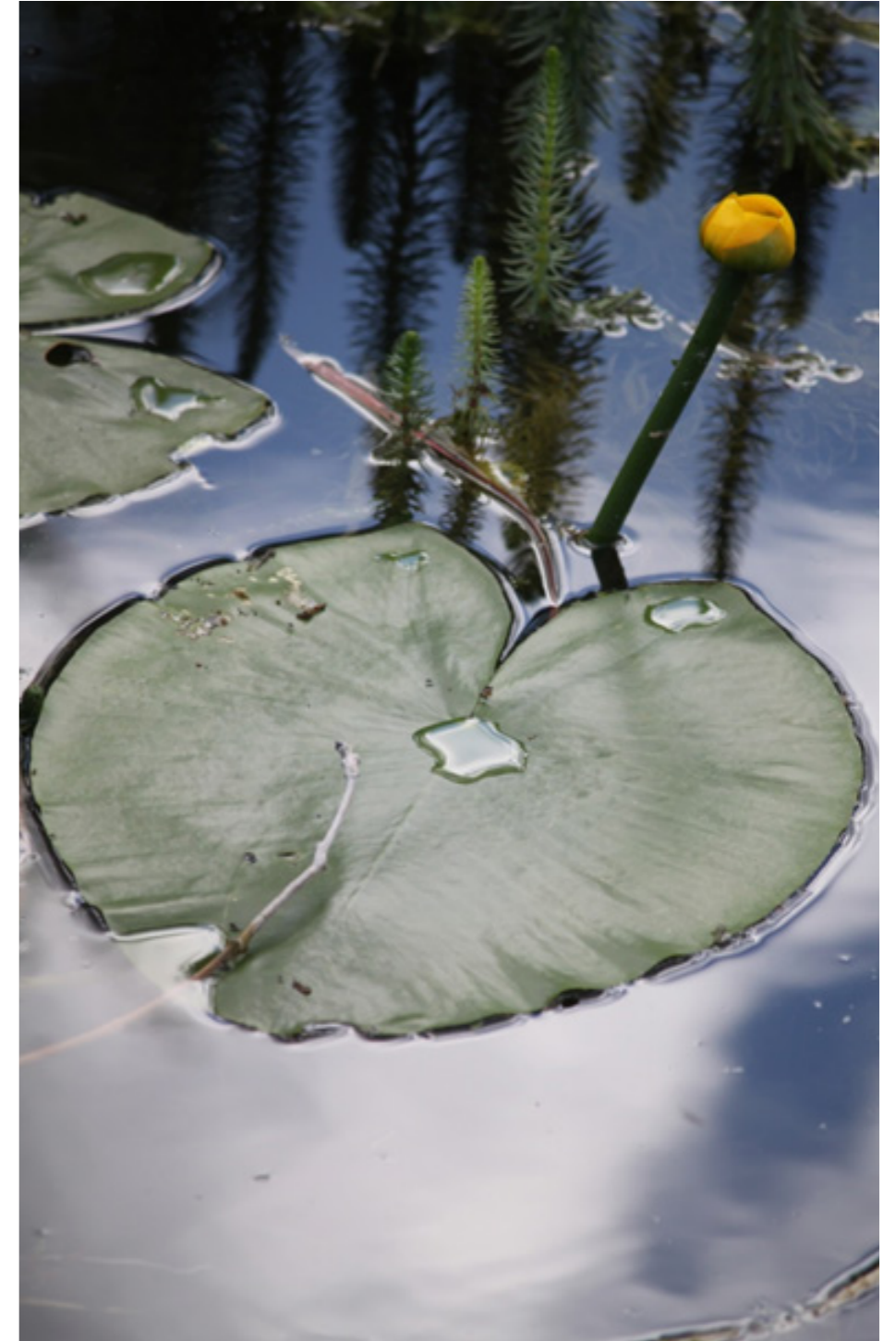
Risk Management Guidelines for Planning Authorities 2009 issued by the DoEHLG and as updated by the Departmental Circular PL 2/2014.

The LAP lands are characterised by their location adjacent to a stream (Barnhill Stream) that flows in a west to east direction under the Royal Canal and enters a lake at Luttrellstown Demesne which itself empties into the River Liffey. The stream has been surveyed as part of the Liffey river catchment and for the Local Area Plan and a flood risk map for this stream has been prepared for the 1% (1 in 100 yr) probability of flooding and the 0.1% (1 in 1000 year probability of flooding). The Flood Risk Assessment, carried out by Garland Consultancy on behalf of Fingal, is contained in Appendix 3 of the LAP.

The LAP sets out general policy requirements contained in the Guidelines to inform strategic land-use decisions with the purpose of ensuring that flood risk management is fully integrated into the plan. The Flood Risk Assessment has informed the identification of areas of the LAP lands that are appropriate and inappropriate for development. There is an opportunity as part of the LAP to develop a linear open space along this stream and in areas adjacent to the Royal Canal and provide for improved recreational amenities.

1.5.4 [Sustainable Urban Drainage Systems \(SUDS\)](#)

Surface water drainage is required to incorporate Sustainable Urban Drainage Systems (SUDS), which will restrict the surface water run-off to that generated from greenfield sites. Accompanying this LAP is a SUDS Strategy which gives advice and best practice examples of SUDS design and provides SUDS policies for development within the LAP area. (Appendix 4)



SECTION 2 EXISTING ENVIRONMENT AND CONTEXT APPRAISAL

2.0 Strategic Location and Description of the Locality

The Barnhill plan lands are situated close to the western boundary of Fingal where the administrative areas of Meath, Kildare and Fingal meet. As previously described they are situated directly south of the Dunboyne to Clonsilla rail line and west of the Royal Canal and the Dublin-Maynooth rail line and east of the R149. Hansfield Train Station is located between Hansfield SDZ and the Plan lands and provides suburban rail services to the City Centre to the east and Dunboyne to the west. The lands are also strategically located in terms of transportation linkages being located approximately 10km south-west of Dublin Airport and 2.6km south of the M3/N3 link with direct access to the strategic national road network.

In a more local context the lands are situated adjacent to the developing lands associated with the SDZ at Hansfield to the north, where circa 3,000 residential units are to be located, once completed. The more established area of Ongar is located further to the north with its associated schools and community facilities with opportunities for connections and synergies to develop. Open countryside surrounds the lands to the east, south and west.

The lands are generally flat, in agricultural use and characterised by field boundaries comprised of hedging and native tree species. There are a number of residential houses and one industrial building on the lands. A small stream (Barnhill Stream) runs in a west to east direction on the southern part of the lands to a lake in Luttrellstown Demesne and then into the River Liffey.

Twin 110kV lines cross the lands in the north-west corner. Two steel pylons servicing this line are located on the lands. This line is the primary power supply serving both Leixlip (Intel) and the Dublin Enterprise Zone. The undergrounding or the diversion of these cables is not a viable option and the overall design and layout proposal should take account of this. The line will remain on its existing alignment with the area under the line used for a mix of open space/parkland, roads and car parking. Lateral clearance between buildings is required, at 20m from the centre line of the transmission line, thus producing a 40m wide restricted corridor. Buildings must not be constructed within 23m of the tower legs.



Fig.1: Physical map of area

2.1 Recreation Amenity and Open Space

Currently the most proximate areas of public open space are the banks of the Royal Canal to the east of the Barnhill lands; at St Catherine's Park, 3km to the south-west comprising circa 80ha and lands at Beechpark in Clonsilla to the east. A village park in the form of 2.35ha public open space is to be provided within the Hansfield SDZ, some 300m to the north of Hansfield rail station. Approximately 3.88 ha of land located to the north east area of the LAP boundary, between the Dunboyne-Clonsilla rail line and the Kildare-Dublin rail line is zoned as Public Open Space. This parcel of land is linked to open space provision for residential lands developed previously in Castaheany to the north and are considered separately to the Open Space requirements of the LAP lands. They are not to be included in the open space calculations pertaining to the LAP.

2 Existing Environment And Context Appraisal

2.2 Natural Environment

There are no Natura 2000 sites within or adjacent to the Barnhill LAP. The nearest site with environmental designation, SAC or SPA, is the Rye River, Leixlip which is 2.7km to the south-west (Appendix 2: Appropriate Assessment Screening). The LAP lands are within the catchment of the River Liffey, with the Barnhill Stream feeding into a lake in Luttrellstown Demesne, which flows into the River Liffey and hence into the South Dublin Bay SAC and the South Dublin Bay and River Tolka Estuary SPA, approximately 15 km away.

The Geographical Survey of Ireland (GSI) provides information available on bedrock and subsoil. There is a small area in Barnhill along the R149 where rock is at or near the surface. Encircling this area there is a small portion of land where Groundwater Vulnerability is 'Extreme', with the remainder of the land being characterised as being either 'Highly' or 'Moderately' vulnerable. The topsoil comprises of Surface Water Gleys, Ground Water Gleys, Grey Brown Podzolics, Brown Earths and Mineral Alluvium, derived from parent materials comprising Limestone Till (Carboniferous) and Alluvium undifferentiated. The topsoil varies from being poorly drained to deep well drained mineral. Subsoil comprise of Till derived chiefly from Limestone and Alluvium.

2.3 Biodiversity, Flora and Fauna

In the urban and suburban environment, the need to protect and enhance biodiversity can be challenging where the need to provide housing and recreational facilities will involve the modification of the existing vegetation and landscape elements.

2.3.1 Flora

A Flora and Fauna Study of the lands was undertaken by Brian Keeley B.Sc (Hons) in Zool.MCIEEM and Malgorzata Wilkowska B.Sc. M.Sc. (Appendix 5) The most predominant habitat is 'Improved Agricultural Grassland' (GA1). It supports little biodiversity, as it is mainly composed of Italian ryegrass. The LAP lands are being closely grazed by cattle and horses. This habitat is of low ecological importance. The fields are mostly bordered by hedgerows which support a wide variety of herbaceous plants. These semi-natural hedgerows

are of high local ecological importance, as they support a variety of wildlife, act as a woodland substitute and are important ecological corridors in both the rural and urban environments. In addition there are stretches of ornamental hedgerow along some of the dwelling properties and these include Laurel and Privet hedges. These hedges are of low ecological importance. The Barnhill stream crosses the southern part of the lands. It can be classified as a 'Depositing Lowland River' (FW2). This stream flows underneath the Royal Canal and feeds into the River Liffey which is part of Liffey Valley pNHA. The stream is screened by naturally formed hedgerow made of scrub and trees and because of overshading, the aquatic vegetation is scarce. Both house gardens and yards have areas of bare or recolonising ground. These habitats are classified as 'Spoil and Bare Ground' (ED2) and 'Recolonising Bare Ground' (ED3) and are of low

ecological importance. Roads are bordered with grassy verges which are classified as 'Dry Meadows and Grassy Verges' (GS2). They are regularly mowed and associated with hedgerows and drainage ditches. They provide some space for flowering plants on which insects can feed. These plants can be scarce in the surrounding improved grassland. Because of that, they can be considered to be of medium local importance. Overall, the most important habitats within the site are hedgerows (including mature trees) and the stream. These habitats should be protected to support biodiversity within the local area. There are no habitats within the Barnhill lands protected under Annex I of the EU Habitats Directive (92/43/EEC). None of the recorded plant species within the Barnhill lands are listed in the Flora Protection Order (1999) and The Irish Red Data Book.

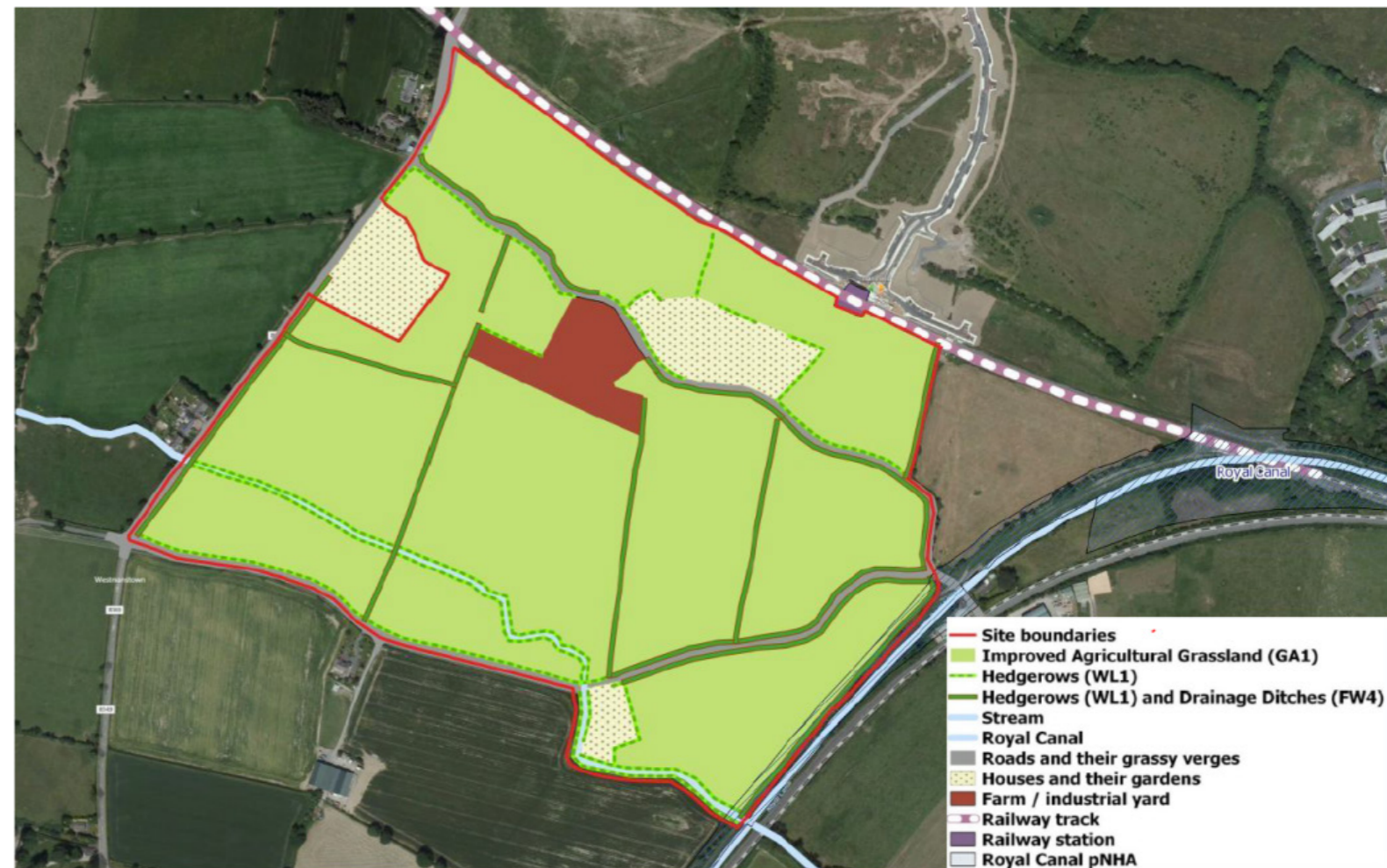


Fig.2: Flora Map



2.3.2 Fauna

Much of the lands at Barnhill are intensively managed grassland and there is widespread evidence of rabbits and rodent activity and evidence of fox throughout the site. The bird fauna primarily comprises the most common and widespread species with little shelter throughout the lands with the exception of some bramble along the stream and treelines close to the Royal Canal. Much of the bird activity and diversity is associated with denser hedgerow and mature trees. The most notable protected mammal species is otter (Annex II of the Habitats Directive) which avails of the stream that runs into the River Liffey having passed under the Royal Canal. The other protected mammal species in evidence within the lands is the badger (*Meles meles* - protected under the Wildlife Act). This species commutes and feeds within the north-eastern corner of the site and enters the lands close to the Royal Canal. An American mink spraint was noted on the culvert passing under the railway line at the Hansfield station in December 2016 and Hedgehog activity has been noted in nearby lands. Surveying within and around the site in May 2017 indicates that three species of bat are present and all three may be roosting here. Of these, common pipistrelles are the most common and widespread species. Leisler's bats are present throughout the area and feed both over the Barnhill lands and over the Royal Canal. Soprano pipistrelle activity is less abundant but occurs within the Barnhill lands and along the Royal Canal. Overall, the most important habitats within the site are hedgerows (including mature trees) and the stream.

The LAP lands are characterised by mature vegetation along field boundaries with hedging and isolated trees prevailing. The open nature of the lands together with the views to the south help create a rich landscape visually. The LAP includes objectives to protect existing trees/hedgerows and to provide for appropriate strategic planting to ensure that the impact of new development in the landscape will be minimised as far as possible.

Ecological Objectives for the Development of the Barnhill Lands

- Protection of the Royal Canal
- Protection of the hedgerow along the Royal Canal boundary with replanting of native species where minor disruption is appropriate to facilitate development.
- Protection of the stream passing through the lands.
- Provision of protection for otters along the stream.
- Protection of bats and bat fauna by appropriate surveys and maintenance of flora, including appropriate planting/replacement where required.

Objectives in the LAP recognising the ecological considerations and findings of the study will allow avoidance of long-term interference with the most important ecological features of the site. This can be achieved by keeping construction away from the Royal Canal and the hedgerow along its towpaths. Houses, roads etc. should not encroach upon this area. Equally, keeping a distance from the watercourse through the lands will avoid interrupting otter movements to and from the Royal Canal and will provide for other species of flora and fauna.

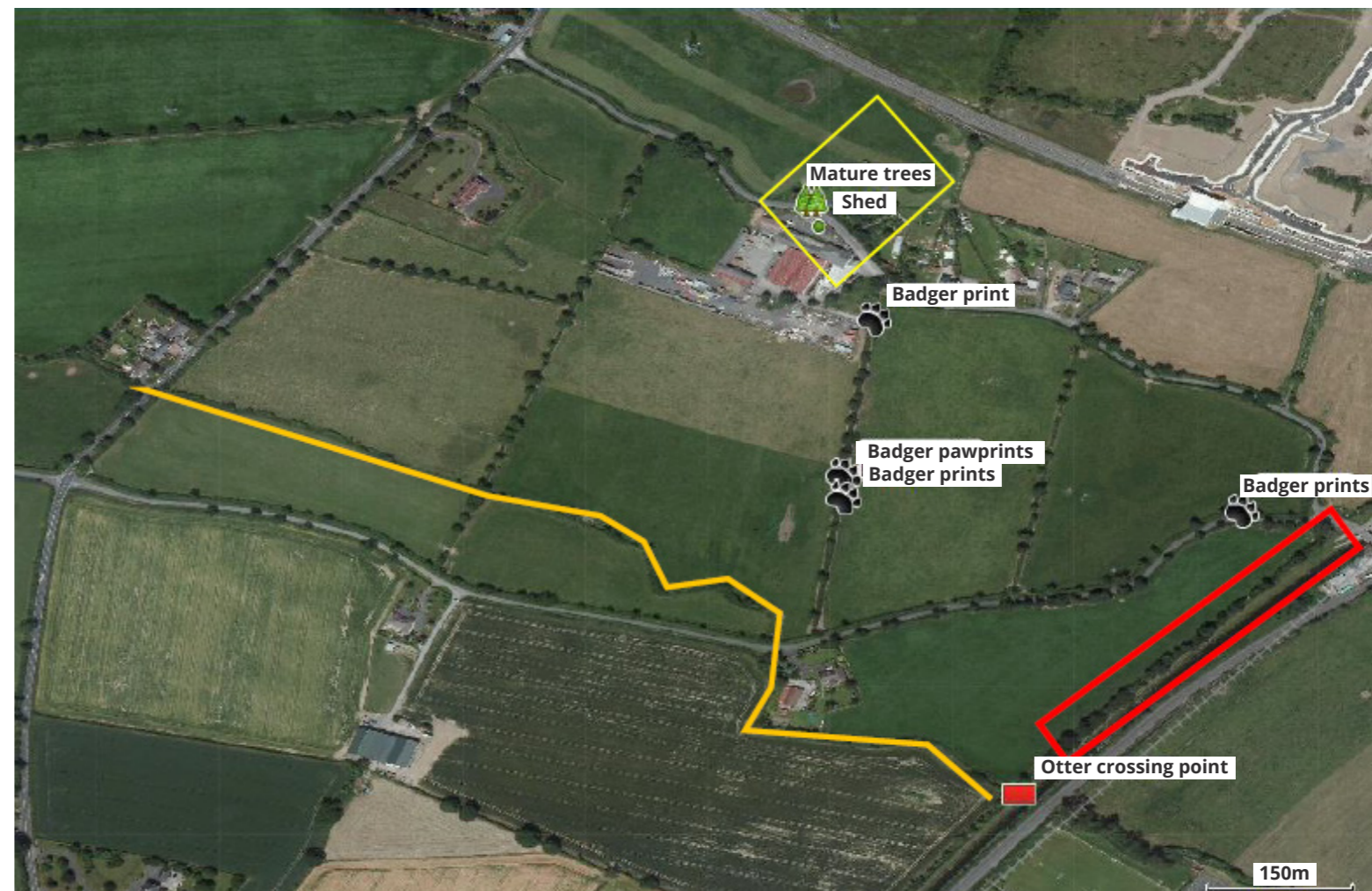


Fig.3: Fauna Map

2 Existing Environment And Context Appraisal

2.4 Educational Requirements

There are a number of existing schools within the area. The closest primary school, Hansfield Educate Together National School is located 350m to the north, while St Benedict's National School and Castaheany Educate Together National Schools are located circa 600m to the north across the Ongar Road. The closest secondary school, Hansfield Educate Together Secondary School is located 200m to the north. Notwithstanding the level of educational facilities already existing in the area any new development at Barnhill will require a reservation for additional primary school facilities. Using the projected number of households and applying the formula used to calculate educational infrastructure requirements used by the Department of Education and Skills one new 16 classroom primary school would be required with the probability that the existing second level schools in the locality could accommodate the anticipated increase in second level pupils.

2.5 Community facilities

There is a sports centre and golf course located to the south east of the LAP lands at Westmanstown. Ongar Community Centre is located on the St Benedict's School campus. There is a new community centre under construction at Luttrellstown Community College south of Clonsilla to the east of the LAP. A number of public parks are located in relative proximity to the lands, St Catherine's Park, Beechpark and Porterstown Park.

2.6 Retail

Although the LAP lands are located 12km from the nearest Level 1 retail centre of Dublin City Centre, they are located within 5km of Blanchardstown Town Centre which is one of eight designated Level 2 retail centres offering high order comparison retail within the Greater Dublin Area and the closest to the lands in question. There are no proximate Level 3 centres. The next level in the retail hierarchy sequence is Level 4 centres (neighbourhood centres) the closest of which will be Hansfield Village Centre when built out, which will provide for local retail and services. Ongar Village is located further to the north.

2.7 Existing Buildings

There are nine residential houses and one no. industrial land

use building complex located within the boundaries of the LAP. The majority of the houses are located in a central position on the lands close to the existing Hansfield train station on Barberstown Lane North. There is a mixture of single storey and two storey housing types some with large extensions. One house, a large dormer style dwelling is located on the Lucan-Clonee road and a large dormer bungalow is located on the southern side of Barberstown Lane South. An old piggery now used for differing industrial uses is located in the townland of Barnhill across Barberstown Lane North and to the west of the existing group of houses.

2.8 Road Network

Road access within the area has been constrained somewhat by the current access arrangements to the lands, with a level crossing of the Kildare-Dublin rail line located to the east off a right angled road junction on the Lucan to Clonsilla road. Access from the north is constrained by the Dunboyne-Clonsilla train line with the existing bridge on the R149 being narrow and without the benefit of footpaths. The two existing roads into the area from the west are narrow country lanes, both roads are narrow winding third class rural roads with poor alignments and no footpaths. The LAP provides for the necessary road improvements in tandem with future development which will improve the accessibility of Barnhill to adjoining areas and Hansfield/Ongar in particular. The LAP has provided for the proposed Ongar-Barnhill access road, approved by the Council as Local Authority own development under Part 8 of the Planning and Development Regulations (as amended) in 2007. The approved road traverses the western part of the lands crossing the railway line in a north-south direction, with a spur at its southern end into the Plan lands broadly along the alignment of the existing rural road, Barberstown Road South.

2.9 Pedestrian and cycle links

There is an opportunity as part of this LAP to provide for pedestrian and cycle routes within the area, along the new Ongar-Barnhill access road and along the proposed upgraded roads with access to the Greater Blanchardstown Pedestrian and Cycle Network.

2.10 Strengths, Weaknesses, Opportunities and Threats (SWOT Analysis)

In order to develop Barnhill as a vibrant and sustainable place to live, work and to visit, it is essential to recognise the various internal and external factors that are favourable and unfavourable to the successful future development of Barnhill as a place that people can be proud of; an area with successful residential communities with a beautiful and accessible natural environment on the doorstep, namely the Royal Canal and open countryside.

It is an objective of the LAP that Barnhill's key attributes are strengthened and developed to ensure that the positive features associated with the area are maintained for the enjoyment of future generations. Connectivity, accessibility, community facilities, infrastructure and a high quality of urban design and architecture are critical to the successful development and integration of new residential communities. New local business and employment opportunities should be encouraged and developed, where possible, and improvements to existing recreational and tourist facilities such as the Royal Canal should be welcomed as a way of bringing life and vitality to the area.

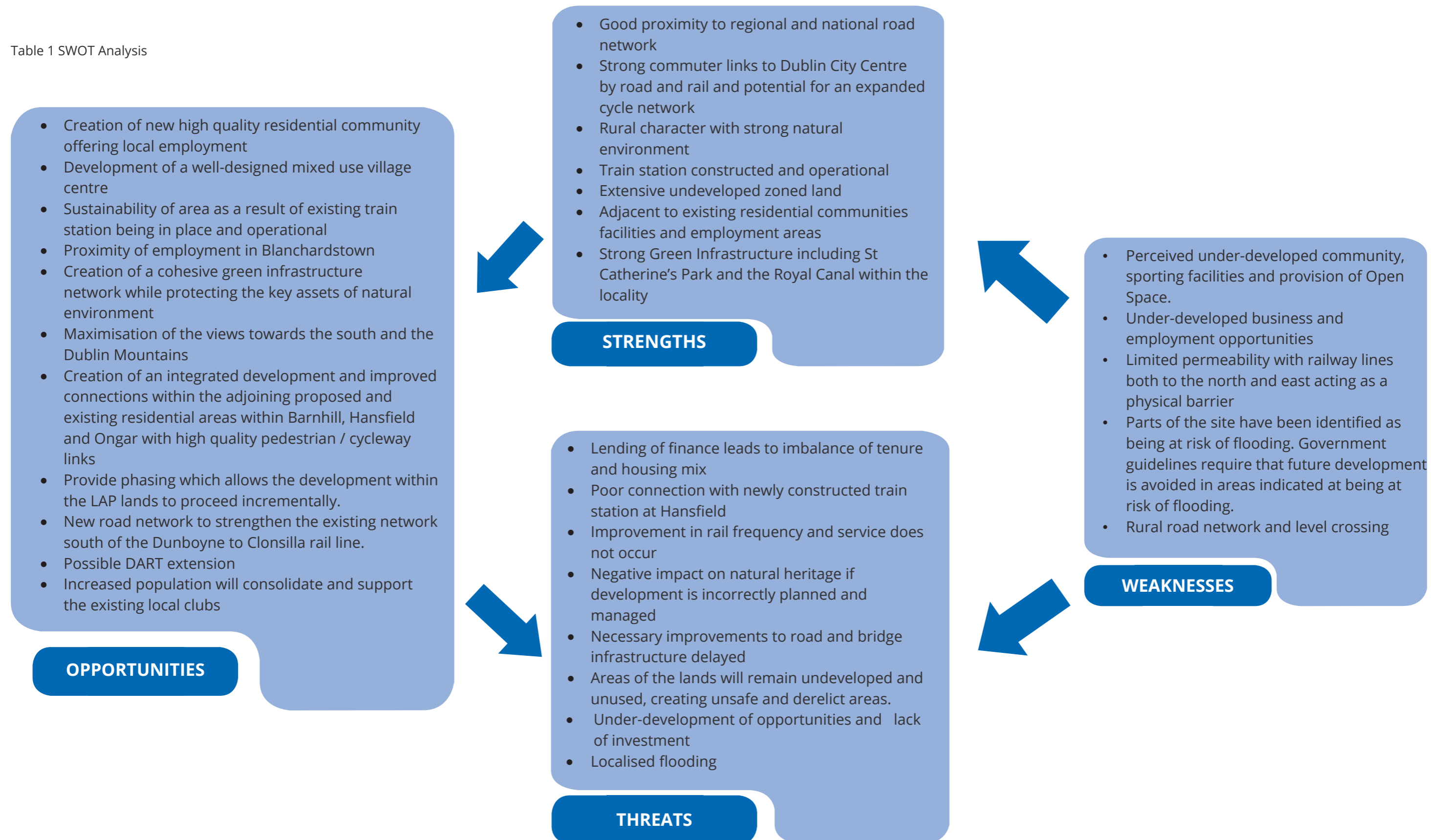
Drawing together the findings of the analysis of existing conditions and taking into account the strategic location of Barnhill within the County and the Region, a SWOT analysis has been prepared to help guide a vision for the Barnhill LAP.



Level Crossing located to the East.



Table 1 SWOT Analysis



3 Planning Context

SECTION 3 PLANNING CONTEXT

3.0 Planning Context and Legislative Framework

The LAP is informed by a hierarchy of European, National, Regional and Local planning policy documents and guidance. The Plan's overall aims and objectives, including maximising the efficient use of land, the integration of land use and transportation and the protection of the natural environment, were conceived from consideration of these documents. All relevant Irish and European planning and environmental legislation inform the LAP, in particular the Planning and Development Act 2000 (as amended), the Planning and Development Regulations 2001 (as amended); EU Directives, including the Birds Directive (2009/147/EEC), Habitats Directive (92/43/EEC), Floods Directive(2007/60/EC) and all associated regulations. In preparing the Local Area Plan due regard has been given to the national, regional and local documents outlined below. While the National Planning Framework has been adopted, the LAP will be published prior to the publication of the Eastern & Midlands Regional Assembly's Regional Spatial and Economic Strategy and any associated Metropolitan Area Strategic Plan. As such, it will accord with the current Regional Planning Guidelines and the National Planning Framework (NPF).

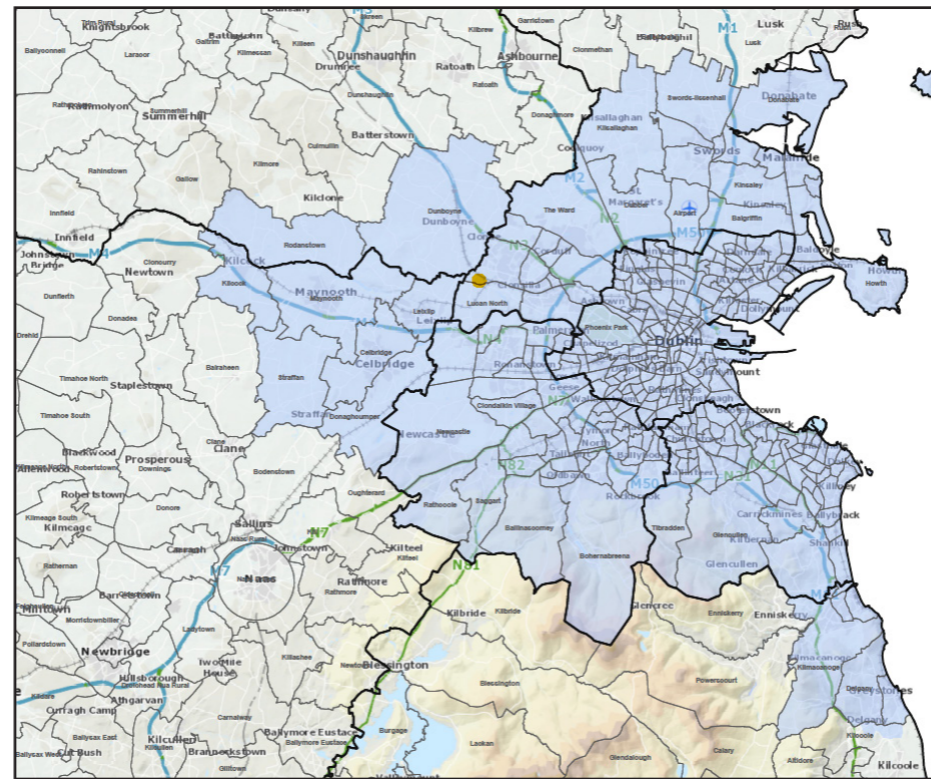


Fig.4: NPF Map (Barnhill site identified in yellow)

3.1 National Context, Guidelines and Other Relevant Documents

The following list is not exhaustive but includes key documents:

- National Planning Framework: Ireland 2040 Plan
The Department of Housing, Planning, Community and Local Government led the preparation of the National Planning Framework, or 'NPF', on behalf of the Irish Government. The Ireland 2040 Plan is a high-level document that provides the framework for future development and investment in Ireland. It is the overall Plan from which other, more detailed plans such as this LAP will take their lead.
- National Development Plan 2018 -2027. This sets out a strategic framework for public capital investment to support the delivery of the NPF over the next 10 years.
- Delivering Homes, Sustaining Communities, 2007
- Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas, and accompanying document Urban Design Manual – A Best Practice Guide, 2009
- Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities, 2018
- Urban Development and Building Heights - Guidelines for Planning Authorities (December 2018 DHPLG)
- Guidelines for Planning Authorities, Retail Planning 2012
- Assessment of the Effects of Certain Plans and Programmes on the Environment – Guidelines for Planning Authorities, 2004
- Appropriate Assessment of Plans and Projects in Ireland –Guidance for Planning Authorities Dec 2009
- The Provision of Schools and the Planning System - code of practice for Planning Authorities July 2008 (DEHLG/DES)
- Technical Guidance Document – TGD 025 Identification and Suitability Assessment of Sites for Primary Schools (2nd Edition January 2012)
- Technical Guidance Document – TGD 027 Identification and Suitability Assessment of Sites for Post Primary Schools (1st Edition January 2012)
- Childcare Facilities – Guidelines for Planning Authorities, 2001
- Government Policy on Architecture 2009-2015



- Design Manual for Urban Roads and Streets (DECLG/DTTS 2013)
- Smarter Travel, A Sustainable Transport Future, A New Transport Policy for Ireland 2009-2020.
- National Cycle Policy Framework 2009-2020
- National Climate Change Strategy 2007-2012 and follow on document *National Climate Change Adaptation Framework Building Resilience to Climate Change 2012*
- The Planning System and Flood Risk Management, Guidelines for Planning Authorities, November 2009
- National Mitigation Plan July 2017
- National Biodiversity Action Plan 2017-2021
- Green City Guidelines, 2008
- River Basin Management Plan for Ireland 2018-2021
- National Disability Authority's Building for Everyone Booklet 9 – Planning
- Spatial Planning and National Roads 2012
- Water Services, Guidelines for Planning Authorities, DHPLG, 2018
- ProPG: Planning & Noise Professional Practice Guidance on Planning & Noise New Residential Development May 2017

3.2 Regional Context

- Regional Spatial Economic Strategy (Working Draft) 2018. The RSES identifies the Eastern and Midland region's key strategic assets, opportunities and challenges and sets out policy responses to ensure that people's needs – such as access to housing, jobs, ease of travel and overall well-being – are met, up to 2030 and beyond. The Barnhill LAP is located within the Metropolitan Area Strategic Plan for Dublin.
- Regional Planning Guidelines for the Greater Dublin Area 2010-2022. Barnhill is located within the development boundary of Blanchardstown; Blanchardstown is identified within the Metropolitan Area second tier (Metropolitan Consolidation Towns) of the Greater Dublin Area Settlement Hierarchy relating to the Regional Planning Guidelines. This town is to be developed at a relatively large scale, as part of the consolidation of the Metropolitan Area, and, to ensure that it supports key public transport corridors

connecting it to the City and to the other Metropolitan Consolidation Towns such as Swords. The development of larger areas of residential or mixed use lands will only take place subject to the necessary infrastructure being available and to this end will be subject to a Local Area Plan. One such area is Barnhill. The LAP must be consistent with the Core Strategy and with the policies and objectives of the Fingal Development Plan. The Barnhill LAP will establish an overall strategy for the proper planning and sustainable development of the area. This approach will result in a greater co-ordination and more focused delivery of services for the benefit of the whole community.

In 2014 the Regional Authorities were amalgamated and 3 new Regional Assemblies formed. Fingal is part of the Eastern and Midland Regional Assembly. The new RSES are due to be published in 2019 and will reflect the objectives and policies of the National Planning Framework. Pending the preparation of same, it remains appropriate for the current RPGs to be the guiding regional strategy for the Barnhill LAP.

- Retail Strategy for the Greater Dublin Area, 2008-2016. The Retail Strategy will be reviewed as part of the RSES.
- Planning and Development of Large-Scale, Rail Focused Residential Areas in Dublin – Final Report May 2013
- Greater Dublin Strategic Drainage Study (GDSDS)
- Greater Dublin Area Transport Strategy 2016-2035
- Busconnects, Core Bus Corridor Project (NTA)
- Eastern River Basin Management Plan 2009-2015
- Eastern-Midlands Regional Waste Management Plan 2015
- Flood Risk Management Plan (Eastern CFRAMS), River Basin Management Plan
- Dublin Agglomeration – Environmental Noise Action Plan 2013-2018

3.3 Local Context

- Fingal Development Plan 2017-2023
- Fingal Local Economic and Community Plan 2016-2020
- Fingal Biodiversity Action Plan
- Fingal Heritage Plan
- Fingal Tourism Strategy 2015-2018

3.4 Fingal Development Plan 2017-2023

3.4.1 Core Strategy

The Core Strategy sets out how the Settlement Strategy including the County's population allocation, the Housing Strategy and the Retail Strategy objectives within the Development Plan are consistent with the development objectives of the *National Spatial Strategy 2002-2020 (NSS)*, the *Regional Planning Guidelines (RPG)* and the *NTA Transport Strategy*. Since the adoption of the Development Plan, the NPF has been published and associated RSES are forthcoming. It is considered that the location of the LAP lands for development will remain consistent with policy in the new national and regional plans and with the *Implementation Roadmap for the National Planning Framework*, published by the DCHLG in July 2018. The LAP lands are part of the strategic landbank within the Greater Dublin Area and included within the Multi Unit Development Scheme monitoring alongside Hansfield SDZ. They are located alongside the Hansfield railway station and were included in the National Transport Authority's study on rail focused residential development. The Core Strategy provides a policy framework for the County at a local level and includes details which set out the settlement hierarchy, population/housing targets for all towns, villages and the open countryside and existing and proposed strategic transport linkages. It also provides a policy framework for LAPs. Fingal's Core Strategy is detailed in Chapter 2 of the Fingal Development Plan 2017-2023 and the Barnhill lands are included as part of the wider Blanchardstown targets.

3.4.2 Population and Demographics

Blanchardstown is designated as a Metropolitan Consolidation Town in both the Regional Planning Guidelines for the Greater Dublin Area 2010-2022 (RPG's) and the Fingal Development Plan 2017-2023. The LAP lands are within the Dublin MASP in the draft RSES. Blanchardstown is the largest commercial and residential centre within the Metropolitan Area of Fingal, and will continue to be promoted as a key urban settlement within the County providing retail, social, cultural, leisure



3 Planning Context

and administrative services catering for a population of circa 100,000 inhabitants. The Development Strategy for Blanchardstown in the 2017-2023 Fingal Development Plan is to promote the planned and sustainable development of Blanchardstown, positioning it as an important residential, service, employment, retail and leisure centre. The LAP will assist in delivering the strategic long term growth of Blanchardstown. The Development Plan states *'The emphasis of this Plan is to continue to consolidate the existing zoned lands and to maximise the efficient use of existing and proposed infrastructure'*. In addition *'The development of larger areas of residential or mixed use lands will only take place subject to the necessary infrastructure being available and to this end will be subject to a Local Area Plan'*. Barnhill, an 'RA' designated land bank since 2005, located on the southern side of the Dunboyne to Clonsilla rail line and on the western side of the Dublin-Maynooth rail line has the potential to provide for an additional population of circa 3,500 persons. Such an increase in population will inevitably put pressure on existing resources, such as wastewater treatment, road infrastructure, water supply and waste disposal.

The population of Fingal grew by 8.1% in the intercensal period 2011 to 2016, in excess of twice the growth rate of the State at 3.7%. Fingal continues to have the youngest population with an average age of 32.9 years, this compares to the State average of 36.1 years. The average number of persons per private household in Fingal is 2.9, higher than the national average of 2.75. (2016 figures). While the national average is decreasing, the average occupancy rate in Fingal has remained relatively constant since 2006. This reflects the number of young families in Fingal. Fingal has a vacancy rate of 5.5%, less than half that of the State average (12.8%) and a decrease since 2011 (2016 CSO). All of these factors have implications in relation to the provision of housing and related facilities in order to cater for the population increase.

The greater Blanchardstown area has experienced significant physical and social changes in recent years. The lands of Barnhill are located within two Electoral Districts – Lucan North and Blanchardstown-Blakestown. There are nine existing houses within the LAP lands, seven of which are in the townland of Barberstown, so, the indigenous population is quite low. However, in the period between the 2011 Census and 2016 Census, the population of the Electoral Districts in which the lands are located increased from 36,057 to 38,924 persons (2,867 persons), an 8% increase in Blanchardstown-Blakestown and from 1,358 to 1,479 (121 persons), an 8.9% increase in Lucan North. This LAP will ensure that facilities and services are planned in tandem with the future population increase on the lands, and in tandem with the necessary physical infrastructure in terms of roads and water/waste water services.

Blanchardstown, as noted, is identified within the second tier (Metropolitan Consolidation Towns) of the Greater Dublin Area Settlement Hierarchy in terms of its place within the Regional Planning Guidelines. This town is to be developed at a relatively large scale to accommodate c. 100,000 persons, as part of the consolidation of the Metropolitan Area and in line with the implementation roadmap for the NPF, July 2018. The total residential population envisaged for the Barnhill LAP is approximately 3,500, based on delivery of 900-1150 units, which is consistent with the Core Strategy of Fingal Development Plan 2017-2023, where the residential capacity for Blanchardstown including Barnhill is given as 11,757 residential units.

The proposed LAP is consistent with Fingal's Core Strategy:

- The LAP identifies the quantum, location and phasing of development for the plan period, which correlates with the regional population targets already established.
- The LAP demonstrates how the future development of the LAP lands will support public transport and existing services in Barnhill.

- The LAP identifies the challenges and addresses the needs and priorities for the local Barnhill area through the policies and objectives outlined in the LAP.

3.4.3 Local Area Plan Zonings

The LAP lands are zoned Objective 'RA', which seeks to *'Provide for new residential communities in accordance with approved local area plans and subject to the provision of the necessary social and physical infrastructure'* in the Fingal Development Plan 2011-2017. The vision for this zoning objective is to *'Ensure the provision of high quality new residential environments with good layout and design, with adequate public transport and cycle links and within walking distance of community facilities. Provide an appropriate mix of house sizes, types and tenures in order to meet household needs and to promote balanced communities.'*

An area of land lies to the north-east and is zoned Objective 'OS', which seeks to *'Preserve and provide for open space and recreational amenities.'* The vision for this zoning objective is to *'Provide recreational and amenity resources for urban and rural populations subject to strict development controls. Only community facilities and other recreational uses will be considered and encouraged by the Planning Authority.'* This OS land is not within the LAP as it is committed Class 1 public open space associated with planning permissions to the north in Castaheany. However, the LAP will facilitate linkages to the lands to ensure access to this amenity space.

3.4.4 Fingal Development Plan 2017-2023 Local Objectives

The Plan contains 17 no. Objectives for Blanchardstown none of which relate specifically to the Barnhill area, however the written text makes specific reference to Barnhill.



3.4.5 Barnhill Local Area Plan (Contained within the Development Plan written text)

- Construction of houses on these lands will be dependent on the delivery of the proposed new road and bridge over the railway.
- Ensure the provision of pedestrian access between Barberstown/Barnhill and the Hansfield SDZ by means of a new pedestrian bridge integrated with adjoining development including the proposed Hansfield rail station.
- Adoption of the Local Area Plan shall be dependent on the rail station at Hansfield being open, accessible and serviced by train.

3.4.6 Development Plan Specific Objective

3.4.6.1 Symbols

There is an indicative road proposal traversing the land in a north-south direction linking the Ongar Road with the Lucan-Clonee Road (R149).

Local Objective 125 - *Ensure the provision of pedestrian access between Barberstown/Barnhill and the Hansfield SDZ by means of a new pedestrian bridge integrated with adjoining development including the Hansfield rail station.*

3.4.6.2 Archaeology/Architectural Heritage

There are no recorded archaeological monuments in the Record of Monuments and Places located on the lands; however there are a number of Protected Structures situated close to the lands.

711 – Pakenham Bridge – Late 18th Century single-arched stone road bridge over the Royal Canal east of the lands.

712 – Barnhill Bridge – Mid 19th Century stone road bridge with single arch over former Dublin –Little Pace Railway Line. This is located to the north-west of the lands and is on the R149 road

(Clonee to Lucan road)
 944a - Royal Canal Late 18th Century man-made canal, including the tow paths, the canal channel with its stone and earth banks, and the canal locks (10th, 11th and 12th Lock). The Royal Canal runs along part of the eastern boundary of the lands and links the River Shannon to the River Liffey.

3.4.7 Landscape Character

The lands are located adjacent to the Royal Canal and close to the River Liffey, within Landscape Character Type ‘River Valleys/Canal’. This Character Type is categorised as having a high value due to the visual and recreation qualities contained therein. A number of institutional and private demesnes e.g. Luttrellstown Demesne, along the Liffey valley maintain a rural and wooded character to the area. The Royal Canal corridor bordering to the east of the LAP lands is included in this character area and provides valuable habitat for fish and other species. As well as being a Protected Structure the Royal Canal is a proposed NHA (pNHA).

RSES1 *Following the publication of the Eastern and Midlands Regional Spatial Economic Strategy (RSES) and subsequent Fingal County Development Plan review, a review as necessary is to be undertaken of the Barnhill LAP to ensure compliance with these documents.*



Pakenham Bridge

4 Development Strategy

SECTION 4 DEVELOPMENT STRATEGY

4.0 Vision, Themes and Objectives

The Vision for Barnhill is to create a place to live that is appealing, distinctive and sustainable, maximising the opportunities provided by the surrounding natural environment for biodiversity and improved amenities. It is envisaged that Barnhill will develop as a sustainable community comprised of new homes, community, leisure and educational facilities based around an identifiable and accessible new local centre which will form the heart of the area. The area will benefit from a strong urban identity anchored by mixed-use supporting hubs, integrated amenities and benefitting from both good permeability and quality public transport options. The area will provide a variety of dwelling types, tenure and size to accommodate different household sizes, differing needs and different levels of income in accordance with the Council's Housing Strategy. The area will be characterised by a vibrant social mix and be well integrated with the wider Blanchardstown Area via improved infrastructure. This will be a fledgling neighbourhood with a varied social mix and will embody the principles of sustainability, sustainable communities and inclusiveness. Future development in the area will be guided by the policies and objectives set out in this LAP, as well as by the policies and objectives of the Fingal Development Plan.

At the heart of the vision is a commitment to high quality design that can create a real sense of place to create a compact, cohesive neighbourhood with a strong identity and distinctive character. High quality and inclusive design will also ensure that the development is attractive, usable, durable and adaptable. It will have its own identity, with a neighbourhood core and open spaces that link the area together. The development will be a new area distinct from but wholly integrated into the fabric of the surrounding area through the use of strong connections between the new neighbourhood and the established areas of Hansfield, Ongar and beyond.

4.1 Development Objectives

This Local Area Plan and overall Vision for Barnhill is underpinned by five interlinked thematic objectives which are the overarching cross cutting themes contained within the Fingal Development Plan 2017-2023.

- Sustainable Development
- Climate Change Adaptation and Mitigation
- Social inclusion
- High quality design
- Resilience

They form the basis for the policies and objectives in this document, and they should guide the preparation and determination of planning applications. This section sets out the key elements that are required to deliver the coordinated development of the Plan lands.

SD1 Require all planning applications to demonstrate how they incorporate the 5 cross cutting themes of the Local Area Plan.

4.1.1 Sustainable Development

The creation of sustainable communities requires places where people want to live with the right balance and mix of uses, an attractive package of amenities and services, networks of attractive green spaces and good quality public transport that help to contribute to healthy living and well-being. It is also about ensuring the development of places that are well designed, safe and secure, with tolerance, respect and a sense of community identity and belonging. The LAP through its many aims and objectives incorporates the following sustainable principles;

- Optimal use of land through the development at an appropriate density, in particular having regard to proximity of the lands to Hansfield train station.
- Maximising opportunities for open space, green connected networks and protection of the natural environment as defining characteristics of the developing area.



- Development of a movement and transport strategy which minimises trip generation and promotes cycling, walking, public transport, and sustainable modes of transport through the area.
- Sustainable approaches to housing developments through design, layout, specifications and a mix of house type including a shift to energy efficient, low environmental impact buildings. Good design is the key to achieving the optimum energy performance of buildings at no extra cost.
- Ensure that all development in the LAP lands will contribute positively towards a reduction in energy consumption and the associated carbon footprint.
- Promotion of high standards of energy efficiency in housing and commercial developments and use of alternative energy techniques.
- Creation of sustainable communities through integration of the new community with the established community in Hansfield to provide people with the services/facilities they need close to their homes to encourage lifetime residency and vibrant communities and places.
- Promotion of the area's recreational resources in a sustainable and environmentally sensitive manner.
- Ensuring the timely delivery of social, community and physical infrastructure and amenities in tandem with the phased development and residential growth of the area.
- Economic Delivery of Local Area Plan

Barnhill has a recognised strategic and advantageous location within the western environs of the city. It is proximate to major employment clusters at Damastown and Ballycoolin, two of the employment sectors identified within the Dublin Enterprise Zone. It is also located close to Coolmine Industrial Estate, Blanchardstown Institute

of Technology, Connolly Hospital and the large retail employment area centred around the Blanchardstown Town Centre. The site has a high level of connectivity to the City Centre by its location close to Hansfield rail station and bus connections. It is located within easy access of the N3 with direct links to the M50, the national road network and Dublin Airport.

The Development Plan envisages that the future development and growth of Fingal will take place in accordance with an overarching hierarchy of settlement centres. Each identified settlement centre will accommodate an agreed quantum of future development appropriate to its respective position in the hierarchy. Blanchardstown is identified as a Level 2 'Major Town Centre' in the Retail Strategy for the Greater Dublin Area. Barnhill is located within the development boundary of Blanchardstown. The Plan allows for the facilitation in the provision of sufficient employment, retail, community and cultural facilities to serve the growing residential community of Blanchardstown thereby adding to the economy of the County.

SD2 Establish sustainable communities, which embody the principles of sustainable development and meet current and future social, economic and environmental needs in a balanced and integrated way.

SD3 New buildings shall be sustainable in their siting, orientation, design and construction. Passive solar design techniques, high energy efficiency, low impact construction methods and the use of local building materials shall be encouraged to ensure that new developments minimise their environmental impacts and long term costs.

SD4 Promote and facilitate the development of renewable sources of energy within the plan area and encourage the integration of micro-renewable energy sources into the design and construction of new developments, as appropriate.

SD5 All proposals for new non-residential developments with a floor area of 1,000m² or more and residential developments comprised of 10 or more units will be required to submit an Energy Statement outlining the methods proposed to minimize energy use in the development, such as building orientation and passive solar design, materials and insulation, renewable/alternative energy sources, etc.

SD6 Require the provision of energy efficient street lighting in all developments.

4.1.2 Climate Change Adaptation

Climate change is an over-riding challenge facing us locally arising from the global challenge of climate change. There are various predictions for the effects of climate change in the future, with moderate predictions indicating an increase in rainfall intensity, an increase in base river flow and a sea-level rise of 500mm by the year 2100.

This LAP promotes energy efficiency in building design, and use of renewable energy sources, public transport usage, walking and cycling, efficient waste management and recycling, surface water management and protection and integration of natural features including trees, hedgerows and existing flood plains to mitigate the effects of climate change.

Energy Conservation and Renewable Energy Technologies
The Government's white paper on energy 'Delivering a Sustainable Energy Future for Ireland - The Energy Policy Framework 2007-2020' sets out the Government's strategic approach to delivering a sustainable energy future for Ireland. At present, approximately 90% of Irish energy requirements are imported. By 2020, the Government aims to meet 20% of energy requirements from renewable sources. There are two binding EU targets for renewable energy by 2020

- 16% of final energy use (all sectors) must be sourced from renewables
- 10% of energy use in the transport sector must be renewable



4 Development Strategy

To achieve the overall 16% target, national sub-targets have also been set for heat (12%) and electricity (40%). The pathways to achieving these targets are set out in the *National Renewable Energy Action Plan (NREAP)*.

New development and larger scale development areas such as the LAP lands at Barnhill provide significant opportunities to develop “decentralised energy systems” such as Combined Heat and Power (CHP). Decentralised energy systems can be more efficient than ‘centralised’ or national power generation and distribution systems as they reduce energy lost through the transmission process. They also utilise energy in the form of heat that is ordinarily discharged into the atmosphere, rivers or sea during the normal energy generation process. The term ‘decentralised’ refers to site-wide systems and smaller scale systems for groups or individual dwellings. There are a number of different types of decentralised energy systems which might be appropriate for use within the Plan lands. In addition to the development of CHP / Community Heating, it is likely that the greatest potential for renewable energy in new development in Barnhill is through solar collection (photovoltaic and solar thermal), ground source heat pumps and biomass.

- SD7 *Ensure that commercial buildings, community facilities, housing and infrastructure employ best practice in all aspects of environmental sustainability.*
- SD8 *Support and facilitate European and national objectives for climate adaptation and mitigation as detailed in the National Climate Change Adaptation Framework 2012 and the National Mitigation Plan and their successors.*
- SD9 *Promote the integration of green infrastructure/networks and other physical features on land into new development proposals in order to mitigate and adapt to climate change*
- SD10 *Ensure that development accords with the policies and requirements set out in the Flood Risk Guidelines*

4.1.3 Social Inclusion

Social inclusion is the process where a series of positive actions are taken to achieve equality of access to goods and services, to assist all individuals to participate in their community and society, to encourage the contribution of all persons to social and cultural life and to be aware of, and to challenge, all forms of discrimination. This Local Area Plan has a role in facilitating such initiatives through promoting good placemaking, for example ensuring new developments are designed with good connectivity and permeability for all, ensuring a strong balanced community with the creation of well-designed sustainable adaptable homes and neighbourhoods, which cater for a range of households and house types.

In terms of housing, the lands in Barnhill are located within the Dublin Metropolitan Area and are viewed as functionally part of the Metropolitan Area Strategic Plan within the draft RSES. They are currently part of the major urban area in the Regional Planning Guidelines for the Greater Dublin Area. This is reflected in the Fingal Development Plan and the Core Strategy set out therein. Barnhill and the wider developing area of Hansfield presents a significant opportunity to contribute towards the economic and population vision set out for Dublin within the relevant Regional Plan.

The LAP area has the potential to provide between c. 950 and 1150 residential units on the lands in total, with significant potential to develop a real community and place of distinction. Higher density development in certain areas of the site should ensure that the minimum figures are surpassed and increase the efficiencies of integrated land use and transport. This means paying particular attention to pedestrian, cycle and public transport; to high quality sustainable building design, open space, and integrated community facilities and infrastructure (including health, educational and leisure facilities). Given that the Local Area Plan lands abut the Royal Canal, with access to a mass public means of transport, the area offers a unique location for sustainable transport.

It is envisaged the LAP lands will facilitate a population of circa. 3,500 persons. The potential population, however, and density of development in this area will need to be optimised given

the proximity of the lands to Hansfield Railway Station. There is some potential for retail/commercial land uses to thrive possibly more than the anticipated level of population would suggest. The development strategy will allow for the area to facilitate limited commercial/café use along the planned Royal Canal Greenway.



The provision of new homes at Barnhill will aim for diversity rather than uniformity with proposals for an inclusive mix and range of housing types (including family and young persons’ accommodation, as well as provision for senior housing, incorporating where possible extra care facilities). The LAP lands are suitable for a mix between low, medium to high density development in line with the location close to public transport.

This will provide the potential for movement within the community by providing for a mix of house type as may be required throughout the life cycle. The population will be supported by a range of community services, educational facilities, retail facilities, open space and physical infrastructure, which will be developed in tandem with residential growth.

- SI1 *Deliver between circa 950-1150 new dwellings and associated amenity and educational facilities on the LAP lands, to help meet existing and future housing needs and to create a sustainable and socially inclusive mixed-use community.*
- SI2 *Ensure that new homes provide a mix of type, size and tenure including social housing, medium to high-density layout appropriate to the location of the site.*



4.1.4 High Quality Design

Good design with an emphasis on place-making has measurable value and benefits. Places that are safe, attractive, comfortable, distinctive, stimulating and varied attract people and investment into an area. Mixed-use developments have the potential to reduce opportunities for crime and vandalism and meet a variety of demands from the widest possible range of users and social groups. Attractive and safe open spaces encourage leisure activities and contribute to healthy lifestyles. Developments that have a good quality network of streets and that have good physical connections with surrounding areas encourage walking, cycling and improved access to public transport. Place-making is therefore central to the vision for Barnhill. The LAP proposes the application of innovative design and creative approaches that will create a clear urban structure with a public realm shaped by good quality streets and spaces. Development will prioritise open ended and safe routes for pedestrians, cyclists and public transport users while also incorporating natural features and green spaces.

Good quality design with an emphasis on quality space means that the places in which new communities live have met the best achievable standards. In particular: by making certain that development mitigates and adapts to climate change as outlined earlier in Section 4.2.2 and by complying with the 12 principles of urban design detailed in the *Urban Design Manual: A best practice guide (DoEHLG, Feb 2008)*

The establishment of a new local centre at Barnhill is a critical step in breathing life into the area. New neighbourhood facilities and services offer a focal point for the integration of residents in existing and new communities. Developing sustainable neighbourhoods where local people have easy access to shops and services is a key strand in the Fingal Development Plan. A new centre will provide a range of uses and a real focal point for living, shopping and access to local services and facilities. At the heart of the new centre will be a multi-purpose civic space, which will visually link the network of open spaces throughout the lands and may also be a key venue for community use and local events.

HQD1 *Achieve a high standard of design through development that creates a real sense of place by the juxtaposition and provision of buildings, streets, spaces, features and facilities, giving full consideration to layout and materials.*

HQD2 *Ensure that development is designed to a high qualitative standard and promotes the creation of good places. The Council will apply the guidance set out in the Urban Design Manual (2008), and will seek to ensure that developments are cognisant of the need for proper consideration of context, connectivity, inclusivity, variety, efficiency, distinctiveness, layout, public realm, adaptability, privacy and amenity, parking, and detailed design.*

HQD3 *Create a sustainable mixed-use centre for Barnhill which meets local needs by providing an appropriate range of retail, commercial, leisure and residential uses and establishes a distinctive sense of place and heart for the community.*

4.1.5 Resilience

Resilience is *the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.* (United Nations Office for Disaster Risk Reduction (UNISDR), 2009).

Challenges include encouraging a vibrant neighbourhood, the provision of a supportive living environment for people from all walks of life and all stages of their life cycle and ensuring new buildings are of a high quality design and adaptable for changing family demands. In addition the use of more sustainable modes of transport and due consideration of surface water and flood plains will aid in the provision of a resilient neighbourhood responsive to climate change and people’s on-going needs.



5 Water Services And Utilities

SECTION 5 WATER SERVICES AND UTILITIES

5.0 Water and Infrastructure Services

Infrastructure and utilities are an essential component of the sustainable development of Barnhill. Infrastructural services include water supply, wastewater and surface water removal and treatment as well as utilities including electricity supply, broadband, gas and telecommunications. All such infrastructure and utilities must be planned for so that they are available to support the quantum of development envisaged, in a manner that is environmentally appropriate, cost effective, efficient and protects public health.

This Section identifies the existing public water supply, drainage and other key infrastructure within the LAP area and sets out the requirements and investment needed in infrastructure to meet the objectives of the LAP. The implementation of the LAP will take place in a phased approach and it is envisaged that upgrading or expansion of elements of the public infrastructure both within and outside the LAP will be required as development progresses.

5.1 Water Supply & Water Conservation

As with all major developments in the Dublin region, the availability of a supply of water is a regional strategic issue which may be a constraining factor on future growth. Currently across the region, supply and demand for high quality drinking water is finely balanced. This will remain the case in the short to medium term pending the delivery of a number of projects to increase production, storage and delivery capacity. The lands will be serviced by a water supply emanating from the Leixlip Water Treatment Plant. Given the quantum of development of circa 1,100 residential units, public water supply should not be a limiting factor for development. Development will be limited to that which can be provided for, based on available water supply and connection agreements with Irish Water.

There are existing public mains on the R149 and the internal rural road running to the south of the Dublin-Dunboyne Railway Line. Proposals for all new hard and soft developments will need to demonstrate that the existing network and any associated way leaves are protected from impacts to prevent network damage. New watermain layouts must be in accordance with most recent version of Irish water's "Code of Practice for Water

infrastructure.", subject to meeting the requirements of this LAP and any conditions of planning permission for development within the LAP. In order to limit unnecessary water usage, leakage and excessive consumption, a Water Management and Conservation Plan will be required from the developer of the respective land parcels detailing how best practice in water conservation can be achieved to include both water mains and internal plumbing. New development should install suitable water conservation measures. The use of rainwater harvesting, particularly in any commercial developments on the lands, is to be encouraged.

WS1 Ensure that new developments are adequately serviced with a suitable, safe and secure quantity and quality of drinking water supply. Where deficiencies exist, development will be limited to that which can be provided for, based on available water supply.

WS2 Promote water conservation to reduce the overall level of water loss in the public supply by encouraging the adoption of water saving measures in future development. Such measures will increase the extent of development capable of being serviced by the existing water treatment plant. Such measures can include:

- *Water butts to collect rainwater*
- *Low flush and dual flush toilets*
- *Low water use appliances*
- *Rainwater harvesting*

WS3 Require that a Water Management and Conservation Plan, detailing how best practice in water conservation shall be applied to include both watermains and internal plumbing, be prepared for development on these lands in order to limit unnecessary water usage, leakage and excessive consumption.



5.2 Foul Water Drainage

The LAP lands are part of the 9C sewer catchment in Blanchardstown which ultimately discharges to the Regional Waste Water Treatment Plant at Ringsend via The Liffey Siphons. Ringsend Waste Water Treatment Plant, at present, is operating at its design capacity. Irish Water has current proposals to increase the capacity of the plant from 1.64 million PE (population equivalent) to 2.4 million PE by the use of Aerobic Granular Sludge (AGS) technology. The utility has recently invested €70 million in upgrading the Ringsend plant. In the longer term the Greater Dublin Drainage Project, aims to provide strategic drainage infrastructure required for the Greater Dublin Area (GDA). It is currently estimated that construction of a new regional wastewater treatment plant in the Fingal area and the orbital pipelines to serve the GDA will be completed by 2024. The Urban Wastewater Treatment Directive requires the collection and high level treatment of wastewater, specifically those to be discharged to sensitive waters such as Dublin Bay. The terms of the EPA discharge license (2010) granted to Dublin City Council and subsequently novated to Irish Water in respect of Ringsend Waste Water Treatment Plant reinforces this requirement.

The requirement that there is drainage capacity available in the network prior to granting a planning permission for any development will apply to all developments within the LAP. The natural drainage of the LAP lands is in a southerly direction towards the River Liffey, however the existing main drainage network is located to the north of the lands, there may therefore be a requirement for a pumping station to be located in the southern part of the lands. The 9C sewer currently has limited capacity and suffers greatly from the effects of infiltration due to storm water ingress and a rise in the water table during intense rainfall events. Duplication of the sewer is currently under way. The proposed project represents an investment of approximately €50 million by Irish Water and will involve the upgrade of the existing sewer network currently serving Blanchardstown and the surrounding catchment areas. This will increase the capacity of the existing sewer serving the area. The sewer is further constrained by the Liffey Siphons which are also at capacity. The Liffey Siphons Rehabilitation Project provides for the rehabilitation of the 3.4 km of twin 900mm diameter

foul sewers. The contract has been awarded to upgrade these by Irish Water with initial works already commenced.

Development will be dependent on the progress of the various improvement works and will be subject to the agreement of Irish Water. Interim solutions may be required to facilitate development in the short term. All development must be drained on separate systems, i.e. foul and surface water flows should be directed to separate pipes. This reduces the possibility of flooding of the foul pipelines during times of extreme rainfall events. Where connection of surface water to a combined network is unavoidable, surface water run-off must be attenuated and sustainable drainage systems utilised. The use of sustainable drainage systems produces multiple benefits in terms of enhanced bio-diversity, reduced peak flows, water quality improvements and improved ecology.

WW1 Ensure the separation of foul and surface water effluent through the provision of separate foul sewerage and surface water run-off networks.

WW2 All foul infrastructure shall be designed and constructed in consultation with Irish Water.

WW3 Support Irish Water in the provision and maintenance of adequate wastewater disposal and water supply in accordance with EU Directives, to service Barnhill as appropriate.

WW4 Permit new development only where it can be clearly demonstrated that there is adequate capacity in the wastewater disposal infrastructure in accordance with applicable requirements and standards, including urban wastewater treatment disposal standards.

WW5 Development shall connect to the public sewer and public water mains, subject to a connection agreement with Irish Water, in order to protect all waters in the plan area.

WW6 Prior to the commencement of any residential or commercial development, in the event that a pumping station is required to service the lands, its location shall be subject to an agreement both with Irish Water and the Planning Authority.

5.3 Surface Water Management

New development has the potential to exacerbate flood risk by increasing hardstanding areas and consequently increasing surface water runoff. It can also impact on water quality and on biodiversity. Given Fingal County Council's commitments under the Water Framework Directive to maintain or improve the quality of the water in the River Liffey and the international and national designations which apply to Dublin Bay, the criterion of Water Quality is a key factor in the design of the storm water system to serve the development.

It is an objective of the Council to incorporate sustainable urban drainage systems (SUDS) in all new developments throughout the county and to encourage where feasible the retrofit of sustainable drainage systems within existing developments. SUDS are a more environmentally effective approach to managing surface water on developed lands.

SUDS offer a comprehensive approach to the management of water on a site, to delay and reduce run-off through infiltration, transpiration, evapotranspiration and re-use, whilst also providing improvements to water quality, amenity and biodiversity. Shallow surface based systems to manage surface water are generally required in favour of underground infrastructure such as pipes and culverts. In tandem with this runoff control measures favoured include surface based systems including weirs rather than proprietary systems contained underground in manholes.

A Stormwater Management Plan (Appendix 4) for Barnhill, prepared by Garland Consulting Engineers on behalf of the Council, identifies various measures that may be employed throughout the development taking into account the existing surface water infrastructure in place across the site. These SUDS measures shall, where appropriate, be incorporated into the development in line with appropriate sustainable drainage



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practices and include for limiting runoff rates and providing site, source and regional controls, such as the following;

- Source controls – rainwater butts, rainwater harvesting, tree pits, permeable pavement, green roofs, blue roofs, infiltration trenches/soakaways, green walls, filter drains
- Site controls – bioretention areas, rain gardens, retention basins, detention basins, underground attenuation systems.
- Regional controls – Ponds, wetlands.

WM1 Implement SUDS measures in line with the recommendations of the Barnhill Stormwater Management Plan for the overall site. Individual site layouts shall demonstrate how they conform to the SUDS measures for the plan lands and the local ground conditions.

WM2 Ensure that the design of the SUDS Systems is in accordance with the Greater Dublin Strategic Drainage Study (GSDSDS) and the CIRIA SUDS Manual or as revised.

WM3 Incorporate a Management Train approach during the design stage whereby surface water will be managed locally in small sub-catchments rather than being conveyed to and managed in large systems further down the catchment. Use of a Management Train may eliminate the requirement for conventional petrol/oil interceptors.

WM4 Locate SUDS measures outside the predicted flood plain so that they can operate during extreme storm events.

WM5 Provide a constructed wetland or pond within the flood plain, unless otherwise agreed, as a regional control to provide water quality and ecological benefits for the overall Barnhill LAP catchment.

WM6 Ensure urban areas are designed to accommodate flood flow routes at times of extreme events through the dual use of roads and pathways as flood conveyance channels and appropriate areas (parkland, car parks, large paved areas etc) are designed for use as temporary flood ponding areas.

WM7 Require that proposals for sustainable drainage systems include provisions for future maintenance. In this regard, Maintenance Plans shall be submitted with each planning application.

5.4 Flood Risk Management

Flooding within the area is associated with both Pluvial and Fluvial occurrences. Pluvial flooding occurs when the soakage capacity of the soil or drainage infrastructure has been exceeded during periods of intense rainfall. At these times, water can collect at low points in the topography and cause flooding. Pluvial flood risk in these areas can be addressed by the provision of an appropriate storm water collection network. Fluvial flooding is produced by an action of a stream or river.

In accordance with the 'Planning Systems and Flood Risk Management Guidelines for Planning Authorities' (DoEHLG, 2009) and Circular PL02/2014, (August 2014), the preparation of the LAP was the subject of a Strategic Flood Risk Assessment (SFRA), (Appendix 3).

The flood modelling shows that there are large areas of low lying lands located to the north and south of the existing stream that are liable to flooding. This is largely caused by the existing capacity of the culvert under the canal and railway. This culvert in a clear open state can pass approximately 1.5m³/s flow before flood waters start backing up and inundating the low-lying areas on both banks of the stream. Although, the peak flow passed through the culvert increases with the increased water level upstream of the culvert, most flows in excess of the culvert capacity are stored upstream of the canal. This inundates large parts of the site as shown on the flood maps provided in (Appendix 3).

The highest predicted flood depths in the 100 year Return Period (RP) event are between 0.9 and 1m, including an allowance for climate change.

The highest predicted flood depths in the 1000 year RP event are between 1.1 and 1.3m, including an allowance for climate change.

The SFRA states that the Flood Risk Mapping in Appendix 4 should be used to determine the appropriate zoning for the site in accordance with the Flood Risk Management Guidelines:

- Areas within the 100 year RP flood plain can be considered in Flood Zone A.
- Areas within the 1000 year RP flood plain can be considered in Flood Zone B.

Neither of these flood zones allows for highly vulnerable development such as residential use, to be located on them. Should future infrastructure works be undertaken which indicate a potential change to the flood extents in the LAP lands, underpinned and supported by new and verified information, this can be examined in the context of the "Guidelines for Planning Authorities November 2009 (The Planning System and Flood Risk Management)" and other relevant statutory requirements and may subsequently inform any future analysis and/or review of the Local Area Plan.

Analysis was undertaken of the proposed Part 8 road scheme to determine the effect on the flood plain. The analysis indicates that the road embankment will displace some flood water during events in excess of the 1 in 25 year return period. The report suggested that compensatory storage be provided for, and suggested locations for same have been indicated within the report.

The SFRA states that Planning zoning within the LAP should reflect the flood mapping presented in the assessment and the flood zoning recommendations set out in the Flood Risk Management Guidelines, that ongoing maintenance of the stream and culverts is required to minimise flood risk and that any planning applications in the study area should include a detailed justification test in accordance with the Flood Risk Management Guidelines.



FRM1 *Implement the provisions of the DoEHLG/OPW publication 'The Planning System and Flood Risk Management: Guidelines for Planning Authorities' 2009 or any superseding document in relation to flooding and flood risk management and facilitate flood management measures, as appropriate.*

FRM2 *Require planning applications located within the Barnhill LAP Area to include a detailed justification test in accordance with the Flood Risk Management Guidelines.*

5.5 Water Quality

Recent years have seen the adoption of a number of EU Directives, transposed into Irish law, which seek to protect and improve water quality. The key piece of legislation governing water quality in Ireland is the Water Framework Directive (WFD) (2000/60/EC) established by the European Community and came into force in Ireland in December 2000. The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters.

For the purpose of implementing the WFD, Ireland has been divided into river basin districts or areas of land that are drained by a large river or number of rivers and the adjacent estuarine/coastal areas. The management of water resources is based on these river basin districts. The Barnhill area falls within the Eastern River Basin District (ERBD).

The Eastern River Basin District comprises of rich agricultural land, coastline, the city of Dublin and the towns which form the Greater Dublin Area and its commuter belt. With land area of around 6,300 km², the Eastern River Basin District covers about one tenth of the entire country and has 350 km² of marine waters. The Local Authorities located in the ERBD - including Fingal - have prepared a River Basin Management Plan and Programme of Measures. This Eastern River Basin Management Plan (ERBMP) (2009-2015) identifies the status of water bodies within the RBD and provides objectives in order to implement

the requirements of the WFD. The Plan lands drain towards the Liffey. In the ERBMP 2015 the Liffey is classified as being of 'poor status'. However ecological conditions were found to be satisfactory at the majority (12) of the 16 stations surveyed on the River Liffey in 2016 (EPA 2017).

Fingal County Council requires the implementation of holistic drainage policies, including stormwater management and SUDS, in all new developments. The Council's Water Pollution Control Section operates a policy of issuing Trade Effluent Discharge Licences during the construction phase of development under the 1977 & 1990 Water Pollution Acts. The licences are issued to ensure all discharges to surface waters do not compromise water quality in the receiving waters. It is imperative that any works during construction/development phases do not impact negatively on the rivers or any tributaries within or adjacent to LAP lands.

WQ1 *Permit development only where it can be clearly demonstrated that the proposal does not conflict with the aims and objectives of the Water Framework Directive and does not have an unacceptable impact on the water environment, including surface water, groundwater quality and quantity, river corridors and associated wetlands.*

WQ2 *Implement the relevant recommendations and measures as outlined in the Eastern River Basin Management Plan 2009-2015, River Basin Management Plan For Ireland 2018-2021 or any other plan that may supersede same during the lifetime of this Local Area Plan.*

WQ3 *Protect riparian corridors throughout the LAP area (See Objective GI22).*

WQ4 *Implement the SUDS Strategy prepared for the LAP lands on behalf of the Council and included as an appendice to this LAP.*

WQ5 *Require all applications to submit measures, as part of best practice, to reduce and prevent pollution to the water body/watercourse, both during construction and after completion of the scheme.*



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5.6 Groundwater Vulnerability and Protection

The Geological Survey of Ireland (GSI) has recently completed Ground Water Mapping for Fingal. The mapping indicates that there is a small area in Barnhill along the R149 where rock is at or near the surface. Encircling this area there is a small portion of land where Groundwater Vulnerability is 'Extreme', with the remainder of the land being characterised as being either 'Highly' or 'Moderately' vulnerable. Groundwater and water catchment areas have an inherent ecological and economic value and are a major resource that needs to be protected. Groundwater contributes to rivers and lakes and influences their amenity and recreational value. The Council is responsible for the protection of all waters including rivers, lakes and groundwater sources. The responsibilities include implementation of pollution control measures, licensing of effluent discharges, implementing and monitoring compliance with environmental regulations and the drawing up of pollution contingency measures.

GVP1 Protect existing ground water sources from pollution during construction/development works.

GVP2 Support the protection of groundwater resources and dependent wildlife/habitats in accordance with the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (Groundwater) Regulations, 2010 .I. No. 9 of 2010) as amended by the European Communities Environmental Objectives (Groundwater) (Amendment) Regulations 2012 or any other updates.

5.7 Public Utilities

The Greater Blanchardstown Area is well catered for in terms of telecommunications, electricity supply, gas supply and broadband. Developments require adequate power, energy and telecommunications services, including telephone services and broadband, which are provided by various providers. The sustainable growth of Barnhill is dependent on the satisfactory provision of service infrastructure, including utilities, energy, and communication networks. The infrastructure requires the need to plan for all of these elements so as to ensure that there is adequate availability to support future development, in a manner that is environmentally appropriate, cost effective and efficient while ensuring the protection of public health. Applications for such infrastructure should take cognisance of the impact on the visual and residential amenity of existing and future occupants. Both existing and new infrastructure should be co-located and undergrounded where possible.

PU1 Facilitate the provision of adequate telecommunication infrastructure within the plan area, including telephone and broadband services, to the requirements of the relevant services providers and in accordance with the principles of proper planning and sustainable development.

PU2 Facilitate the provision of an adequate supply of electricity and gas to developments in the plan area, to the requirements of the relevant service provider and in accordance with the principles of proper planning and sustainable development. All future ESB services shall be undergrounded.



SECTION 6 MOVEMENT AND TRANSPORT STRATEGY

6.0 Introduction

The Barnhill area benefits from a location close to the Dunboyne (Pace) -Clonsilla rail line. Road access within the area has been constrained somewhat by the current access arrangements to the lands, with a level crossing of the Kildare-Dublin rail line located to the east off a right-angled road junction on the Lucan to Clonsilla road. Access from the north is constrained by the Dunboyne-Clonsilla train line with the existing bridge being narrow and without the benefit of footpaths. The existing roads into the area from the west are narrow country lanes also without the benefit of footpaths.

There is a need for the LAP to address both the key strategic proposals set out in the *Greater Dublin Area Transport Strategy 2016-2035*, which has been prepared by the National Transport Authority, and to improve connectivity of the lands with surrounding areas. Barnhill presents an opportunity to develop a modern sustainable urban form of development that will be well connected to the city centre through public transport links and uniquely located close to the amenities of the countryside. It is also an exciting opportunity to create a community which champions healthy living and promotes mitigation to climate change by discouraging unnecessary car use and providing good quality alternatives. The area has been planned around the integration of land-uses and transportation objectives which includes a layout that promotes cycling and walking. The LAP seeks to achieve a significant proportion of journeys on foot, by cycle and by public transport. To support this it proposes well designed pedestrian and cycle networks to ensure ease of access to the high quality network of public transport which serves the site. To this end the LAP will focus on achieving a high degree of accessibility through the site and integration with the surrounding area. A network of attractive and safe footpaths and cycleways, coupled with the provision of frequent and reliable public transport services, will connect major destinations within the area and beyond. Good quality design, permeability and legibility will be among the key principles in the layout of the development within the Plan lands. Green routes (i.e. footpaths and cycleways) will connect the new residential areas to Hansfield, the Royal Canal and the wider Greater Dublin Area cycle and pedestrian network.

Ease of movement into and out of an area has many benefits, such as fostering economic competitiveness, reducing greenhouse gases and noise and air pollution, promoting healthier lifestyles and providing maximum transport efficiency with the least environmental impact. The Local Area Plan will continue to promote integrated land use and transportation planning to further support and encourage more sustainable modes of travel. This includes ensuring that the design and layout of new developments provide permeability, linkages and connectivity to their surrounding areas, thereby minimising local trips by private car.

The main vehicular link to the land will be via the approved but not yet constructed over-bridge from Hansfield. This will allow for the lands to be opened up by means of a redesign of the existing country lane located in the southern part of the lands. The provision of the new over-bridge and road from Hansfield will bisect the existing country lane serving the residential houses located in the centre of the lands. This lane will become a cul-de-sac and the future function of this road will be as a green route primarily for pedestrian/cycling with limited access for cars.

A challenge for this LAP is to both promote use of sustainable transport options and to improve road connectivity and vehicular circulation. There is scope, given planned public transportation improvements, for further increases in public transport use, and also to further promote and support cycling and walking as sustainable options - either in tandem with public transport or as individual modes of travel.

The policy and objectives of this section seek to support strategic documents including the Government's *'Smarter Travel, A Sustainable Transport Future 2009-22'*; the National Transport Authority's *'Greater Dublin Area Transport Strategy 2016-35'*; *Dublin Area Bus Network Redesign, 'Bus Connects'*; *Planning and Development of Large-Scale, Rail Focussed Residential Areas in Dublin (NTA 2013)*; *National Planning Framework, National Development Plan and; the Fingal Development Plan 2017-2023*. These encourage pedestrian and cycle movement, increased public transport provision/usage, and seek densities of development that support this approach.



6 Movement And Transport Strategy

6.1 Movement and Transport Strategy

Key aims of the LAP strategy are:

- Improve accessibility and maximise public transport use, taking account of the land's location adjoining Hansfield train station.
- Encourage use of sustainable transport options. Walking and cycling shall be encouraged, particularly for shorter trips.
- Prioritise planned infrastructure that supports public transport, and ensures the land use strategy is informed by, and integrated with transportation objectives.
- Seek the interconnection of walking and cycling routes with key public transport and amenity destinations (both existing and planned).
- Encourage sustainable densities of population, such that public transport is supported and sustained, and walking and cycle routes are kept active.
- Facilitate the provision of electricity charging infrastructure for electric vehicles both on street and in new developments in accordance with car parking standards.

MT1 Improve accessibility throughout the plan area, through the completion of a hierarchical road infrastructure network to serve the development, and encourage links to existing and proposed public transport nodes both within and beyond the LAP boundary.

MT2 Ensure the provision of new road infrastructure as required to serve the Plan lands prior to the delivery of any new residential development.

MT3 Promote increased cycling and pedestrian activity within the development through a network of routes that connect to public transport routes, centres of employment, amenities, and community and retail destinations.

MT4 Implement an integrated and sustainable movement and transport strategy for Barnhill which

supports the effective management of sustainable travel patterns across the site with good connections to the greater Blanchardstown network.

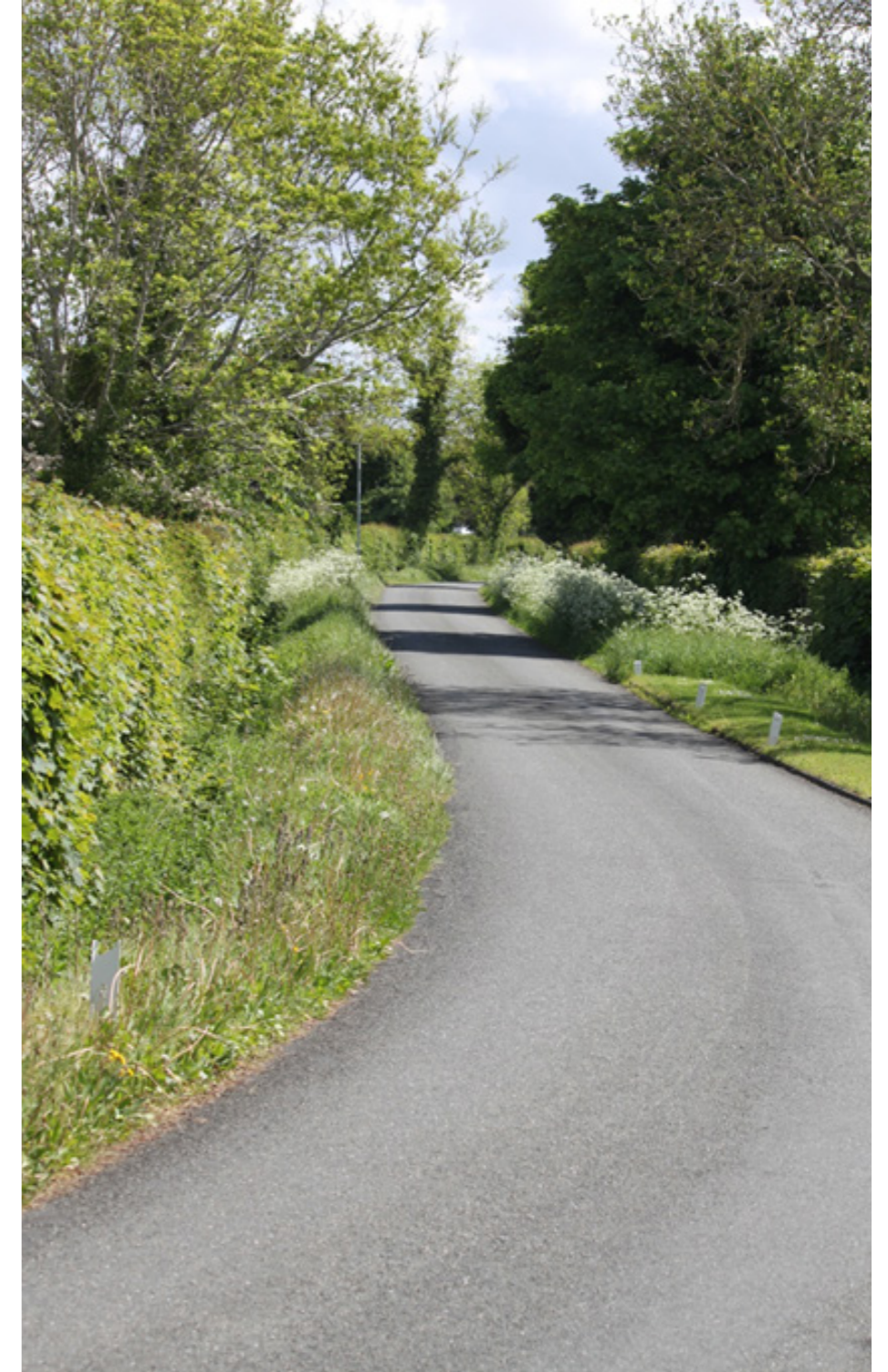
MT5 Deliver an integrated hierarchical road network of primary, secondary and tertiary routes involving a series of transverse road routes running north/south across the plan area and connecting to existing and proposed east-west routes. This will provide a permeable street network, allowing for balanced dispersal of traffic and serving both existing and new developments.

MT6 Prioritise sustainable modes of transport including walking, cycling and public transport and reduce the reliance on the use of private cars within Barnhill.

MT7 Require the preparation of a phasing programme with all proposed development, to include (inter alia) clear reference to the intended roll-out of transportation infrastructure on the lands. This programme shall also refer to planned improvements in connectivity for pedestrians, cyclists, public transport infrastructure and motorists in the area, taking account of existing infrastructure and current barriers to movement.

MT8 Provide for adequate car parking provision for new developments within the LAP area that promotes sustainable modes of transport, discourages casual park and ride, whilst also catering for the needs of car storage and commercial and community activities.

MT9 Ensure that new non-residential buildings with more than 10 car parking spaces have a minimum of one electric-vehicle charging point. These buildings shall also have ducting infrastructure, connection points, meters and pillars, as required, to be agreed with the Planning Authority which would allow electric-vehicle charging points to be set up for 20% of available car parking spaces.



Existing Road on Lands



MT10 Ensure that for new residential buildings there is ducting infrastructure, connection points, meters and pillars, as required, to be agreed with the Planning Authority which would allow electric-vehicle charging points to be set up for all available car parking spaces.

MT11 Ensure the provision of new cycle parking facilities in tandem with new development, including community, residential, commercial and public transport developments to include where appropriate lockers, storage facilities, individual secure units, and changing and shower facilities, to be agreed with the Planning Authority.

MT12 Cul-de-Sac Barberstown Lane North to through vehicular traffic.

MT13 Provide a well-lit and ventilated underpass for pedestrians and cyclists under the proposed new north-south road adjacent to the Clonsilla-Dunboyne trainline.

MT14 Ensure that any proposed road infrastructure to link Kellystown to the east provides for permeability and linkages within the Plan lands, specifically that it allows for linkages between the open space lands within the LAP.

6.2 Road Network

The planning and design of all streets and roads in the Plan area must comply with the objectives and guidelines included in the *Design Manual for Urban Roads and Streets 2013 (DMURS)*.

The Plan seeks a high level of connectivity, with a network that encourages low traffic speeds by integrating traffic calming measures into road design. The geometric features of a street are designed to complement the built form and further slow traffic without the use of more intrusive measures such as speed ramps or excessive signage. The design of streets calm traffic by providing:



Road Image

- Frequent crossing points and junctions
- Raised crossing points as required
- Horizontal and vertical deflections
- Minimising formal signage and road markings
- Narrower carriageways
- On-Street parking
- Reduced visibility splays
- Shared street surfaces
- Tighter corner radii
- Appropriate landscaping and urban design to minimise through visibility for drivers

In general, the lower the desired design speed the more restrictively and/or more frequently the geometric measures listed above and illustrated below should be applied.

Road Image

In order to provide for a coherent sustainable movement and transport strategy and to maximise development capacity within the LAP lands the following 4 measures are required. It is anticipated that these measures will be delivered on a phased basis in conjunction with relevant stakeholders and developers.

- 1 *The delivery of the necessary extension of the Ongar-Barnhill road with provision of a new bridge over the Dunboyne (Pace) – Clonsilla rail line and provision of a new junction with the existing road network. This will connect the Ongar road to the existing Clonee-Lucan road(R149).*

This objective is included in the Development Plan 2017-2023 where it states in Chapter 4, Urban Fingal, that 'construction of houses on these lands will be dependent on the delivery of the proposed new road and bridge over the railway.' Delivery of this Barnhill-Ongar Road may be enabled, at least in part, through a Section 48 development contribution scheme (Planning and Development Act 2000 as amended) where it states under Section 48 (2) (c) that 'a planning authority may, in addition to the terms of a scheme, require a special contribution in respect of a particular development where specific exceptional costs not covered by a scheme are incurred by any local authority in respect of public infrastructure and facilities which benefit the proposed development.'

The delivery of this road, including the bridge, and, access arrangements to the lands as noted in item 2 below are clearly linked to the development of the LAP lands and so a special contribution payment scheme may apply.

- 2 *The re-alignment of Barberstown Lane South.*
This will allow access to the LAP lands and aid the future development of the area as part of the Ongar to Barnhill road scheme.
- 3 *Creating a new cul-de-sac on Barberstown Lane North.*
This is necessitated by the provision of the Ongar-Barnhill road which will bisect the existing Barberstown Lane North with provision of a new bridge over the Dunboyne – Clonsilla rail line.
- 4 *A series of transverse secondary routes running north/south across the site and feeding back into the primary access route i.e. Barberstown Lane South.*
These routes will allow a means of access and provide a hierarchy of streets to develop the lands to their full potential.

RN1 *Ensure delivery of the appropriate road infrastructure in line with the phasing of the LAP and infrastructure needs.*



6 Movement And Transport Strategy

RN2 Apply a Section 48 (2)(c) development contribution scheme as may be required, to deliver the infrastructure necessary to secure the plan lands for development.

In terms of movement and accessibility within the wider area of Blanchardstown to the south of the rail line a study is being undertaken by the Council to determine the preferred route of the future road network connecting Kellystown to Barnhill. While the preferred route is not determined at the time of the plan as it is not required for development to proceed at Barnhill, it is anticipated that this route will link in with Barberstown Lane South and cross over the Plan lands to the east. A map based objective relates to this.

RN3 Ensure that appropriate areas of the Plan lands are reserved for compensatory storage as may be required for road infrastructure

In terms of movement and accessibility within the LAP lands, the planned layout of the development is based around a hierarchy of roads each with a different role in terms of urban structure and accessibility. They should be so designed to be an integral part of the community intended to be the focus of many activities that link together people's lives. In this regard special attention will be needed to ensure road layouts maximise permeability and militate against speeds that discourage pedestrian and cycle movements. Consideration should be given in the use of surface and boundary treatment, materials and landscaping to create a sense of local identity.

RN4 Ensure routes within the LAP are well designed to function as urban streets rather than traffic distributors to accommodate multi-modal movements, create a sense of place and contribute to the public realm and overall permeability within the lands.

6.2.1 Street Hierarchy

Development of a hierarchical street network will create a legible and highly connected community. The four street categories outlined below, in addition to off street walking and cycling

routes will form the primary transport system throughout the lands. They will be designed to reflect and complement urban character which underpins the urban design strategy. The proposed street and pedestrian systems will ensure permeability and ease of movement for all modes of transport.

6.2.2 Main Avenue

A crescent shaped main urban street will have a north to west axis and link Hansfield train station with a commercial/residential hub, civic plaza, local school and public park. This main urban street will be pedestrian friendly with wide footpaths, cycleways and planting. The Avenue will be tree lined with cycle and pedestrian services situated on both sides of the road. Any commercial premises should open directly onto footpaths. Gateway buildings/features at key locations are envisaged.

6.2.3 Primary Streets

These Streets are the most important means for vehicular access into the area. They link Barberstown Lane South with the development lands to the north. The horizontal alignment of the Streets will incorporate visual and speed reducing consideration. The Streets will be tree lined with cycle and pedestrian services situated on both sides of the road. Direct access to individual residential houses can be gained off these roads. There can be a variable building line to allow on-plot parking and corner expression. Roadside parking will be permitted along the Avenue at certain locations.

6.2.4 Secondary Streets

These streets are to provide higher permeability through the lands, whilst maintaining a low design speed. They give access through the varying areas, but do not generally connect through the lands. Hard and soft landscaping and tree planting are proposed in order to create a visually attractive environment and to act as a traffic calming feature. They are narrower than the Avenue.



6.2.5 Shared Surface Residential Street

Shared surface residential streets are proposed to serve smaller clusters of housing. They are the least connected streets and are for local access only. They are located within pedestrian dominated areas. The street is shared by parking/seating, play areas and traffic movement with 1.5m wide clear zone for pedestrians only. Parking will vary between on-street, front garden and behind building line.

RN5 Require a detailed street design plan prior to the submission of planning applications; the pre-planning plan to include details of surface treatments of cycleways, footpaths, street trees, nature strips, road pavement and street lighting, all to be overlaid. Regard to be given to the publication Design Manual for Urban Roads and Streets (DECLG/DTTS 2013) to guide the detailed design of streets and to the need to incorporate street trees within the design.

6.2.6 Civic Area

The village centre and area to the front of the train station shall incorporate civic spaces. Hard landscaping elements such as changes in paving and materials will be used to delineate these spaces, while soft landscaping such as trees and ornamental planting will be encouraged to soften the appearance of the areas. Seating and cycle parking facilities shall be provided as an integral part of the design .

6.3 Public Transport

Trains using the Dunboyne-Clonsilla rail line serve Barnhill from the Hansfield train station. The station is located on the northern border of the lands and is serviced (2018) by 30 no. trains daily in both an easterly and westerly direction. There are no bus services currently serving the lands however a Dublin Bus scheduled service, the 39 – Ongar to Burlington Road, which provide links to Dublin City Centre is available along the Ongar Road. Under the proposed 'Busconnects -Dublin Area Bus Network Redesign Initiative'- the Ongar Road has an integral part to play in the role out of public transport into the future for Dublin, with increased services serving the lands accessing it. This road is located 650m to the north of Hansfield train station. Improving transport linkages, better use of the existing rail and

bus network along with alternative ways of travelling such as cycling and walking will be encouraged through the Plan lands which will help to promote a more sustainable way of living. New residential communities will be closely linked to and integrated with the existing communities.

Regular and direct bus links from the LAP lands to Blanchardstown Centre are important to successfully connect and integrate development in the area. Developers will be required and facilitated by the Council to work together with the bus transport providers and the National Transport Authority to improve bus services in the area. Road infrastructure will be designed to facilitate the roll out of additional bus services to the area.

PT1 Facilitate and promote the development and use of an enhanced quality and integrated public transport network to serve the existing and future needs of the Barnhill lands in association with relevant providers. This may include a public transport interchange area or terminus location/turning location for buses, as appropriate.

6.4 Cycle/Pedestrian Access

The Local Area Plan incorporates a network of pedestrian and cycle routes connecting to the local centre, school, community services and public open space. The pedestrian/cycle routes will connect with existing links in adjoining areas and to the pedestrian/cycle network in the Greater Blanchardstown Area. The Barnhill Pedestrian/Cycle Routes Map identifies clearly the pedestrian/cycle desire lines within the lands and to surrounding areas. Currently there are two access points to lands north of the Dunboyne-Clonsilla rail line: There is an underpass located at the point where the Royal Canal veers to the south and access is gained via the existing bridge on the Barnhill road. Two other routes will come on stream when the new over-bridge is constructed and when access to Hansfield rail station is gained from the south.

All pedestrian/cycle routes will, as far as practical, be directly overlooked by residential development to ensure a high degree of supervision. The cycle and pedestrian routes indicated on

the map below are indicative only. The precise location of the routes will be finalised at planning application stage. The provision for and design of cycle infrastructure, including cycle parking, will be guided by the NTA's National Cycle Manual'

CP1 Provide for an urban environment within Barnhill where priority is given to legibility and permeability for cyclists and pedestrians, with safe, direct and easy access provided to public transport points, schools, parks, the local centre, existing community of Hansfield/Ongar and to the Greater Blanchardstown Area.

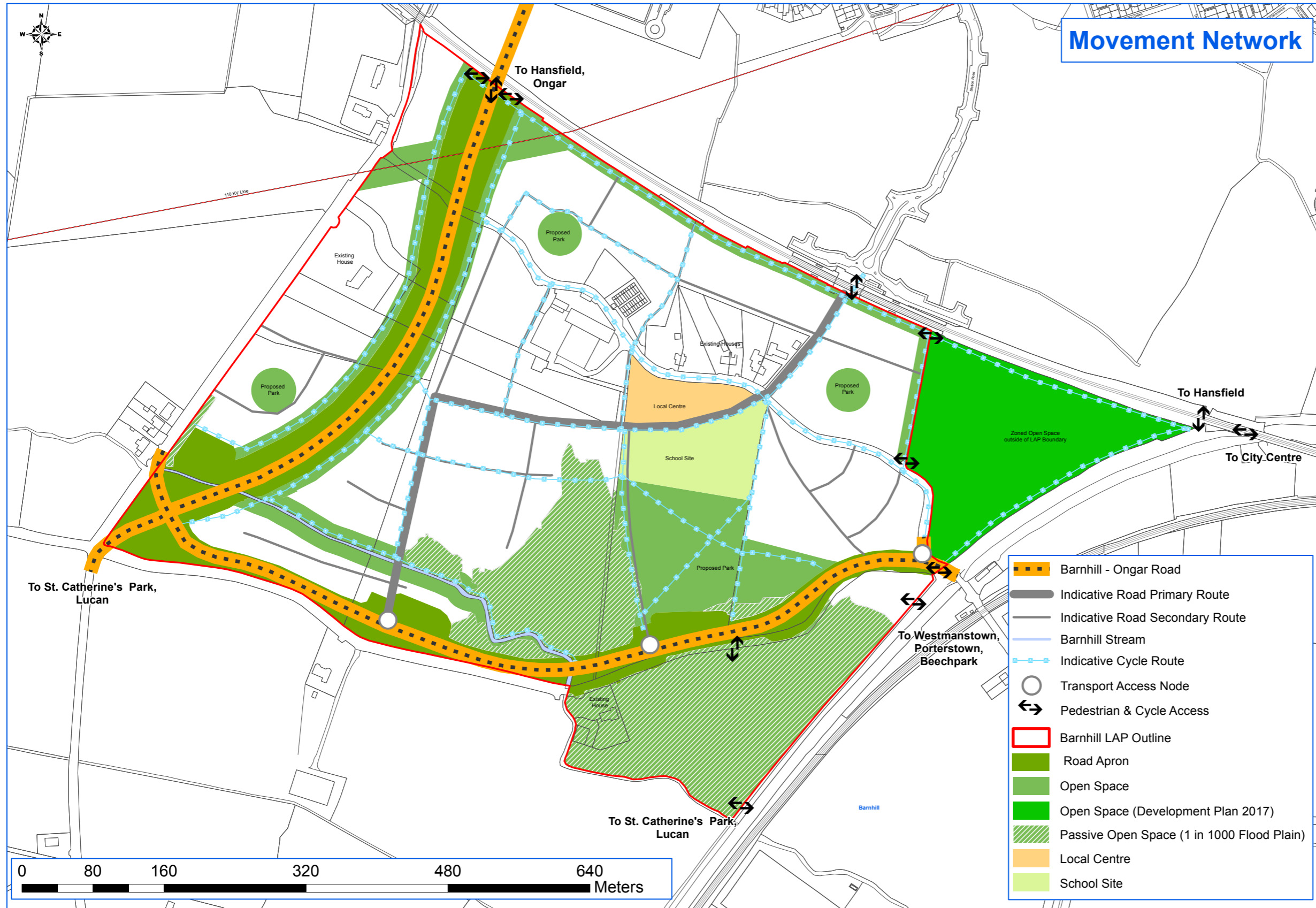
CP2 Ensure that all pedestrian and cycle routes within Barnhill are overlooked to the greatest extent possible by residential development or other forms of passive surveillance..

CP3 Encourage direct walking and cycle routes through pocket parks and open space areas to provide direct linkages between neighbourhoods, local centres, schools, parks and public transport.

CP4 Establish quality connections linking open spaces and the riparian corridor which provide for visual amenity and recreational use while addressing the need for nature conservation and flood risk mitigation.



6 Movement And Transport Strategy



Movement Network

SECTION 7 PLACEMAKING STRATEGY

7.0 Introduction

Given that the LAP is intended primarily as a residential area, it is important that any strategy recognises the supporting requirements of sustainable communities, and therefore this strategy seeks delivery of these, including quality amenities, community facilities, infrastructural improvements and commercial services. A suitable mixed-use will be identified which will accommodate a range of uses in close proximity to good public transport. In addition to the above, objectives can be applied to specific locations where it is considered appropriate to provide more focused land-uses. A theme relevant to all land-uses is that of permeability and sustainable transport linkages, and green infrastructure objectives can effectively integrate walking and cycling routes with biodiversity and attractive amenities. Hence, this section should be considered in tandem with Green Infrastructure and related urban design objectives.

7.1 Guiding Principles for the LAP

Guiding land use strategy principles for this LAP which aim to support the vision for Barnhill are as follows:

- Ensure a land use strategy which capitalises on the area's locational advantages being situated beside two train lines and siding onto the Royal Canal.
- Support the development of a coherent spatial structure, characterised by a small mixed use hub located in a predominantly residential area.
- Utilise the Royal Canal amenities which partially frame the eastern boundary to ensure that they are interconnected via links through key open spaces, contributing to an attractive public realm.
- Encourage employment-generating uses in identified mixed-use areas, where feasible.
- Support the achievement of high levels of modal shift by collaborating with the relevant stakeholders and other agencies to improve public transport services to support use of sustainable modes of travel.
- Ensure the provision of an appropriate housing mix, considering the changing demographic (needs of older people) and the housing market requirements for Metropolitan Dublin and the requirements of social housing within the Fingal Development Plan and Housing

Strategy.

- Require housing density that encourages more efficient land use and infrastructure investment patterns and particularly creates conditions more favourable to the increased use of public transport.
- Ensure that new mixed use areas contribute to active streets and quality public realm.
- Require the provision and enhancement of open spaces and amenities and their connectivity both within and beyond the plan area.
- Facilitate appropriate community, educational, and cultural uses/services at appropriate locations to serve the growing population.
- Support a holistic approach, which ensures the provision of essential and appropriate facilities, amenities and services, is considered at design stage to ensure that a sustainable community emerges.

7.2 Green Infrastructure and Planning

Green Infrastructure (GI) ensures that the natural, cultural, and health requirements of communities are integrated into, and not compromised by, new development. In urban areas, green infrastructure includes open spaces such as public parks; significant tracts of garden space and features that provide public access such as river/canal walks and cycleways; as well as man-made features such as swales and green roofs on buildings that thread through and surround the built environment and connect to one another. A key objective of green infrastructure planning is that green infrastructure management and provision is integrated with plans for growth and development. The preparation of Local Area Plans provides a key opportunity for the protection, management, enhancement and provision of green infrastructure which is fully integrated with new development. This LAP seeks to create a green infrastructure network of high quality amenity and other green spaces that permeate through the plan lands while incorporating and protecting the natural heritage and biodiversity value of the lands. This will be secured by implementing the following overarching strategy for the LAP area based on Protecting, Creating, Enhancing and Connecting the overall green infrastructure network in the area:



7.2.1 Protecting

- Ensuring development protects and enhances areas of biodiversity value, particularly sites protected under European and National Legislation in order to achieve a net gain in biodiversity.
- Protecting and safeguarding all existing water courses from inappropriate development and ensuring measures to help secure the requirements in relation to water quality as set out in the Water Framework Directive.
- Working with relevant bodies and others to protect and enhance the ecological, biodiversity and aesthetic values of the area's sensitive sites e.g. Royal Canal
- Complying with the policies of the Fingal Development Plan relating to open space, biodiversity, green infrastructure and open space provision.

7.2.2 Creating

- Maximising opportunities for the delivery of a hierarchy of publicly accessible open spaces in the form of Local Parks, Small Parks, Pocket Parks and Play facilities that punctuate the Plan lands.
- Supporting and enhancing biodiversity value through the design of open space and buildings.
- Combining the use of Sustainable Urban Drainage Systems (SUDS) with the management of biodiversity and the creation of amenity and landscaped areas.
- Requiring a high-quality design approach to all green infrastructure, which creates inviting, flexible, multifunctional places, local distinctiveness and character, incorporating existing features and important vistas.
- Contributing to the built structure and natural heritage by creating green links and biodiversity corridors within the Plan lands.

7.2.3 Enhancing

- Using opportunities during the creation of new green links to augment and expand existing links.

7.2.4 Connecting

- Promoting publicly accessible open spaces as multi-

functional spaces that cater for a range of activities, lifestyles, ages and needs.

- Improving access to the strategically important publicly accessible open spaces, which currently include St Catherine's Park and Beechpark and facilitating access to future open space lands at Hansfield.
- Increasing connectivity to Hansfield by ensuring permeability between the two areas through the provision of pedestrian, cycle and vehicular links. The extension of the Ongar road to facilitate Barnhill will provide improved vehicular access between the two areas. It is a requirement of this Local Area Plan that enhanced and segregated vehicular and pedestrian/cycle access be provided on this road. In addition, the completion from the southern side of the rail line for pedestrian and cycle traffic at Hansfield rail station; the incorporation of the existing bridge bounding the lands to the west; and the existing underpass of the Dunboyne-Clonsilla rail line will strengthen linkages between the two areas.
- Promoting a more comprehensive and joined up network of carefully designed and managed footpaths and cycleways.
- Promoting the development of an ecological network within the Plan Area, which supports ecological connectivity and functioning, creates opportunities for active and passive recreation and provides visual relief from the built environment.

7.3 Green Infrastructure and Barnhill

Reflecting the five key themes set out in the Fingal Development Plan 2017-2023 and Theme 1 of the Vision for the Barnhill LAP lands, 'Sustainable Development', this LAP utilises green infrastructure as a means of developing a strategy in relation to the following key areas: the conservation and enhancement of biodiversity; the provision of accessible parks, open spaces and recreational facilities; the sustainable management of water and the maintenance of sensitive landscapes. Green infrastructure planning is crucial to meet the growing demands of environmental legislation and directives that relate to water quality, flooding, habitats, birds, Strategic Environmental Assessment, Appropriate Assessment and environmental liability. The challenge in Barnhill is how to balance the



development of a compact urban area with approaches which work effectively with nature.

There is a strong emphasis on the provision of Green Infrastructure in the Fingal Development Plan. This development on the LAP lands will secure landscape, biodiversity and appropriately managed public access to open space area which will protect and enhance the setting of the LAP lands. A green infrastructure network of safe usable, hard and soft landscaped, green spaces that permeates through the Plan Lands in a manner that links adjoining lands, provides meaningful recreational facilities, incorporates environmental resources including existing elements of significant heritage and wildlife value, and provides for sustainable water management, will contribute towards enhancing the natural and built environment and overall attractiveness of the area.

The Barnhill LAP addresses Green Infrastructure (GI) under the five Green Infrastructure themes:

- Landscape
- Archaeological and Architectural Heritage
- Biodiversity
- Parks, Open Space and Recreation
- Sustainable Water Management

GI1 Require all planning applications to be accompanied and informed by a Green Infrastructure Masterplan for the entire LAP lands. The Masterplan will form part of the overall assessment of each application and shall clearly:

- *demonstrate the creation of a cohesive network of open spaces and green corridors; including street trees;*
- *demonstrate the creation of green routes/links and stepping stones;*
- *Facilitate biodiversity and wildlife movement within and outside the LAP;*
- *Achieve the requirements for the open space hierar-*

chy within the lands;

- *Demonstrate a cohesive approach to surface water management, including all SUDS features and compensatory storage; and*
- *Indicate the location of any proposed pumping station where within the LAP lands.*

GI2 Create a high-quality, well-connected and sustainable natural environment of green spaces and watercourses that promotes biodiversity.

GI3 Require a high-quality design approach to all green infrastructure, which creates inviting, flexible, multifunctional places, protects and enhances local distinctiveness and character, incorporating existing key features and important vistas.

GI4 Maximise the opportunities for enhancing the green infrastructure resource through the provision of urban landscape features such as green corridor routes and links, swales, green roofs, trees and shrubs within the new development and public realm.

7.3.1 Landscape

The Barnhill LAP lands are located within Landscape Character Type 'River Valleys/Canal'. This Character Type is categorised within the Development Plan as having a high value due to the visual and recreation qualities contained therein. A number of institutional and private demesnes e.g. Luttrellstown Demesne, along the Liffey valley maintain a rural and wooded character to the area. The Royal Canal corridor is included in this zone and it provides valuable habitat for fish and other species and is a proposed NHA (pNHA). The Royal Canal borders the LAP lands to the east.

In terms of topography the land is generally flat. There is a small incline from north to south but in general the land height throughout the area varies by only 2m approximately. The lands comprise of a number of fields subdivided by hedgerows and trees, with two individual residential plots located along the border and seven residential plots and an industrial building

occupying the central area. No tree copses are located on the lands however a number of individual trees of greater scale are contained within the hedgerows, none of which are identified in the Development Plan for preservation. There are drains at a number of field margins with a stream traversing the lands from west to east in the southern section of the LAP lands (Barnhill Stream). A feature of the lands is the distant view of the Dublin Mountains to the south. The lands are crossed by overhead lines and pylons which have a negative visual impact. The use of existing vegetation on site, notably the field hedgerows and ditches, has value in integrating future development into the existing landscape. Important trees, hedgerows and townland boundaries will be preserved where possible and appropriate.

Overall the LAP land has a good orientation with plentiful exposure to southern sunlight. Boundary treatments (including noise amelioration measures) and building lines to the Barnhill road, the new Ongar to Barnhill link road, the train line and Royal Canal need to be carefully designed and provided for in all planning applications. As far as practicable, the existing hedgerows will be preserved except where it is necessary to upgrade the existing roads, create a vehicular/pedestrian/cycle access to the land or where it is desirable to create passive surveillance points. Where hedgerows are removed, there will be a requirement for replanting and/or mounding, if applicable, at appropriate locations.

GI5 Protect, insofar as is possible, existing trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character and ensure that proper provision is made for their management.

GI6 Ensure that any development in proximity to hedgerow or a hedgerow which forms a link with other habitats retains such features or replaces such features with equal or greater areas of native trees, hedgerows and shrubs.

GI7 Ensure that townland boundaries are maintained and designed into development proposals



where feasible. At all times townland boundaries should be demarcated as part of a design layout.

GI8 Ensure that adequate measures are taken to protect residential amenities adjacent to roads and the train line. Ensure that plans, designs, detailed schedules and specifications of work including management plans, where privately managed, for all public open spaces and green infrastructure are integral to all planning applications.

7.3.2 Biodiversity

The integrity of an effective ecological network within the LAP lands will be dependent on the existence of green spaces/stepping stones, corridors and links that will criss-cross the Plan lands. Networks effectively enlarge local green spaces by linking them together. This planned green network will comprise hedgerows, tree belts, public open spaces, private gardens and created corridors such as tree lined streets, road margins, cycle and pedestrian paths, and SUDS features (e.g. green roofs, ponds and swales), These will be multi-functional in that they will serve both people and wildlife. This will provide the setting for the residential development. The creation of this green network will provide opportunities to improve linkages, for both the residents of the area and local wildlife, between the Barnhill LAP lands, the neighbouring SDZ lands at Hansfield and the surrounding countryside.

Important hedgerows and treelines should be maintained to protect the remaining wildlife features. Verges of five metres or more should be left on either side of hedgerows and tree-lines as buffers, to promote their use as wildlife corridors and to facilitate the development of grassland communities. Where this is not feasible, replacement habitats will be provided. Any removal of hedgerows within the Barnhill LAP should be balanced with re-planting an equal or greater area of native trees, hedges and shrubs, whether in linear form or in large connected blocks, to provide corridors for wildlife and increase biodiversity value.

The existing watercourse within the lands will be maintained with riparian strips of a minimum 10 metres from each bank,

which will be widened to incorporate passive and small active parks where feasible and to incorporate areas which are prone to flooding.

Green links generally refer to connected patches and linear strips of habitat that have an inbuilt ecological use including hedgerows, woodlands, wetlands and artificial corridors such as roads, railway lines, road margins and streetscapes. These will provide an important part of the overall movement network, water management and Green Infrastructure Strategy in the LAP area. A green network of corridors in the form of footpath and cycleways is proposed as part of the LAP strategy to link open space areas both within the lands and to the surrounding environment. Linkages will be created between the Dunboyne-Clonsilla rail corridor, the Royal Canal and the stream traversing the lands as well as to any public parkland developed in the area. This will allow wildlife to move throughout the lands despite surrounding development.

These green corridors and green links will be complemented by a series of stepping stones or open spaces within the residential areas. Stepping stones are a series of usually small, unconnected habitats that allow animals to move from one habitat to another. Within the LAP lands these stepping stones will take the form of a public civic space in the proposed village centre and other open spaces contained within the newly emerging residential developments.

GI9 Create new links, which incorporate green infrastructure, to connect publicly accessible open spaces to main destination points, such as the train station, bus stops, village centre, school, health facilities and other publicly accessible open spaces.

GI10 Ensure that the design of all green corridors, links and stepping stones takes account of the sensitivities of habitats and avoids excessive adverse impacts resulting from noise, lighting and other types of disturbance.

GI11 Ensure that all development proposals include measures to protect and enhance biodiversity and

deliver new green infrastructure, as appropriate.

GI12 Protect a minimum 10m riparian corridor from each bank along the Barnhill Stream and widen the corridor to incorporate flood zones and passive and small active parks as required.

GI13 Preserve and/or extend the width of the existing tree-line/hedgerow margin along the Royal Canal and create a green margin along the route of the Dunboyne-Clonsilla rail line, the width of which will allow for a pedestrian walkway, cyclepath and landscaped corridor.

GI14 Integrate provision for biodiversity with public open space provision and sustainable water management measures (including SUDS) where appropriate.

GI15 Provide green links between the Royal Canal, the Dunboyne-Clonsilla rail line, the riparian corridor associated with the Barnhill Stream and any public parkland in the area where feasible.

GI16 Maintain, where feasible, verges of five metres or more on either side of hedgerows and tree lines as buffers, to promote their use as wildlife corridors and to facilitate the development of grassland communities.

GI17 Implement the All-Ireland Pollinator Plan 2015-2020.

GI18 Provide tree lined Primary roads as part of an integrated SUDS train with appropriately sized tree pits within a grass verge.

7.3.3 Parks, Open Space and Recreation

7.3.3.1 Public Open Space

High quality public open space will be provided in accordance with the policy of the Fingal Development Plan in order to meet the amenity requirements of future residents within the Plan



lands. For all developments with a residential component, the overall standard for public open space provision is a minimum 2.5 hectares per 1000 population. The existing 3.88ha of zoned open space, bordering the LAP to the east, is residual open space arising from housing estates previously permitted and now already constructed (Beechfield etc). The provision of the open space in this triangular shaped area which is outside the LAP will be in addition to the quantum of open space arising from the new development of the RA zoned lands. The Green Infrastructure Strategy contained within the Fingal Development Plan 2017-2023 will be used to inform the location and type of open space for Barnhill. The strategy outlines the public open space hierarchy and accessibility standards and allows the provision of:

TABLE 2 OPEN SPACE HIERARCHY AND ACCESSIBILITY			
Type of Public Open Space	Areas	Accessibility from homes	Note
Pocket Parks (Class 2 as per Development Contribution Scheme) Facilities for smaller children, but not necessarily formal play facilities. Have an important visual and social function also. Pocket parks must not be to the side or back of houses and must be adequately overlooked.	Between 500 sq m – 0.2 hectares	Every home within 150m walking distance	Provide pocket parks in all cases. No contributions in lieu

Small Parks (Class 2 as per Development Contribution Scheme) Depending on their size, these will accommodate playground facilities, kick about areas, and passive recreation.	Between 0.2 – 2 hectares	Within 400m walking distance of homes	
Local Parks (Class 1 as per Development Scheme) Accommodate playground facilities and a number of playing fields. Passive recreational and biodiversity areas will also be accommodated in these parks.	Between 2 hectares – 20 hectares.	400 metres.	

Urban Neighbourhood Parks (Class 1 as per Development Contribution Scheme). A wide variety of facilities and uses can be provided here due to their size. Biodiversity areas will also be accommodated in these parks.	Between 20 hectares – 50 hectares	Within 1km	
Regional Parks (Class 1 as per Development Contribution Scheme) Provide for a large range of uses. Formal and informal play areas, passive recreation areas, biodiversity areas and often a distinct attraction will be available on site.	Over 50 hectares	Within 5km	

- *Areas not counted in the Open Space calculation include:
- Environmental Open Space, i.e. incidental or narrow pieces of open space used for the preservation of trees and or as a visual relief and screen planting e.g. along roads.
 - Green corridors/riparian strips
 - Areas of open space under high voltage electricity lines.
 - Area designated as OS located between the rail lines and outside of the LAP.

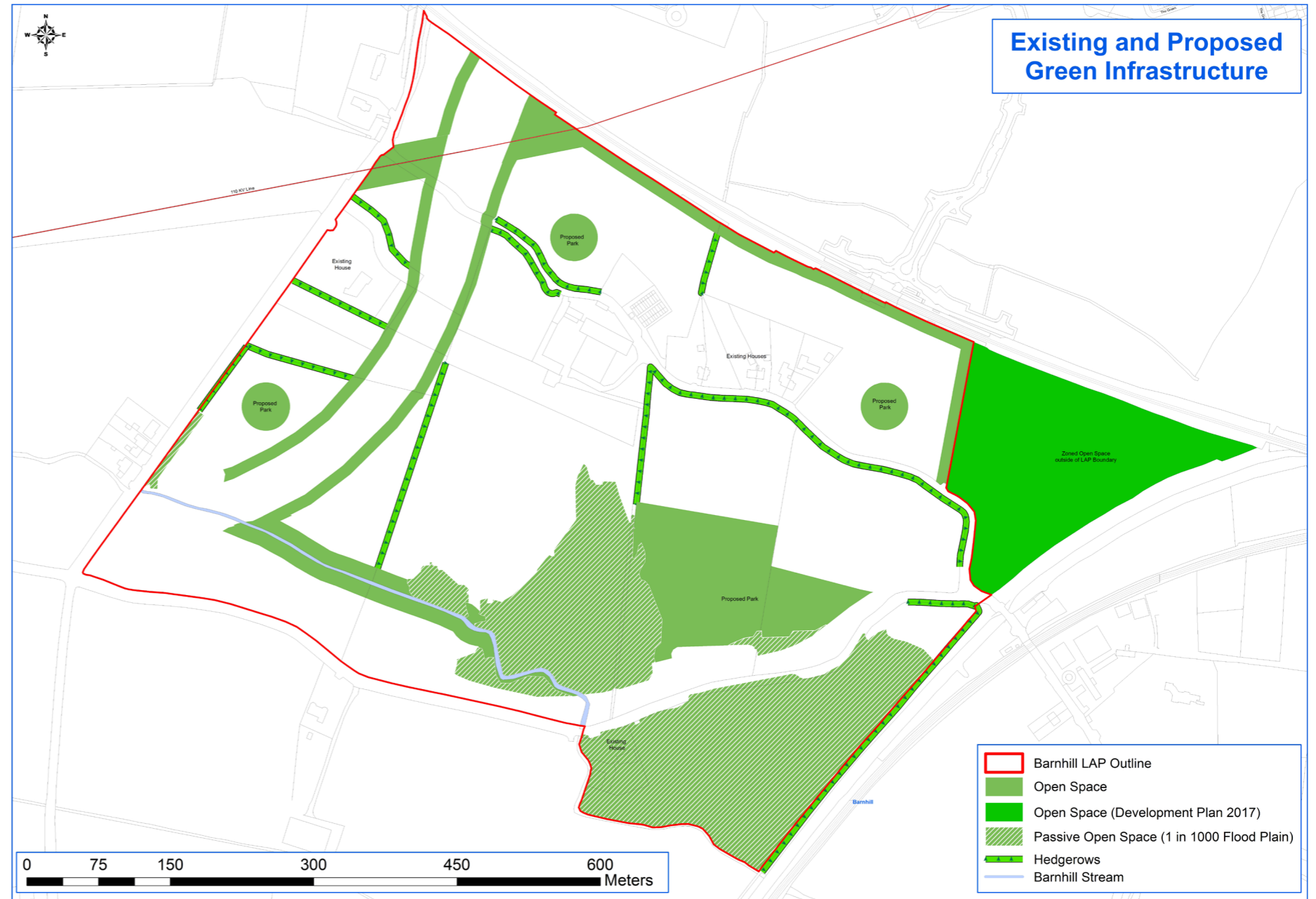


7 Placemaking Strategy

The Open Space Strategy will connect with the open space network in the Greater Blanchardstown Area. A hierarchy of open space with appropriate uses is proposed.

Lands along the rail line and canal will be used as linear corridors and will link up with open space lands to be located along the Barnhill Stream and further south across Barberstown Lane South. This green route will consist of a pedestrian and cycle way in addition to an appropriately planted landscape buffer with various pieces of exercise equipment interspersed at different locations along the route. Lands beside the rail line and Royal Canal, zoned 'OS' and located east of the LAP lands will be utilised to complete this circular route. There may be opportunity for various pieces of exercise equipment along this route subject to agreement with an overall playground/exercise strategy with the Planning Authority as part of the Green Infrastructure Masterplan.

There is an opportunity within the Barnhill LAP to combine this requirement with open space provision associated with the establishment of a new school. A public park, of minimum size 2.5ha, is to be located adjoining the reserved school site of 1.14ha, to be availed of by both the public and school pupils. Facilities will include playing pitches, for possibly GAA or soccer as well as an area given over for a Multi Use Games Area (MUGA), a skatepark and playground. There is potential for shared car parking between the school and the users of the open space and this will be promoted by the local authority. This public open space area, controlled and managed by the Council will be an active recreational zone and will be located adjoining a more passive area of open space provision, associated with the area of land located within the flood plain of the Barnhill Stream. SuDS features associated with the development of the lands may be incorporated into this parkland in the form of a regional pond/constructed wetland area to provide a suitable habitat for wildlife, as well as a pleasant amenity. An alternative location for this regional pond/constructed wetland is that area of land within the LAP boundaries liable to flooding located on the southern side of Barberstown Lane South. (See figure 3 Barnhill Stormwater Management Plan). Compensatory storage associated with the provision of the Part 8 road scheme is likely to be required. The precise quantum and location of this compensatory storage area will be determined at the final



Existing And Proposed Green Infrastructure Map

design stage/planning application stage of this road. A playground(s) will be provided within the LAP lands on the northern side of Barberstown Lane North. Any playground(s) shall be located within a larger public park to ensure the privacy and amenity of neighbouring properties. Lands to the southeast of Barberstown Lane South will be managed as a natural landscape as they are located within the flood plain of the Barnhill stream where most types of development is restricted. This area is a possible alternative

location for a regional pond/constructed wetland. Paths through these lands will allow pedestrians and cyclists to link up with the proposed Royal Canal Greenway and avail of the loop trail proposed around the lands. These lands will act as an additional passive recreational area complementing that proposed on the northern side of Barberstown Lane South. The open space strategy will underpin the layout of each residential sector and will take place in tandem with development. All open space areas should be overlooked by



residential units. It is important that the different areas of open space are functionally and physically linked. To this end, any future road design which bisects recreational lands should take account of permeability and accessibility between the different areas of open space.

The Council has the discretion, in exceptional circumstances, to accept a financial contribution in lieu of any remaining open space requirements that are above the minimum 10% of a proposed development site area's open space requirements; the contribution shall be calculated on the basis of 25% Class 2 and 75% Class 1. A minimum of 3.5 ha of Class 1 open space provision and all Class 2 open space provision will be delivered within the confines of the LAP boundaries. Passive open space, as identified in this LAP, is excluded from the calculations for Class 1 open space provision. This will provide for a cohesive linked network of both active and passive open space adjacent to the new population. It will also support the wider green infrastructure objectives including enhancement of biodiversity.

POSR01 Provide a wide variety of public open space on a hierarchical basis throughout the LAP lands in order to achieve a choice of open space facilities. The centre piece of this hierarchy will be a new 2.5 ha minimum active recreational park availing of shared facilities associated with the new school accommodation.

POSR02 Require a minimum public open space provision of 2.5 hectares per 1000 population. For the purposes of this calculation, public open space requirements are to be based on the residential units with an agreed occupancy of 3.5 persons in the case of dwellings with three or more bedrooms and 1.5 persons in the case of dwellings with two or fewer bedrooms.

POSR03 Require a minimum of 3.5 ha of Class 1 open space provision within the confines of the LAP boundaries and require all Class 2 open space to be clearly delivered within the confines of the LAP boundaries outlined within the Green Infrastructure

Masterplan and as per Development Plan standards. Passive open space, as identified in this LAP, is excluded from the calculations for Class 1 open space.

POSR04 Ensure every home within a new residential scheme is located within 150 metres walking distance of a pocket park, small park, local park, urban neighbourhood park or regional park.

POSR05 Provide for the development of quality open space areas and facilities to meet the recreational needs of residents and ensure appropriate passive supervision through good design.

POSR06 Maximise the accessibility of the recreational amenities by developing a network of key cycle and pedestrian routes.

POSR07 Provide appropriately scaled children's playground facilities within the LAP lands. Playground or equivalent facilities shall be provided at a rate of 4 sq m per residential unit. Details of playground facilities and location shall be included as part of the Green Infrastructure Masterplan. All residential schemes in excess of 50 units shall incorporate playground facilities clearly delineated on the planning application drawings and demarcated and built, where feasible and appropriate, in advance of the sale of any units.

POSR08 Ensure that in the instance of an equipped playground being included as part of a specific facility, it shall occupy an area of no less than 0.02 hectares. Any such playground shall be located within a larger public park area to ensure the privacy and amenity of neighbouring properties. A minimum of one piece of play equipment shall be provided for every 50 sq m of playground.



POSR9 Consider accepting the plaza/public realm area beside the rail station as Class2 Public Open Space subject to a sufficiently high quality finish and design.

7.3.3.2 Private Open Space

Private open space for the residential sector will be provided in accordance with Fingal Development Plan standards.

7.3.4 Sustainable Water Management

Sustainable Water Management is defined as the management of our water resources whilst taking into account the needs of present and future users. To achieve this, the drainage network for the LAP lands is to be designed and constructed to provide sustainable infrastructure. This will ensure that the local environment and receiving waters are protected from increased flows and pollutant loading and that the LAP is resilient, particularly with regard to predicted climate change impacts. A detailed SUDS Strategy has been prepared to inform the LAP (Appendix 4).

Green infrastructure is multi-functional and has the potential to offer a working landscape and a sustainable alternative to the kind of traditional water services engineering solution, such as stormwater pipes, that have been historically relied upon to deal with surface water in urban areas. As areas of vegetation are replaced by impermeable concrete, tarmac or roofed areas the area loses its ability to absorb rainwater. This rain is instead directed into surface water drainage systems, often overloading them and causing floods. Sustainable Urban Drainage Systems, which deal with surface water, are designed to mimic natural drainage as closely as possible. The Sustainable Urban Drainage Systems (SUDS) approach utilises a wide range of different techniques, including green roofs, rainwater harvesting, permeable pavements, tree pits, wetlands and balancing ponds, to delay stormwater discharge.

Within the Barnhill lands SUDS measures will have a very important role in controlling the quantity and quality of water being discharged to the Barnhill Stream thus helping to ensure compliance with the Water Framework Directive (WFD). The

WFD encourages the protection and enhancement of every aspect of the water environment, introducing more stringent standards and requires 'no deterioration' from current water status.

SUDS measures will be incorporated throughout the LAP lands in both the public and private realms. The pocket and local parks within the residential development will not only provide a recreational and amenity function for residents and act as stepping stones for wildlife but can also incorporate some elements of SUDS features to reduce the risk of flooding on site, provided that such features do not unduly compromise the intended function of the open space. In addition, Barnhill Park will provide a pond/wetland system as part of a SUDS surface water management train.

SWM1 Integrate provision for biodiversity with public open space provision. Provide visual amenity and sustainable water management measures (including SUDS) where possible and appropriate.

SWM2 Allow the provision of SUDS within open spaces where this does not compromise the primary function of the open space.

SWM3 Ensure that SUDS proposals conform to the SUDS Strategy in this LAP.

7.3.5 Archaeological and Architectural Heritage

A site survey was carried out on the 9th March 2017, by Jon Stirland of Archaeological Consultancy Services Unit (ACSU). This comprised of a walk-over field survey of all the lands contained within the Barnhill LAP boundary. The fields were carefully examined for potential surface features of archaeological or cultural heritage interest. The field survey took into account areas suited to human habitation due to topographical characteristics.

The site of the Barnhill LAP lands consists of a network of 12 agricultural field systems bordered on its northern boundary by the Iarnród Éireann railway line and its associated Hansfield Railway Station; and on its eastern boundary by the route of the Royal Canal. Cartographic evidence clearly indicates that since

the production of the 1st Edition OS map in 1837 the site of the Barnhill LAP lands have been largely agricultural with isolated rural housing and farms. The Barnhill LAP lands contain no recorded monuments listed within the Record of Monuments and Places (RMP) and there are no recorded monuments within a kilometre of the lands. There are no structures of architectural note located within the area. The lands do not contain any protected structures listed within the Fingal Development Plan 2017-2023. The nearest being:

711 – Pakenham Bridge – Late 18th Century single-arched stone road bridge over the Royal Canal.

712 – Barnhill Bridge – Mid 19th Century stone road bridge with single arch over former Dublin –Little Pace Railway Line.

944a – Royal Canal – Ashtown to St. Catherine’s Park (Leixlip), Co. Dublin – Late 18th century man-made canal, including the tow paths, the canal channel with its stone and earth banks, and the canal locks (10th, 11th and 12th Lock).

Between 2008 and 2012 three archaeological assessments have been carried out within the Barnhill LAP lands and the site of the Part 8 access road and Hansfield Railway Station. In 2008 a geophysical survey followed by intensive archaeological test trenching was carried out along the proposed route of the Ongar to Barnhill Road. This assessment involved the mechanical excavation of 84 test trenches with a combined total length of 2,791.9m, resulting in a total excavated area of 6002.9m². No archaeological sites were identified during the testing of the proposed Ongar to Barnhill Road. In 2012 archaeological monitoring was carried out on the site of Hansfield Railway Station and its associated access road, which also failed to identify any archaeological features or deposits. Despite the lack of recorded monuments/adjacent recorded monuments and the lack of archaeological features recovered during previous archaeological assessments; it is still considered that due to the undisturbed agricultural nature of the subject lands, they have the potential to contain previously unrecorded subsurface features and deposits of an archaeological nature. Large scale residential, commercial and infrastructural projects carried out in agricultural landscapes in the rural hinterlands

of Meath, Fingal and Dublin have uncovered previously unrecorded archaeological features and deposits that have no visible surface expression.

The policies set out in the Fingal Development Plan 2017-2023 provide a comprehensive policy approach for archaeology in the County. The management approach as detailed in the Fingal Development Plan 2017-2023 will be implemented in the Plan area.

AAH01 *Promote best practice for archaeological excavation by ensuring that they are undertaken according to best practice as outlined by the National Monuments Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, The National Museum and the Institute of Archaeologists of Ireland.*

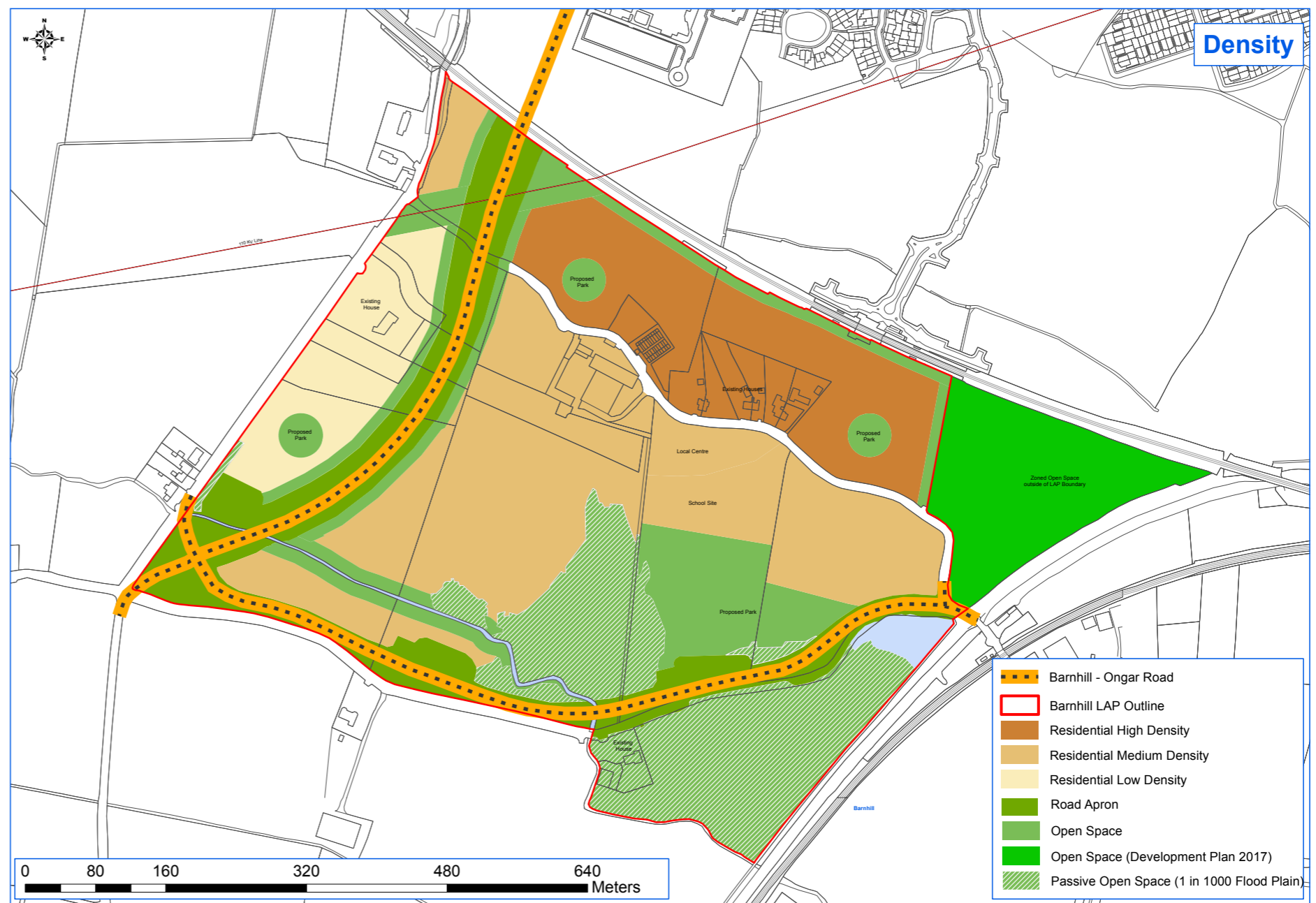
AAH02 *Locate, where feasible, identified archaeological sites and monuments within open space areas.*

AAH03 *Require a place-naming scheme which reflects the heritage of the Barnhill area.*

7.4 Density and Housing Mix

Varied residential density and a mix of dwelling types will exist over the lands in order to accommodate the needs of changing household size patterns, the variety of lifestyle changes and market demands. The LAP advocates a mix of residential units, tenure mix, unit size and design to support the development of a balanced community. There will be a mix of dwelling types and sizes ranging in general from 1-4+ bedrooms including townhouses, semi-detached dwellings, detached dwellings and apartments.

As noted previously, the average number of persons per private household in Fingal is 2.9, higher than the national average of 2.75. (2016 figures). The number of young families is also high and it is anticipated that there will be a higher percentage of 3/4 bed units throughout the Plan lands to cater for the higher family profile.



Density Map

Higher densities of c.84 units/ha are identified along the rail corridor and at appropriate adjacent locations. Medium densities in the range 35-50 units per ha are identified on the remainder of the lands east of the new bridge associated with the Dunboyne-Clonsilla rail line. Within this area there may be potential for pockets of slightly higher density proximate to the train station. Lower densities generally c. 24 units per ha are located on the western part of the lands.

Apartment type units are envisaged on the high density lands, whilst on the medium and low density lands residential development will comprise predominantly of a mix of semi-detached, detached and terraced housing, though apartment and duplex units are not excluded. The Council will look favourably on the provision of accommodation to suit the different residential needs within the community. These will include the needs of the aging population within the greater Blanchardstown area who may wish to trade down to a smaller house or apartment or for those who wish to relocate from rural areas to live closer to services. Adaptable extendible space for



7 Placemaking Strategy

an additional bedroom will be available in a proportion of units. It is anticipated that the mix of dwelling type will vary over the lands. The overall house-type mix for the development of the LAP lands will be broadly within the following parameters:

1 bedroom units	3-10%
2 bedroom units	25-45%
3 bedroom units	30-52%
4 plus bedroom units	5-12%

The Development Management process will ensure that an adequate residential mix is maintained throughout the LAP lands. The LAP lands are anticipated to support between 900-1,150 residential units, but the eventual developed out figure may be greater.

DHM1 Promote a sustainable mix of housing types, sizes and tenures to reflect the diversity of needs in an expanding community set in a high quality well designed environment.

DHM2 Support the development of between 900-1,150 residential units or greater on the lands.

7.5 Building Heights and Landmark Buildings

Building heights within the LAP lands shall be generally 2/6 storey, though the Council is open to single storey residential units in the lower density area to the west of the lands, or at locations where specific type units are proposed to serve the elderly or people with special needs subject to the locations and quantity of units being acceptable to the Council. Similarly greater heights may be appropriate to provide increased densities to the north of the LAP. Each development area shall have a variety of building heights, with a clear design rationale, in order to create interest and improved urban form visually across the LAP. Finishes shall be sufficiently varied in colour and texture to create distinguishable places and provide legibility. They shall be durable and low maintenance.

At strategic locations within the development it would be appropriate for 'landmark' buildings to be developed. These would help to create a focus or sense of place. 'Landmark' buildings in general may be taller buildings, but need not be a tall

building to function as such. A uniquely designed building or the use of a distinctive palette of materials will perform this function just as well. Planning applications for landmark buildings will be assessed on the basis of their potential contribution to the built environment, the quality of the architecture employed and their appropriateness in terms of function and sustainability through the use of durable materials and energy efficiency.

Development along the rail line will be primarily 4/6 storeys minimum in height, with potential for key punctuation buildings along the main street and at key junctions on adjoining streets. The height of dwellings across the rest of the land will be mainly 2/3 storeys. Landmark buildings at key nodal points will be accommodated to provide identifiable visual landmarks.

BH1 Building height will primarily range between 4-6 storeys (or greater subject to high quality design and visual impact) along the rail line and canal and between 2-3 storeys elsewhere on the LAP lands.

BH2 Accept local landmark and feature building elements over the stated building heights at key locations, where they contribute to the visual amenity, civic importance, quality design and legibility of the area. The locations are to be agreed with the Planning Authority at application stage and will be subject to relevant government guidelines.

7.6 Noise

It is the policy of Fingal County Council to adopt a strategic approach to managing environmental noise within its functional area, which will aim to prevent members of the population in new residential and other noise sensitive developments being exposed to undesirable noise levels. The biggest generators of traffic noise in the vicinity relate to the external roads and to the train lines that run to the north and east of the plan area. As the area develops it is to be expected that the noise issue will emerge as a concern. Developers will be required to ensure that appropriate noise assessments are carried out and the principles of good acoustic design are applied in line with "ProPG: Planning and Noise Professional Practice Guidance on Planning & Noise New Residential Development" (2017) and that

predicted internal and external noise levels are in keeping with World Health Organisation recommendations and guidance.

N1. Require developers to ensure that appropriate noise assessments are carried out and the principles of good acoustic design are applied in line with " ProPG: Planning & Noise Professional Practice Guidance on Planning & Noise New Residential Development (May 2017 or as revised) and in keeping with World Health Organisation recommendations and guidance, where appropriate.

7.7 Community and Local Services

The residential zoning on the lands and its suburban nature means that residents in the main will travel to areas outside Barnhill for their employment needs. The Dublin Enterprise Zone, Blanchardstown Centre and the Coolmine Industrial area are located within easy reach of the LAP lands. In addition the LAP's location on the banks of the Royal Canal, offer some limited potential for commercial activity over and above the level of economic activity that would normally be envisaged on foot of a population of circa 3,500 people.

The LAP will provide for a range of services to cater for the shopping, recreational, educational, medical and other needs of the community. The provision of a vibrant village centre will complement the development of the Hansfield SDZ lands to the north, Ongar Village and the existing range of local facilities at Clonsilla Village and will encourage walking and cycling trips in preference to private car use.

A small commercial/café use along the canal will create an attractive destination for residents further afield to enjoy the as yet under developed amenity of the Royal Canal. The facilities within the wider LAP will provide for shopping, commercial, childcare, employment uses, community, leisure and recreational facilities. The appropriate layout of residential units will ensure passive supervision of the area at all times of the day and night. It is envisaged that the provision of a new school within/beside this Local Centre will add vibrancy and vitality to the area and aid in its economic success. The Centre should be large enough to provide for a 1,000 – 2,500 sq.m



foodstore with a range of supporting shops and retail services grouped together to create a focus for the local population and the provision of a civic plaza area should aid in this.

The Local Centre may be situated on both sides of the proposed 'Main Street', this will be determined at application stage pending a design that complies with the Urban Design Guidelines, Chapter 11, section 11.11

CLS1 Facilitate the development of a Local Centre having regard to the retail and service needs of its catchment population.

7.8 Social & Affordable Housing

Social and Affordable housing will be delivered in accordance with the provisions of the Housing Strategy. It is an objective of the Council to ensure that the provision of social and/or affordable housing is integrated throughout the Barnhill lands. It is envisaged that the social housing requirement will be dispersed within the LAP lands and not concentrated in one particular area. Planning applications shall demonstrate this. The social housing requirement within each development area shall be located within the respective Development Area.

SA1 Promote the integration of social/affordable housing with private housing and ensure that Part V development is located within each development area.

7.9 Education/Community

There are a number of existing schools within the area. The closest Primary school, Hansfield Educate Together National School is located 350m to the north, with St Benedict's National School and Castaheany Educate Together National Schools located circa 600m to the north across the Ongar Road. The closest Secondary school, Hansfield Educate Together Secondary School is located 200m to the north. Given the anticipated level of population on the LAP lands the Department of Education and Skills (DES) has advised the Council that a primary school is required. This is seen as a necessary resource for the future based on the emerging residential demography and anticipated demand. Associated with this school may be a multi-functional hall, made available to the wider community. This hall could be

used for among other uses religious purposes. The site for the primary school is located centrally on lands on Main Street and is well positioned to benefit from public transport and from the network of pedestrian/cycle routes and parks, and, open spaces associated with the Royal Canal.

Development of school facilities may occur in any phase subject to demand. Given the level of provision in existing and proposed school sites within the local area, the need for school site reservations will be assessed on an ongoing basis. In the event that the reservation for the school is no longer required and this is confirmed by the Department of Education and Skills, the site will revert to a residential land use designation. A Traffic Management Plan will be prepared for the area containing any proposed school at planning application stage.

It is proposed to provide open space which can be shared with the school and the public (See Section 6.3.3. above) This would also facilitate the shared use of the school car park spaces outside school hours.

E1 Reserve a site c.1.14ha to provide for a primary school adjacent to the local centre. In the event that the DES indicates to the Planning Authority that a school reservation is no longer required the site will revert to a residential land use designation.

E2 Provide an open space to the south of the school site and facilitate complementary shared open space and car parking between the school and public open space.

E3 Ensure that residential development does not take place until such time as the developer has undertaken an Educational Needs Assessment which demonstrates to the satisfaction of the Planning Authority that there is adequate school provision for the needs generated by the proposed development.

7.10 Childcare Facilities

The provision of adequate childcare facilities is a crucial component of social infrastructure. Childcare facilities are to be

provided in accordance with relevant guidelines. The location of childcare facilities will take account of existing geographical distribution of facilities. All premises must be capable of providing outdoor play space or have safe or easy access to a safe outdoor play area.

CF01 Childcare facilities shall be provided in accordance with relevant national policy and shall include outdoor play space or have safe and easy access to a safe outdoor play area.





7.11 Public Art

The Council will encourage and give support to proposals for the creation and display of works of art in suitable, accessible public places within the LAP lands. Such features help establish and reinforce visual identity and sense of place. Large developments in excess of 100 units and large commercial/retail developments in excess of 2000 sq m will be required to provide a piece of public art or sculpture or architectural feature, designed in consultation with the Council. The piece of art should have a relationship with the area. Outdoor sculptures, appropriate art work, and special architectural and landscape features are encouraged in the development of the LAP lands on individual sites and as features within public areas of estates.

PA01 Require new residential developments in excess of 100 units and large commercial/retail developments in excess of 2000 sq m to provide for a piece of public art to be agreed with the Council.

PA02 Ensure that where developers are applying for permission for multiple developments of less than 100 units on the lands that the provision of public art is considered as part of the cumulative total of units.

7.12 Waste

Residential developments will have adequate waste storage space designated for 3 waste streams- residual waste (grey bin), dry recyclables (green bin) and organic waste (brown bin) and will comply with Fingal County Council's *Guidelines on the Provision of Waste and Recycling Bins for Residential Developments*. The storage of bins and waste receptacles will be carefully considered at the design stage with appropriate design measures for refuse bins, within the curtilage of private homes or within a convenient distance of all units.

W01 Require new developments to submit proposals demonstrating how the prevention, reduction and recycling of waste is to be achieved and ensure on-site provision for waste storage and segregation pending collection at all new domestic and non-domestic premises.

W02 Require all future residential schemes to include appropriate design measures for refuse bins, within convenient distance of all units not exceeding 50 metres, details of which are to be clearly identified at planning application stage.

W03 Ensure refuse bins are not situated immediately adjacent to the front door or ground floor windows, unless adequate screened alcoves or other such mitigation measures are provided.

W04 Facilitate the installation of bring bank(s) at suitable locations within the plan area, which do not adversely affect residential amenity or environmental quality.



Group Refuse Bins

7.12.1 Construction Waste Management Strategies

Developer(s) shall be required to submit at planning application stage a construction and demolition waste management plan setting out a programme for the management/recovery/disposal of construction/demolition waste material generated at the site during the excavation and construction phases of development, in accordance with the relevant national waste management legislation. In all instances developers must ensure that all waste is removed from the plan's lands by approved waste disposal contractors to approved waste disposal facilities. Furthermore, the use of sustainable construction methodologies and material will be encouraged and developers will need to demonstrate that these materials are sourced sustainably.

7.12.2 Operational Waste Management Strategies

Waste Management strategies that promote the principle of recovery, recycle and re-use can make a significant contribution towards the overall sustainability levels of development. In this regard an integrated waste management strategy shall be undertaken to ensure that the development makes a positive contribution to the overall sustainability of any development. All new developments shall be required to comply with Eastern Midlands Waste Management Plan. A waste strategy shall accompany all applications for substantial development and shall address:

- Maximising the recovery of valuable resources, for reuse or recycling, before further treatment or disposal.
- Design and development of an integrated process which seeks to significantly reduce direct and indirect emissions, particularly CO₂, methane and dioxins.

7.13 Economic Context

All new mixed use areas should contribute to active streets and quality public realm. Ground floor shops, cafes and restaurants in particular can add vitality to an area. In relation to retailing, a variety of local level shopping is envisaged, with possibly small-

scale neighbourhood level facilities where it is demonstrated that they can contribute positively towards urban design and meet other planning requirements. The area around the Royal Canal and the areas around the train station at Hansfield and new local centre should be promoted as areas for new investment and employment as part of an integrated mixed use environment at this location.

For the majority of the immediate plan area, future employment will be largely dependent on existing and new local services including shops, cafes, restaurants, community uses and live-work or local offices. Such uses will be encouraged on pedestrian thoroughfares and fronting urban spaces, where active frontages can add to urban vitality, providing community focus. Such uses will be supplemented by education-related employment when the primary school is built, and also by temporary employment during construction phases. Small-scale development adjoining the Royal Canal, in the form of café/restaurant/interpretive centre and other services have potential to enhance public appreciation of the canal as an amenity, and may generate additional service-sector employment.

E1 Encourage employment-generating sustainable developments around the train station and within the local centre which will benefit from planned improvements in infrastructure and public transport. In particular, small-scale offices, business services and local level retailing will be encouraged.

E2 Promote the development of an urban community plaza adjoining the entrance to Hansfield train station framed by residential with potential for mixed uses. A minimum floor to ceiling height of 2.7 metres shall be required, measured from finished floor level to finished ceiling level in all ground floor apartments and shall be increased in certain circumstances, particularly where necessary to facilitate a future change of use to a commercial use.

E3 Encourage development of focused small-scale canal-side services which enhance public appreciation of the Royal Canal and its amenities.

Any such proposals will necessarily consider impacts on existing and planned residential amenities, and shall not impact negatively on the biodiversity value of the canal corridor.

7.14 Climate Change

There are various predictions for the effects of climate change in the future, with moderate predictions indicating a 10% increase in rainfall intensity, a 20% increase in base river flow and a sea-level rise of 500mm by the year 2100. Climate predictions are constantly under review and scientists on the International Panel on Climate Change are considering the current rate of melting of the polar icecaps. Notwithstanding the mitigation measures taken as part of the LAP, any report from this body may affect planning permissions and development constructed after the date of issuing.



8 Development Areas

SECTION 8 DEVELOPMENT AREAS

8.0 Development Areas.

In order to help realise the vision for the residential lands at Barnhill, land use strategies, key site objectives and guiding principles are included in this section. Their aim is to encourage designers and developers to frame future developments so that they will contribute to achieving the vision to build a sustainable urban neighbourhood. Proposed developments will be guided in general by the objectives, development standards, and guidelines in the Fingal Development Plan except where more specific guidance for Barnhill is included for in the LAP.

General Guiding Principles

- Encourage a varied, high quality housing choice to attract a diverse occupancy in both household type and tenure and to create a vibrant mix in the community and offer lifestyle and life span choices.
- Promotesustainabledensitiesofresidentialdevelopment that make efficient use of infrastructure, sustain local services and support a public transport service.
- Prioritise good urban design as the key element in the development of place-making, embedded into the design of both buildings and the spaces between them to create a place where people will want to live, work and socialise.
- Develop a network of roads and streets, varying in scale and character, but sharing a similar high quality sustainable and enduring design, sufficiently distinctive to create a memorable brand of place.
- Create a strategic, safe and attractive pedestrian and cycle network with high levels of legibility and permeability, affording direct links to the local centre, nodes, public transport routes and the wider Blanchardstown area.
- Establish a local centre with a mix of commercial and community uses that supports a scale of development in line with the anticipated residential and employment catchment so designed and laid out to provide for a vibrant public realm and function as a key focus for community activities.
- Facilitate all forms of social inclusion in the built environment.
- Facilitate the reduction of greenhouse gas emissions, healthy lifestyles and more compact good urban forms

through reducing car dependency, by encouraging the development of employment opportunities, local services and homes in close proximity, connected by multi-functional green infrastructure networks benefitting both humans and wildlife.

- Allow for landmark buildings defined by their distinctive architectural quality and/or taller height relative to neighbouring buildings subject to design assessment and visual impact. The potential locations of landmark buildings are identified on the LAP Map.
- Ensure residential amenity is secured in the design and layout of development located in proximity to public transport corridors through appropriate noise mitigation.
- Ensure that the scale of the buildings respond to the street hierarchy and character and affords an appropriate degree of enclosure to key civic spaces and junctions.
- Acknowledge that the construction of developments may not be coordinated in sequence, nor controlled by the same developer/design teams, and require demonstration of how a coherent, built form, streetscape and public realm with a coherent physical character is to be achieved in each planning application. This requires the adoption of complementarity in building proportions, roof profiles, external materials, colours and landscaping including tree/plant species and public realm.
- Require the public realm, that is, all the areas which the public have access including streets, roads, parks, and squares, generally the spaces between buildings and the structures that enclose these spaces to be designed with the appropriate attention. This includes for consideration in the context of all users of details such as surface treatment, hard and soft landscaping, lighting, security, street furniture, signage and street art.

DA01 *Ensure that the Urban Design Guidelines for this LAP which aim to support the vision for Barnhill are adhered to in the roll out of development in the area.*

There are 4 identified Development Areas within the lands and these are identified on the map below. In the interests of



controlling the pace of development and ensuring that the new development is well integrated with existing development and in tandem with the necessary physical and social infrastructure, it is an objective of the LAP that individual planning applications should be submitted for the proposed development areas. The phasing of future development within each such area should be clearly indicated as part of the planning application. Should a larger planning application be lodged (Strategic Housing Development) it shall clearly outline proposed phasing within each development area.

Each of the distinct Development areas will have its own character. This will be defined through density, the finer detailing of the buildings, form, fenestration, the nature of activities they generate, their relationship to each other and to the public realm as well as the specification of the palette of materials required to reflect locality and promotion of a sense of place. Different architectural treatments will be sought to provide variety between the different development areas and enhance legibility between and within them. The development areas are primarily residential in nature with the areas around the train station and local centre providing locations and backdrops for the civic and commercial life of the emerging neighbourhood. In addition the local centre will act as a link to the railway station and the area around the train station will act as a link to the development in Hansfield, located across the tracks.

8.1 Development Area 1: Railway Edge

This zone is situated in the northern part of the lands in the vicinity of the Hansfield train station and has been designed to accommodate high density development in the order of circa 84 units per hectare.

Development along the railway edge may take the form of cul-de-sacs with the built form comprising incomplete perimeter blocks with gables to the railway. The boundary edge to the railway will consist of a minimum 2m high wall (with decorative/planted finish). This wall is to provide security for residents and the railway; and to provide a minimal level of noise amelioration and should be of fair-faced brickwork, self-coloured render, dry

dash finish or other aesthetically acceptable finish which may include appropriate planting in the form of climbers or other vegetation.

This parcel of land currently contains an existing row of residential houses located on Barberstown Lane North. Sustainable residential densities are encouraged here in the interests of urban design and where amenity is not considered as being unduly compromised. This will contribute to the goal of providing a range of housing unit types that would support a diverse community. The strong urban form defined by the design of Main Street within Hansfield SDZ is to be replicated on this side of the rail line incorporating a civic space near the entrance to the station. A green route shall run along the length of the rail line, east-west, offering designated and safe

pedestrian and cycle routes which may incorporate facilities associated with a parcours or similar. This will link up with the underpass of the Ongar-Barnhill Road to the west and the zoned open space area and Royal Canal located to the east. The main internal avenue within the LAP lands commences in this Development Area at Hansfield Train Station at the small civic space and will run in a curved south-westerly direction to link in with a proposed local centre located in Development Area 2. Buildings at this location shall be so designed as to allow either residential development and/or commercial development with restaurants and shops encouraged here integrated with residential development.

The southern access to the rail station is a crucial part of the role out of development within Barnhill and shall be accommodated



Map Of Development Areas

8 Development Areas

from the outset of development. The phasing arrangement for the LAP lands will reinforce this (see Chapter 9 Phasing). The layout and design of the access route and surrounding built form shall be an integral part of any initial planning application on the lands. The Plan shall allow for an increased number of car parking spaces for commuters availing of Hansfield Train Station. Access to the train station from the southern side shall be provided in the first phase of development on the lands.

DA02 *Ensure that the layout, design and delivery of the access route to the train station and the surrounding built form of the civic plaza shall be an integral part of any initial planning application on the lands whether in this Development Area or otherwise.*

The minimum 10% allocation of land for open space may be reduced and the allocation transferred to Development Area 2 to allow for a more functional and better proportioned public park to cater for the LAP lands as a whole.

DA03 *Any proposed allocation of open space to an area outside the relevant Development Area shall be delivered on a phased basis.*

Development Schedule	Railway Edge
Gross Area	c.7.43ha
Existing Built on RA land	(c.1.24ha)
Net Area	c.6.19ha
Net Development Area minus areas not developed specifically for housing (10%)	c.5.56ha
Dwellings per ha	84 +/-units
Total Units	467+/- units
Min Social & Affordable 10% of total	47+/- units
Min/Max Building Heights	In general 4-6storeys
Public Open Space	Pocket Park(s), plaza subject to design/finishes
Landmark buildings	At road junctions
Social Infrastructure	Park , Creche
Retail/Commercial	Small scale development
Total residential units	467+/- units

8.2 Development Area 2: Centre

This Development Area occupies the central part of the LAP lands. The density of development will be generally in the range 35-50 units/hectare, though there may be opportunity for a higher density arrangement to occur at locations directly to the south of Barberstown Lane South, subject to agreement with the Planning Authority. It is envisaged that any educational requirements will be located here as well as the majority of own door, back garden housing. The site for the educational facility shall be in the proposed local centre situated on 'Main Street', the road running from the train station which links up with the roads heading northwards from Barberstown Lane South. An area of 1.14ha is given over as a reserved site for the school. It is envisaged that some of this reserved land combined with the open space allocation for Development Area 1 and Development Area 3 will combine to provide for a better functioning public park. (See Section 7.3.3).

It will be necessary to ensure that this core area including the local centre and school is design led, located as it is on the main movement route with a strong surrounding residential content. Critical in establishing a sense of community and identity will be the inclusion of an appropriately proportioned civic space forming a 'village square' enclosed by buildings that accommodate ground floor active frontages and defined by a fine urban grain. This civic space will be required to be designed to give identity to Barnhill and act as a landmark destination and primary space for public interaction.

The establishment of a new local centre at Barnhill is a critical step in breathing life into the area. New neighbourhood facilities and services offer a focal point for the integration of residents in existing and new communities. Developing sustainable neighbourhoods where local people have easy access to shops and services is a key strand in the Fingal Development Plan. A new centre will provide a range of uses and will offer a focal point for living, shopping and access to local services and facilities. At the heart of the new centre will be a multi-purpose civic space which will be a key venue for community use and local events.



Train Station Plaza





Local Centre

The proposed school and local facilities will front onto this civic space. The 'Main Street' on the southern side of the rail line within Barnhill may contain convenience shopping /restaurant/ medical/health facilities/ crèche/ shared centre for religious worship and local services. As with the Main Street in Hansfield possible future expansion is catered for by the inclusion of residential buildings with high floor to ceiling ground floor accommodation capable of future conversion to commercial uses. The street forms the spine link to public transport and schools and is within walking distance of all units proposed within the LAP lands.

Given the findings of the Strategic Flood Risk Assessment, lands in the southern part of this zone will be managed as a natural landscape and will be incorporated into a public park with the addition of SUDS features in the form of a wetland/ wildflower area to provide a suitable habitat for wildlife, as well as a pleasant amenity. A suitable location outside of the area liable to flooding shall be set aside for compensatory storage to

allow for any additional water displacement resulting from the provision of the new roads in the area (Figure 3.9 Appendix 3).

There may be scope to provide an enhanced and combined SUDS/open space element in the southern section of this Development Area which would cater for the SUDS requirement for the housing development in addition to that pertaining to the new roads and afford the public a greater level of visual amenity.

Development Schedule	Centre
Gross Area	c.15.37ha
Net Development Area (minus 10% Open Space, minus Development Area 2 Open Space, School reservation site and areas not developed specifically for housing (10%))	c.11.37ha
Min/Max Dwellings per ha	35/50 units
Min/Max Total Units	398/569
Min Social & Affordable	40/57
Min/Max Building Heights	Indicative Building Heights: 2-3 Storeys
Social Infrastructure	Pocket Park, 10% Open space for Development zone 2 and 3, School reservation 1.14ha, Place of worship/ shared community space
Landmark Building	2-4 storeys
Retail/Commercial	Local Centre –scale as per Development Plan
Social Infrastructure	Parks, Playground, School, Creche
Total	Range 398 -569 units

8.3 Development Area 3: West

This zone is close to the greenbelt with County Meath situated between the western boundary of the LAP lands and the new road reservation relating to the Ongar-Barnhill Road. Building height and form and the quality of design are important given their potential prominence at the interface of the urban edge with the rural hinterland.

There is currently only one residential property on the lands. Vehicular access to this Development Area will be provided from the Clonee to Lucan road (Barnhill Road – R149). There are a number of constraints relating to these lands i.e. the pylon



8 Development Areas

corridor traversing the lands to the north, the existing Barnhill Stream and the SUDS area to the south and the isolating nature of the new road which will separate this segment of the LAP lands from the remainder of the lands located to the east. There is however a proposed underpass of the Ongar-Barnhill road which will allow a connection for pedestrians and cyclists to the north of the lands but not for vehicular traffic. Development of these lands will be generally limited to residential development consistent with the zoning density of that area of the Hansfield SDZ located to the west, i.e. Zone 4. The density of development therefore will be generally circa 24 units/ hectare with the possible exception of the area to the north.

Development Schedule	West (Southern)
Gross Area	c.3.53ha
Existing Built on RA land	(c.1.22ha)
Net Area	c.2.31ha
Net Development Area minus 10% Open Space and areas not developed specifically for housing (10%), c 20% reduction in total.	c.1.88ha
Dwellings per ha	c.24 units
Total Units	45 units
Min Social & Affordable	4
Min/Max Building Heights	1-2.5 storeys
Public Open Space	Pocket Park
Social Infrastructure	Parks

A smaller area of land located between Barberstown Lane North and the train line can sustain a higher density given its location close to the train station and given the constraints of the two roads located on either side of it, rising as they do to bridge the rail line to the north. An opportunity exists to locate a higher building here or position a landmark building as an entrance detail when viewed from an access point to the west along the rail line or the R149. The provision of an under-pass of the Ongar to Barnhill Road will help maintain strategic links to the remainder of the LAP lands and offer routes to the train

station, school and shops. A pedestrian and cycle path should run on a north - south axis linking the underpass with the new road junction linking the Ongar Barnhill Road with the R149.

Development Schedule	West (Northern)
Gross Area (omitting pylon corridors)	c.0.56ha
Net Development Area minus areas not developed specifically for housing (10%)	c.0.5ha
Dwellings per ha	c.50
Total units	25
Landmark building	Option subject to design
Min Social & Affordable	3
Total Area 1 Residential Units	70

Given the constraints of the new road on the land, separating it from the remainder of the LAP, the requirement for a minimum of 10% of the development land to be developed as public open space will be to the benefit of the future residents within this Development Area. Part of the lands to the south located between the R149 and the Ongar-Barnhill Distributor Road

shall be reserved as a potential location for a SUDS feature associated with the provision of the Ongar-Barnhill Road. There may be scope to provide an enhanced and combined SUDS/ open space element here which would cater also for the SUDS requirement for the housing development in addition to that pertaining to the new road.

8.4 Development Area 4: Royal Canal

This Development Area is located between the Royal Canal and Barberstown Lane South. Taking into consideration the findings of the Strategic Flood Risk Assessment Report undertaken which identifies the majority of this land area as being within a flood zone, most of this Development Area is designated as open space/wetland. Development in this area shall be limited to land uses associated with Open Space zoning, managed as a natural landscape and incorporated into a public park.

An objective of the Council is to secure the provision of pedestrian and cycle access to the Royal Canal towpath which is currently being assessed by Fingal and the NTA for upgrading to the Royal Canal Greenway. This development area will provide a gateway entrance to the environs of the Royal Canal and will also link to a potential linear pedestrian route southwards to the open space lands of St Catherine's. It will also ensure a direct pedestrian and cycle route to Dublin City Centre along the canal. There is a small area of land in the northern section



Schematic image of apartments off R121



of this Development Area where the SFRA allows development to occur and it is envisaged that a café/interpretive centre/amenity use associated with the Royal Canal may be located here, given its pivotal position next to it. This is subject to identification of a suitable location for compensatory storage associated with new road infrastructure in the area (see Figure 3.9 Appendix 3).

The LAP map indicates potential for a future road across these lands to link the Porterstown Road to the new Ongar-Barnhill road. This route is based on a strategic accessibility study currently being carried out for the wider southern area of Blanchardstown by the Council. The exact alignment of this proposed route is not known at this time but it is most likely that it will traverse the lands in this Development Area.

Development Schedule	Royal Canal
Gross Area	4.65ha
Net Development Area	0.28
Min/Max Dwellings per ha	
Min/Max Total Units	
Min Social & Affordable	
Min/Max Building Heights	
Public Open Space	4.37ha
Landmark Building	Based on design(not height)
Social Infrastructure	Parks
Retail/Commercial	Café/use related to location along the canal



The Local Area Plan prepared for the lands at Barnhill indicates in broad detail the manner in which the Council requires the land to be developed. It is an objective of the Planning Authority to ensure the timely and orderly development of the Barnhill lands in a sustainable manner. The development may occur over a period longer than this 6 year plan having regard to market demand, construction capacity and the timely supply of infrastructural services.

Development will be phased to ensure that the infrastructure required for a given level of development is provided in tandem with that development including water, sewerage and road infrastructure, open space and local facilities. Phasing can also help to ensure the sustainable and efficient integration of development with public transport infrastructure. The development of zoned land should be phased in accordance with the sequential approach.

9.0 Key Principles of Phasing:

Development should extend outwards from the railway station with undeveloped land closest to the station and public transport routes being given preference, i.e. 'leapfrogging' to peripheral areas should be avoided; A strong emphasis should be placed on encouraging better use of existing under-utilised lands; and areas to be developed should be contiguous to existing developed areas. Only in exceptional circumstances should the above principles be contravened, for example, where a barrier to development is involved. All exceptions must be clearly justified in planning terms and evidence based justification for a departure from these principles must be set out in any planning application proposal for assessment. Where development is out of sequence the relevant phasing, as if it were in sequence, will apply.

The LAP has three indicative phases. Phase 1 includes all the 'RA' zoned land to the north of Barberstown Lane North and east of the new Ongar – Barnhill Road and includes the development of this new road. This initial phase includes those areas adjacent to the existing residential areas located centrally on the lands.

Phase 2 includes all remaining land to the east of the Ongar-Barnhill Road and is the location for the primary school

reservation, local centre, café/interpretative centre and the majority of own door housing. It is recognised in this Phase that the requirement for the school may not coincide with residential development. The school site reservation will remain unless confirmation is received from the DES that it is no longer needed. It is also recognised that the Café/type use in Development Area 4 may not coincide with the general phasing of the lands. The development of this café type/interpretative use can occur at any stage of the phasing.

Phase 3 relates to all lands to the west of the Ongar-Barnhill Road and comprises of development primarily consisting of low density residential housing.

The over-riding aim of the phasing of development in Barnhill is to create a sustainable urban high quality environment with supporting services, amenities and infrastructure to serve the future residents of the area.

P1 Each planning application shall be accompanied by an Environmental Impact Assessment screening report or a full EIAR as appropriate.

P2 All planning applications shall clearly set out a phasing programme as part of the application and this shall include a clear understanding of how each phase is to be completed including infrastructural requirements prior to the commencement of the next phase of development.



Table 3 Phasing Requirements
Phase 1

Enabling Infrastructure	Phase 1 Requirements	Responsibility	Development Area (DA)
Delivery of road infrastructure necessary to provide access to development from lands to the north.	Delivery as part of or prior to the first planning application for development on the lands as agreed with the Planning Authority. No residential units shall be commenced until such time as the appropriate road infrastructure, as agreed with the council, is in place to serve the development.	Developer FCC.	DA 1, 2 and 3.
New entrance and plaza to train station.	Delivery with first development.	Developer with Iarnrod Eireann approval.	DA 1.
Green Infrastructure Masterplan for all of LAP lands.	Delivery of this masterplan (as per objective GI1*) will accompany the first planning application and all subsequent applications and will inform the planning assessment of all proposed development.	Developer in consultation with the Planning Authority at pre-planning stage.	All Development Areas.

Provision of waste water facilities including pumping station as required.	Delivery to align with each stage of development. Pumping station location to be included within Green Infrastructure Masterplan and subject to a planning application as required.	Developer in consultation with Irish Water and the Planning Authority.	All Development Areas.
Pedestrian and cycle links to train station and Hansfield, and a network of pedestrian and cycle links within the lands.	Delivery in tandem with development ensuring that all development includes appropriate access/links to the station.	Developer.	All Development Areas.
Construction of a constructed wetland/pond as part of SUDS management train and water quality infrastructure.	Required size necessary to serve the wider development to be delivered as part of Phase 1.	Developer.	Development Area 2 or 4.
Public Open Space.	Park/wetland/wildflower areas and playing fields to be provided in tandem with relevant phase of development.	Developer.	All Development Areas for Class 2 open space. Development Areas 2 and 4 for Class 1 open space.
School.	Site identified for school to be made available to the DES as per their requirements.	Developer DES FCC.	Development Area 2.



9 Phasing

* G11 Require all planning applications to be accompanied and informed by a Green Infrastructure Masterplan for the entire LAP lands. The Masterplan will form part of the overall assessment of each application and shall clearly:

- demonstrate the creation of a cohesive network of open spaces and green corridors; including street trees;
- demonstrate the creation of green routes/links and stepping stones;
- Facilitate biodiversity and wildlife movement within and outside the LAP;
- Achieve the requirements for the open space hierarchy within the lands;
- Demonstrate a cohesive approach to surface water management, including all SUDS features and compensatory storage; and
- Indicate the location of any proposed pumping station where within the LAP lands.

Phase 2

Enabling Infrastructure	Phase 2 Requirements	Responsibility	Development Area
Pedestrian and cycle links to train station and Hansfield, and a network of pedestrian and cycle links within the lands.	Delivery in tandem with development ensuring that all development includes appropriate access/links to the station.	Developer.	All Development Areas.
Civic Area at Local Centre.	Civic Area with Local Centre delivered as part of development in phase 2.	Developer.	DA1.
Provision of waste water facilities including pumping station as required.	Delivery to align with each stage of development. Pumping station location to be included within Green Infrastructure Masterplan and subject to a planning application as required.	Developer in consultation with Irish Water and the Planning Authority.	All Development Areas.
Green Infrastructure Masterplan for all of LAP lands.	Delivery of this masterplan (as per objective G11*) will accompany the first planning application and all subsequent applications and will inform the planning assessment of all proposed development.	Developer in consultation with the Planning Authority at pre-planning stage.	All Development Areas.
Public Open Space.	Park/wetland/wildflower areas and playing fields to be provided in tandem with relevant phase of development.	Developer.	All Development Areas for Class 2 open space. Development Areas 2 and 4 for Class 1 open space.



School.	Site identified for school to be made available to the DES as per their requirements.	Developer.	
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Phase 3

Enabling Infrastructure	Phase 3 Requirements	Responsibility	Development Areas
Pedestrian and cycle links to train station and Hansfield, and a network of pedestrian and cycle links within the lands.	Delivery in tandem with development ensuring that all development includes appropriate access/ links to the station.	Developer.	All Development Areas.
Provision of waste water facilities including pumping station as required.	Delivery to align with each stage of development. Pumping station location to be included within Green Infrastructure Masterplan and subject to a planning application as required.	Developer in consultation with Irish Water and the Planning Authority.	All Development Areas.
Green Infrastructure Masterplan for all of LAP lands.	Delivery of this masterplan (as per objective GI1*) will accompany the first planning application and all subsequent applications and will inform the planning assessment of all proposed development.	Developer in consultation with the Planning Authority at pre-planning stage.	All Development Areas.

Public Open Space.	Park/wetland/ wildflower areas and playing fields to be provided in tandem with relevant phase of development.	Developer.	All Development Areas for Class 2 open space. Development Areas 2 and 4 for Class 1 open space.
School.	Site identified for school to be made available to the DES as per their requirements.	Developer.	

All proposals for development must demonstrate their contribution to the public realm, including civic spaces, shared surfaces where relevant, public and communal Open Space and cycle/pedestrian routes.



10 Urban Design Guidelines

SECTION 10 URBAN DESIGN GUIDELINES

DA01 *Ensure that the Urban Design Guidelines for this LAP which aim to support the vision for Barnhill are adhered to in the roll out of development in the area.*

10.0 Permeability and Ease of Movement

- *Development will create a pedestrian and cyclist friendly environment with safe access and direct links via connecting open spaces/ walkways to key destinations within Barnhill, Hansfield/ Ongar and the wider Blanchardstown area.*
- *A hierarchy of interlinked urban streets will be established and will include limited use of cul-de-sacs and strong urban edges overlooked by well-designed buildings.*
- *A pedestrian friendly environment in the form of shared spaces/ home zones will be supported in appropriate locations.*
- *The main avenue will be designed as a tree-lined urban street accommodating footpaths and cycle-paths and shall be overlooked by attractive well-designed buildings.*
- *Traffic calming integrated into the design will be a feature of the layout.*
- *Internal access road geometry (widths, radii, speed limitations) will be designed consistent with a traffic calmed residential area.*
- *A Green Infrastructure Masterplan shall be prepared and shall be submitted with the first planning application. The Planning application will be assessed on its achievement of Green Infrastructure objectives.*

10.1 Green Infrastructure

- *Ensure that the design and function of green infrastructure is able to allow the movement of flora and fauna species across the lands and maintain connectivity between the ecological nodes of the Royal Canal, the internal stream and the rail line.*
- *Ensure that the design of all development takes account of the sensitivities of retained habitats and greenways such as the Royal Canal and avoids adverse impacts resulting from noise, lighting and other types of disturbance.*
- *Encourage awareness among local communities of the existence of important greenways, treelines and ecological connectivity to ensure their retention and management for future generations.*
- *The open space strategy will comprise a hierarchy of well-designed open spaces, ranging in size, character and role, supported and connected via green routes, where possible.*
- *All public open space will be accessible, usable and functional.*

- *Open spaces and green corridors will be designed to ensure they are overlooked, safe spaces, enjoying passive surveillance from surrounding development.*
- *A variety of planting and protection of riparian corridors will be incorporated within the Plan lands to encourage biodiversity value.*
- *Open space for active recreation shall be provided as per Development Plan standards in identified locations to serve the LAP lands.*
- *Existing hedgerows to be protected and incorporated into the development in so far as is practicable, particularly along the riparian strip/ecological corridor. Native species such as lime, ash, beech, hawthorn, elderberry and cherry to feature.*
- *Streets and open spaces will incorporate SUDS solutions in their design, this shall include the required tree pits and green verges along the main routes.*

10.2 Public Realm

- *The public realm shall be attractively designed and support successful outdoor spaces developed in the Local Centre, at the train station and adjoining the Royal Canal.*
- *High quality design of the public realm shall be delivered with hard and soft landscaping, finishes and treatments, street furniture and lighting.*
- *The layout, form, scale and massing of development within the lands shall ensure that the impact on views from the lands is mitigated, where possible*

10.3 Urban Design

- *A high standard of urban design is required to ensure the creation of a high quality environment with a distinct sense of place, physically linked with adjoining developments.*
- *Ensure buildings, streets and places are of a human scale.*
- *Moderate the mass of a building or group of buildings so that it steps up or down to its neighbours.*
- *Developers to take adequate measures to minimise the impact of traffic, noise and dust, on residential amenity during construction phases.*
- *Landscape/noise attenuation mounds or other mitigation measures to be located where required to reduce noise levels.*
- *Proposals for residential developments will not create gated communities.*
- *Daylight and sunlight is a key residential amenity and all buildings*



shall receive adequate daylight and sunlight and be within acceptable standards.

- People with disabilities to have freedom to enjoy access to all buildings, streets, amenities and public spaces. Designers shall consciously seek to apply the optimum standards when designing for such access.

10.4 Dwellings/Buildings

- Development shall comprise a wide mix of unit types, sizes and tenure and each character area will have its own individual building typology.

- Buildings shall be constructed to maximise energy use.

- Streets and buildings shall be orientated to maximise access to sunlight/ daylight.

- High standards of energy efficiency and environmental sustainability in layout orientation and building materials.

- High standard of elevational detail is required on buildings that front onto main routes, open space and pedestrian routes.

- Careful attention to orientation and landscaping of individual properties is required.

- Ensuring noise insulation in new buildings so that traffic, train and aircraft noise does not exceed acceptable levels in living spaces.

- Ensure all new residential schemes are designed so that residential units are easily adaptable. All homes, whether apartments, duplexes, traditional houses or otherwise, should be adaptable to the life stage of those living there. While the needs of a family with children are very different to those of an elderly couple, the basic structure of the home should be easily adaptable to accommodate these different life stages.

- Ensure that appropriate building line setbacks, on street parking and privacy strips are provided for in residential and commercial development.

- Where residential units are designed without front curtilage parking, the area to the front of the property shall have narrow, landscaped front-gardens/ privacy strips. This is to provide a buffer between private living space and the public realm, to contribute to local biodiversity, SUDS, and facilitate passive supervision. The conversion of this private open space to facilitate car-parking shall not be permitted.

10.5 Apartments Living Design

- People in apartment developments live in close proximity to one another. Effective sound insulation/acoustic privacy is most important within apartments, between apartments, and between apartments and common areas. Developers shall meet or exceed the noise insulation requirements in the current Building Regulation or any updated standards, where deemed appropriate by the planning authority.

- Residential units shall be designed to maximize use of natural daylight and sunlight. Daylight and sunlight levels, as a minimum, should be in accordance with Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice (B.R.E. 2011) and British Standard (B.S.). 8206 Lighting for Buildings, Part 2 2008: Code of Practice for Daylighting or any update on these documents.

- Entrances and lobbies are important quality issues in apartments. Entrances will be clearly identified and accessed off main streets within the scheme. Lobbies shall be spacious and welcoming as they are a form of communal space.

- Communal facilities [e.g. a community room] will be provided in all apartment schemes in excess of 100 units for the communal use of the residents as deemed appropriate by the Council. In addition a manager's office and store will be provided as appropriate.

- Communal laundry rooms and storage facilities will be provided in apartment blocks where deemed appropriate.

- Dual aspect will be incorporated into the design of all apartment /residential blocks to the maximum extent having regard to the Apartment Design Standards for New Apartments, Guidelines for Planning Authorities 2017 or as revised. Dual aspect provides for inter alia, cross-ventilation, better views, better daylight/ sunlight and more adaptability within residential units. Where single aspect apartments are provided, the number of south facing units should be maximised, with west or east facing single aspect units also being acceptable.

- A minimum floor to ceiling height of 2.7 metres shall be required, measured from finished floor level to finished ceiling level in all ground floor apartments and shall be increased in certain circumstances, particularly where necessary to facilitate a future change of use to a commercial use.

10.6 Distinctiveness, Character, Legibility

- Create individual neighbourhoods with their own identity.

- Promote the development of each area as a distinct and legible new neighbourhood with an individual character achieved through concept, design style and use of materials.

- Each individual character area will be locally distinct with individual features including where appropriate public art and civic landmarks to form its character.

- Development shall incorporate focal points utilising views out of the Plan lands.

- Use of existing landscape elements shall aid distinctiveness and support biodiversity.

- Variations in building design and height shall be encouraged to avoid a monotonous roof line.

- Use of a palette of materials shall be encouraged to support the development of a varied and attractive environment.

- Design solutions to be varied significantly throughout the LAP lands ensuring the avoidance of monotonous repetition of a limited number of buildings and dwelling types.

- Provide for principal frontages in each development plot to define strong streetscape elements, turn corners on public roads, and enclose and overlook amenity open space areas and green routes.

- Require the layout of residential areas to maximise pedestrian permeability with clear, legible and direct routes for pedestrians and cyclists along anticipated desire lines, with safe edge treatment, clear sight lines at eye level and an appropriate level of passive supervision.

- Ensure that innovative building typologies are used throughout Barnhill for life long living and that address issues of car parking, private open space, and the need for high quality residential amenity. Ensure that these buildings have a greater engagement with the varying road and green way layout.

- Ensure a sustainable built form with best practice sustainable design, construction methods and materials, which has regard to solar effect, wind tunnelling prevention and microclimate. Adaptable residential building design, which is responsive to changing technical/economic and social conditions, is generally encouraged.

- Ensure that frontage widths of individual buildings and massing allow for their successful integration into the streetscape.

- Ensure that the distinctiveness of materials is used at various



10 Urban Design Guidelines

scales, allowing for a coherent and high-quality built environment, with an individual palette to identify each neighbourhood. High-quality finishes are to be used in the public realm, including external elevational treatment to buildings, structures and public open space.

- Promote the design and location of bin-stores, service boxes and similar ancillary provision, including meter boxes, into the curtilage of developments or as positive design features that enhance the local streetscape and do not register as visual clutter.

10.7 Parking

- Car parking shall be designed within the context of the streetscape with tree planting incorporated where appropriate.

- Communal multi-use car parking areas, if any, shall be well lit with the benefit of natural surveillance where feasible.

- Car parking shall be designed so that it does not dominate the streetscape.

- Car parking and bicycle parking shall be provided in accordance with Development Plan standards or the appropriate guidelines.

- Car parking shall be clearly delineated for each residential unit and shall be an integral part of the design concept for apartment development.

10.8 Key Architectural Features

- Punctuation buildings shall be encouraged at significant junctions/ corner sites/gateway entrances/nodal points to the development.

- Buildings with frontages to parks, pedestrian/cyclist routes and along Main Streets shall have strong facades, support natural surveillance and be well designed and varied in their elevational treatment.

- Street frontage buildings shall be designed to provide strong corner definition such that gables are avoided and the front elevation definition will be continued to the side elevation thereby ensuring a 'seamless' transition at corners and junctions.

- Urban spaces, defined by quality designed buildings, shall provide visual and physical focal points, at the heart of the new residential community - Buildings shall incorporate architectural expression at entrances, corners, ground floors and roofs.

- High quality materials with good maintenance characteristics shall be used. Natural materials such as stone, brick and timber shall be favoured.

- High standards shall be required for ground finishes, street furniture, signs, landscaping, public lighting and open space.

10.9 Views and Prospects

- Protect and enhance views and panoramas to key local vantage points particularly views and general prospects towards the Dublin mountains to create a sense of place, coherence and appreciation for the overall setting of the lands.

10.10 Local Centre Design

- A small Local Centre shall be developed in an urban village format and shall address/ connect into the surrounding street network in a seamless manner. Residential/ office over ground floor units will be encouraged to facilitate an appropriate mix of uses. A range of daytime and evening uses shall be encouraged.

- The Local Centre shall incorporate a high quality public space which shall be attractively landscaped, incorporate bicycle parking and seating arrangements, and have a high quality paving finish. The space shall be designed to ensure that vehicular parking does not encroach upon this area.

- Buildings shall generally be arranged in a perimeter block pattern adjoining and providing a strong edge and supervision to the main street they front onto, with access to development at designated junctions only.

- Only limited direct vehicular access from buildings shall be permitted onto the main street. Principal pedestrian entrances to the residential development shall be from the public street.

- Buildings shall generally be in the range 2/6 storeys in height, with punctuation buildings facilitated at key sites subject to normal planning criteria.

- Bus lay-bys and a taxi area shall be accommodated at designated points in the Local Centre to accommodate sustainable modes of transport.

- Parking for the commercial uses within the Local Centre shall be located to the rear of buildings, where possible.

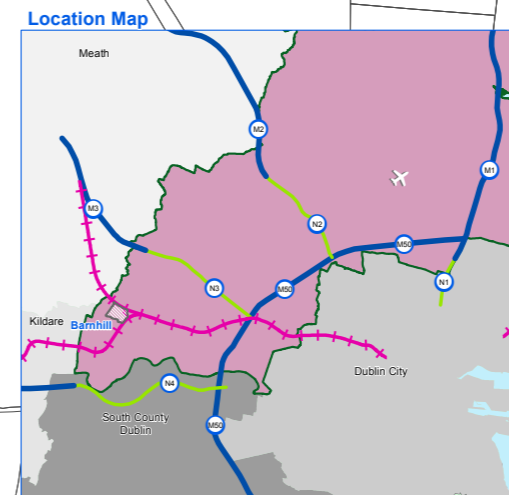
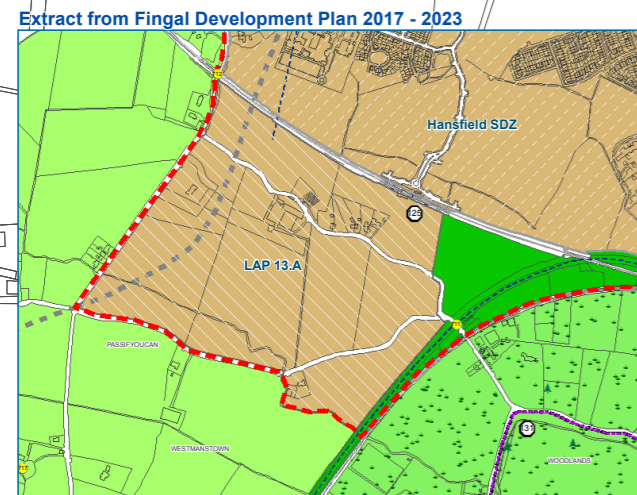
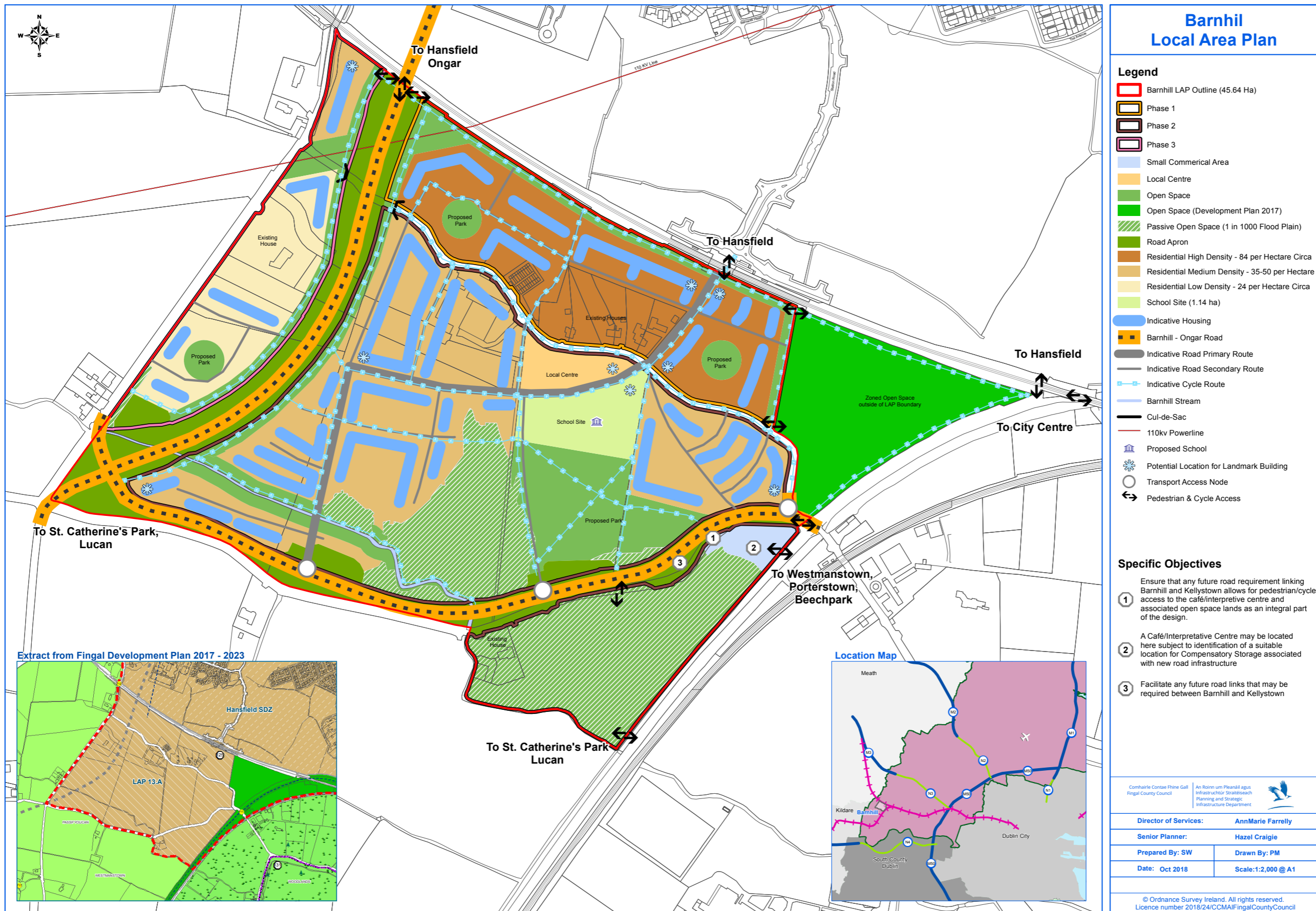
- The Local Centre shall be designed and accessible for all modes of transport, including delivery vehicle, car, bus, pedestrian and cyclist movement.

- Single storey stand alone buildings will not be permitted.

GP01 Ensure that the Urban Design Guidelines for this LAP which aim to support the vision for Barnhill are adhered to in the roll out of development in the area.



Barnhill Local Area Plan Map



Barnhill Local Area Plan

Legend

- Barnhill LAP Outline (45.64 Ha)
- Phase 1
- Phase 2
- Phase 3
- Small Commercial Area
- Local Centre
- Open Space
- Open Space (Development Plan 2017)
- Passive Open Space (1 in 1000 Flood Plain)
- Road Apron
- Residential High Density - 84 per Hectare Circa
- Residential Medium Density - 35-50 per Hectare Circa
- Residential Low Density - 24 per Hectare Circa
- School Site (1.14 ha)
- Indicative Housing
- Barnhill - Ongar Road
- Indicative Road Primary Route
- Indicative Road Secondary Route
- Indicative Cycle Route
- Barnhill Stream
- Cul-de-Sac
- 110kv Powerline
- Proposed School
- Potential Location for Landmark Building
- Transport Access Node
- Pedestrian & Cycle Access

Specific Objectives

- Ensure that any future road requirement linking Barnhill and Kellystown allows for pedestrian/cycle access to the café/interpretive centre and associated open space lands as an integral part of the design.
- A Café/Interpretive Centre may be located here subject to identification of a suitable location for Compensatory Storage associated with new road infrastructure
- Facilitate any future road links that may be required between Barnhill and Kellystown

Comhairle Contae Fhine Gall Fingal County Council	An Roinn um Pleanáil agus Infrastruchtúr Spásleasach Planning and Strategic Infrastructure Department
Director of Services:	AnnMarie Farrelly
Senior Planner:	Hazel Craigie
Prepared By: SW	Drawn By: PM
Date: Oct 2018	Scale: 1:2,000 @ A1

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Barnhill

Local Area Plan
February 2019

