

# **APPENDIX I - NON TECHNICAL SUMMARY**

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## Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report of the Cherrywood Planning Scheme. The purpose of the Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of growth in Cherrywood.

### **What is an SEA?**

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a proposed plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest appropriate stage of decision-making on a par with economic, social and other considerations.

### **Why is it needed?**

The SEA is being carried out in order to comply with the provisions of the SEA Regulations and in order to improve planning and environmental management within Cherrywood. The output of the process is an Environmental Report and SEA Statement, both of which should be read in conjunction with the Planning Scheme.

### **How does it work?**

All of the main environmental issues in Cherrywood are assembled and presented to the team who prepared the Planning Scheme. This helped them to devise a Scheme that protects whatever is sensitive in the environment. It also helped to identify wherever there are environmental problems in the area and ideally the Planning Scheme tries to improve these.

To decide how best to make a Planning Scheme that protects the environment as much as possible the planners examined alternative versions of the Scheme. This helped to highlight the type of Planning Schemes that are least likely to harm the environment.

### **What is included in the Environmental Report which accompanies the Planning Scheme?**

The Environmental Report contains the following information:

- A description of the environment and the key environmental issues;
- A description and assessment of alternatives for the Planning Scheme;
- An assessment of Planning Scheme objectives; and,
- Mitigation measures which set out to aid compliance with important environmental protection legislation - e.g. the Water Framework Directive, the Habitats Directive - and which will avoid/reduce the environmental effects of implementing the Planning Scheme.

### **What happens at the end of the process?**

An SEA Statement has been prepared which includes information on how environmental considerations have been integrated into the Planning Scheme and why the preferred alternative was chosen for the Scheme in light of the other alternatives.

## Section 2 The Planning Scheme

### 2.1 Vision and Content of the Planning Scheme

The overarching vision for the Planning Scheme is:

- To create a sustainable place with a rich urban diversity, which respects its historical and natural setting while also facilitating innovation and creativity.
- To spatially develop a cohesive and diverse community with a strong identity and environmental integrity.
- To contribute to the economic growth of the County through the development of a vibrant economic community anchored around the Town Centre.
- To provide a safe and friendly environment where people can live, work and play within an envelope of sustainable, integrated transport with a primacy of soft modes of transport throughout.

The Planning Scheme document has been prepared by Dún Laoghaire Rathdown County Council and comprises of a written document with maps, and extensive appendices containing a Strategic Environmental Assessment, Studies and Reports and the Cherrywood Biodiversity Plan. The structure of the Planning Scheme is as follows;

1. Introduction, Context, Strategy and Purpose.  
This chapter explains what an SDZ is, the background to the SDZ designation, and the policy context for the Planning Scheme. It sets out the National, Regional and Local Policy context as appropriate. With this foundation the Chapter sets out the vision, principles, and themes for Cherrywood, which underpin all the Chapters and aspects of the Planning Scheme.
2. Proposed Development in Cherrywood  
This chapter sets out the nature, type and extent of development in the Planning Scheme area, and establishes a framework for the built form in Cherrywood.
3. Built and Cultural Heritage  
This chapter details the broad range of protected structures and the archaeology in Cherrywood, and establishes guidelines for their protection and future development.
4. Physical Infrastructure  
This chapter identifies the existing infrastructure in the area and sets out the services required to provide for the capacity of development in Cherrywood. It also sets out a sustainable multi modal transport strategy for the plan area to provide for sustainable travel to, from and within Cherrywood, and establishes policies on energy, telecoms, utilities and waste management.
5. Green Infrastructure and Biodiversity  
This chapter identifies the existing green infrastructure in Cherrywood and details the scheme's open space strategy, a green linkages plan, and biodiversity actions.
6. Development Areas – type, extent and overall design  
This chapter divides the plan into 8 development areas and sets out the extent, scale, nature and form of each of these development areas. The physical infrastructure to be delivered with the development of each area is also stipulated.
7. Phasing of Development  
This chapter sets out the sequencing of Development Areas and the phasing of development and services within Cherrywood.

## 2.2 Interactions with Relevant Policy, Plans or Programmes

### Introduction

The Planning Scheme sits within a hierarchy of land use forward planning strategic actions. The Plan must comply with higher level strategic actions and may, in turn, guide lower level strategic actions. A number of these strategic actions are summarised below:

### The National Spatial Strategy 2002-2020

The focus of the National Spatial Strategy (NSS) 2002-2020 is on fostering a closer match between where people live with where they work. The NSS established a detailed sustainable planning framework for strategic spatial planning to ensure development is targeted at the most appropriate locations. The NSS places emphasis on the creation of high quality living environments through urban design and the integration of social and community amenities.

### Smarter Travel – A Sustainable Transport Future 2009

“Smarter Travel” is the Government’s action plan to free towns and cities from traffic congestion, substantially cut CO2 emissions, encourage car based commuters to leave their cars at home, and encourage a shift toward walking, cycling and greater public transport usage.

### Greater Dublin Area Transport Strategy – 2030 vision

This document sets out the National Transport Authority’s Strategic Transport Plan for the Greater Dublin Area for the period up to 2030. At the heart of this strategy is the requirement that land use planning and transport planning need to be considered together in the overall development of the region.

### Regional Planning Guidelines for the Greater Dublin Area 2010- 2022

The settlement strategy from the Greater Dublin Regional Planning Guidelines identifies Cherrywood as a ‘Large Growth Town II’. It is the only one within the M50 corridor in the Dublin area, and is described as economically vibrant with high quality transport links to larger towns/city. It is envisaged that Cherrywood will ultimately accommodate in the region of 15,000-30,000 persons, which is stated as a range suitable to the scale of the town.

### Retail Strategy for the Greater Dublin Area 2008-2016

The Strategy outlines a retail hierarchy for the various towns within the greater Dublin area and categorises Cherrywood as a ‘Level 3 Town’, within the Metropolitan area. It proposes to facilitate and promote the development of Cherrywood Town Centre on a phased basis as a large scale urban district centre located within a high density environment subject to the provision of light rail links, a sufficient resident population exceeding 10,000 and the preparation of an approved urban design master plan.

### County Development Plan 2010-2016

The existing Dún Laoghaire-Rathdown County Development Plan 2010-2016 states that Cherrywood SDZ is the most significant and strategic development opportunity available to Dún Laoghaire-Rathdown to realise the County’s aspirations and requirements for additional enterprise floorspace and residential units in one of its most sustainable locations.

### Strategic Development Zone Order 2010

The Government Order designating Cherrywood as a site for an SDZ, S.I. No. 535 of 2010, states that Cherrywood SDZ may accommodate: ‘residential development and the provision of schools and other educational facilities, commercial activities, including office, hotel, leisure and retail facilities, rail infrastructure, emergency services and the provision of community facilities as referred to in Part III of the First Schedule to the Act, including health and childcare services’.

### Environmental Protection Objectives

The Planning Scheme is subject to a number of high level environmental protection policies and objectives with which it must comply, including those which have been identified as Strategic Environmental Objectives in Section 3.11.

Note that the above policies etc. influenced the various provisions of the Planning Scheme which are detailed within Section 8 of the main SEA Environmental Report and within the Scheme itself.

## Section 3 The Environmental Baseline

### 3.1 Introduction<sup>1</sup>

The environmental baseline of Cherrywood is described in this section. This baseline together with the Strategic Environmental Objectives, which are identified in Section 3.11, is used in order to identify, describe and evaluate the likely significant environmental effects of implementing the Planning Scheme and in order to determine appropriate monitoring measures. The environmental baseline is described in line with the legislative requirements encompassing the following components – biodiversity, flora and fauna, population, human health, soil, water, air and climatic factors, material assets, cultural heritage, landscape and the interrelationship between these components.

Having regard to the detail provided in the Planning Scheme and issues which were identified during the SEA scoping process, Dún Laoghaire-Rathdown County Council made resources available to facilitate the undertaking of the following studies which have informed the baseline description provided in the Environmental Report and summarised in this appendix:

- Baseline Hydrogeological Assessment<sup>2</sup>;
- Baseline Noise Assessment<sup>3</sup>;
- Biodiversity Plan<sup>4</sup>;
- Appropriate Assessment<sup>5</sup>;
- Flood Study for lands at Priorsland<sup>6</sup>;
- Baseline Visual Impact Assessment, undertaken as part of this SEA; and
- Archaeological Studies<sup>7</sup>.

The lack of a centralised data source that could make all environmental baseline data for the Planning Scheme area both readily available and in a consistent format posed a challenge to the SEA process. This difficulty is one which has been encountered while undertaking SEAs at local authorities across the Country and was overcome by investing time in the collection of data from various sources and through the use of Geographical Information Systems.

### 3.2 Likely Evolution of the Environment in the Absence of the Planning Scheme

In the absence of the Planning Scheme the environment would evolve under the regime of the existing County Development Plan 2010-2016 zonings as summarised under Section 4.2 of this report.

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<sup>1</sup> The Planning Scheme boundary shown on maps in this section is that which was placed on public display as part of the Draft Planning Scheme. This boundary was slightly amended in the south-western corner before the Scheme was adopted. The adopted Planning Scheme boundary is shown on Figure 5.1 in Section 5 of this report.

<sup>2</sup> RPS for Dún Laoghaire-Rathdown County Council (2011) *Cherrywood Hydrology - Phase1 Hydrogeology Assessment of the Cherrywood SDZ*

<sup>3</sup> AWN Consulting for CAAS Ltd. (2011) *Cherrywood SDZ Noise Report*

<sup>4</sup> Scott Cawley for Dún Laoghaire-Rathdown County Council (2012) *Biodiversity Plan*

<sup>5</sup> Scott Cawley for Dún Laoghaire-Rathdown County Council (2012) *Appropriate Assessment for the Cherrywood Strategic Development Zone Planning Scheme*

<sup>6</sup> RPS for Dún Laoghaire-Rathdown County Council (2011) *Flood Risk Assessment and Management Study at Priorsland, Carrickmines*

<sup>7</sup> Including Margaret Gowen & Co. Ltd (2010) *Cherrywood Strategic Development Zone Archaeological Study For RMP DU026-127, Cherrywood, Co. Dublin*

### 3.3 Biodiversity and Flora and Fauna

The Planning Scheme is accompanied by and has been informed by a Biodiversity Plan which provides a summary of the strategy behind the design of the Planning Scheme in terms of the retention, protection and management of ecological resources. New residential, commercial and transportation developments and site preparation works, including those in recent years have resulted in loss of biodiversity and flora and fauna across the site however legislative objectives governing biodiversity and fauna were not identified by the assessment as being conflicted with.

#### European and National Designations

There are no Special Areas of Conservation or Special Protection Areas located within or adjacent to the Planning Scheme area. There is one proposed Natural Heritage Area located immediately to the east of the Planning Scheme area - Loughlinstown Woods pNHA Site Code 001211 - and one located less than 1km to the west of the Planning Scheme area - Dingle Glen pNHA Site Code 001207.

Natural Heritage Areas (NHAs) are designated due to their national conservation value for ecological and/or geological/geomorphological heritage. They cover nationally important semi-natural and natural habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes. NHAs are designated under the Wildlife (Amendment) Act 2000. Proposed NHAs were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated.

#### Other Habitats and Ecological Networks

The Planning Scheme area supports a range of grassland, woodland and wetland habitats that require specific management to maintain their biodiversity. Habitat value ranges from locally-important to County-important scales. The Biodiversity Plan identifies and maps habitats that occur within the SDZ (see Figure 3.1 and Figure 3.2). The most ecologically important habitats include:

- Woody vegetation habitats;
- Hedgerows and tree lines;
- The Loughlinstown River and the Carrickmines Stream.
- Tuffa Spring Areas.

These habitats include various species and function as an ecological network. Ecological networks are composed of linear features, such as treelines, hedgerows, rivers and streams, and the aforementioned roadside green areas, which provide corridors or stepping stones for wildlife species moving within their normal range. They are particularly important for mammals, especially for bats and small birds.

#### Tuffa Springs

The *Cherrywood Hydrology - Phase 1 Hydrogeology Assessment of the Cherrywood SDZ* and the *Biodiversity Plan for Cherrywood SDZ* identify a number of tuffa spring formations<sup>8</sup>. The Hydrology Assessment identified two separate protection zones encompassing two tuffa spring formations. The larger of these zones encompasses the only maturely developed tuffa formations within the limits of the Planning Scheme area. The springs in this area were identified by the Biodiversity Plan as an example of the Annex I habitat 'Petrifying springs with Tuffa formation' and the site was regarded to be of County-level importance<sup>9</sup>. The smaller of these zones encompasses more immature tuffa formations that comprise an ecologically sensitive area within the Planning Scheme area.

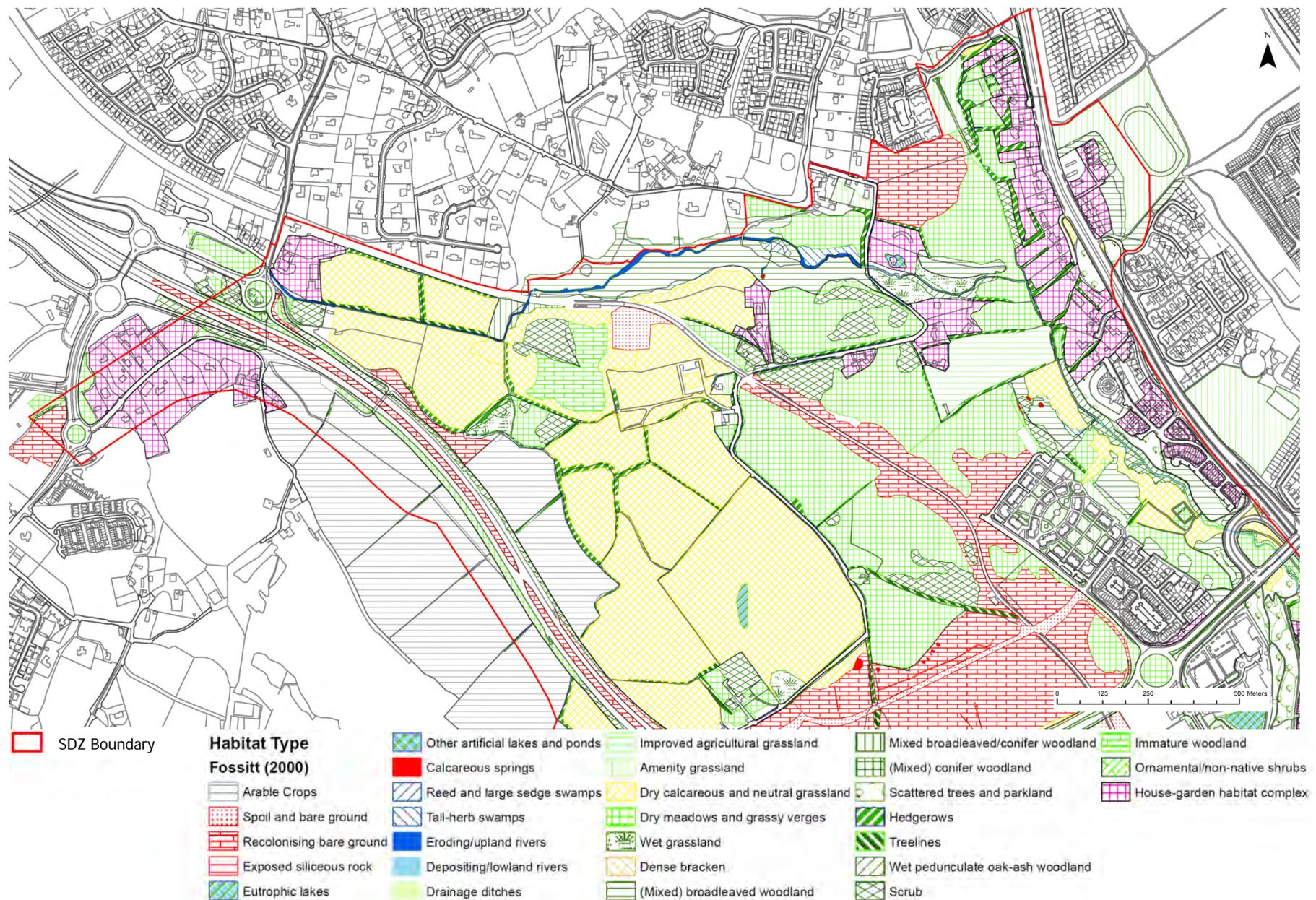
#### Species

Notable species that are protected by legislation and which are identified by the Biodiversity Plan include badgers, otters and bats.

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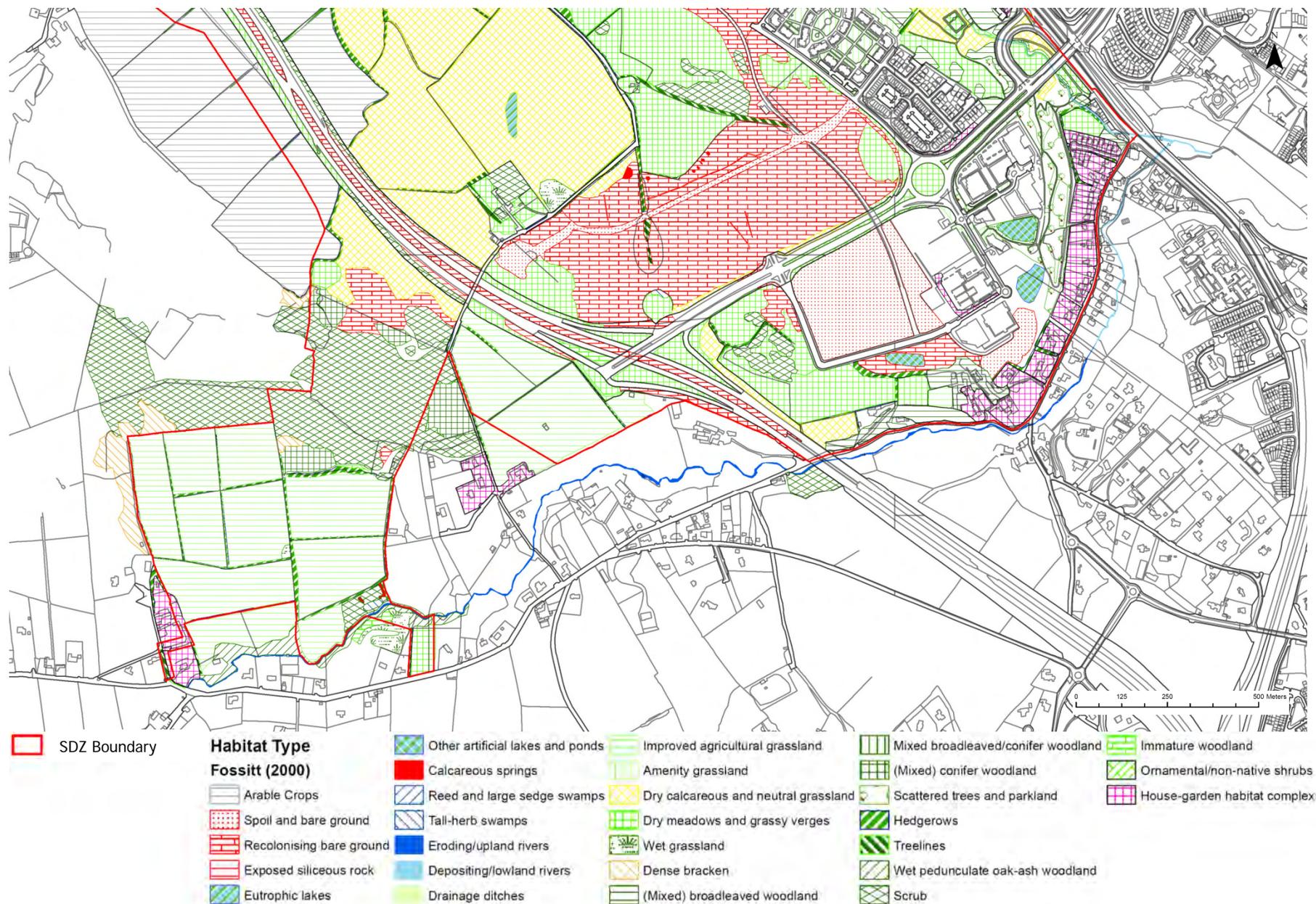
<sup>8</sup> Tuffa is a deposit of calcium carbonate that has deposited at the source of a spring emergence. Groundwater percolating through the soil and aquifer material can dissolve calcium from the parent material and precipitate calcium carbonate where groundwater emerges at the spring source. Tuffa springs are supported by a hydrological cycle whereby rainfall infiltrates the subsoil and discharges at spring emergences.

<sup>9</sup> Scott Cawley for Dún Laoghaire-Rathdown County Council, 2012



**Figure 3.1 Habitats in the north of the SDZ area**

Source: Biodiversity Plan for Cherrywood SDZ (Scott Cawley for Dún Laoghaire-Rathdown County Council, 2012)



**Figure 3.2 Habitats in the south of the SDZ area**

Source: Biodiversity Plan for Cherrywood SDZ (Scott Cawley for Dún Laoghaire-Rathdown County Council, 2012)

### 3.4 Population and Human Health

The SDZ comprises 361 hectares, a large proportion of which is currently unoccupied/undeveloped as indicated by the aerial photograph of the area (see Figure 3.3). It is estimated that the current residential population of Cherrywood is approximately 1,550 persons<sup>10</sup>. This population resides mainly in the eastern fringe of the SDZ. In addition to the residential there is an additional employment population. The main existing employment area within the Planning Scheme area is known as the Cherrywood Science and Technology Park. According to the 2006 Census there were c. 2159 people employed in the Cherrywood Science and Technology Park.

Human health has the potential to be impacted upon by environmental vectors (i.e. environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings). Hazards or nuisances to human health can arise as a result of exposure to these vectors arising from incompatible adjacent land uses for example. These factors have been considered with regard to the description of: the baseline of each environmental component; and the identification and evaluation of the likely significant environmental effects of implementing the Planning Scheme.

Legislative objectives governing population and human health were not identified by the assessment as being conflicted with.



**Figure 3.3 Aerial Photo of the SDZ area**

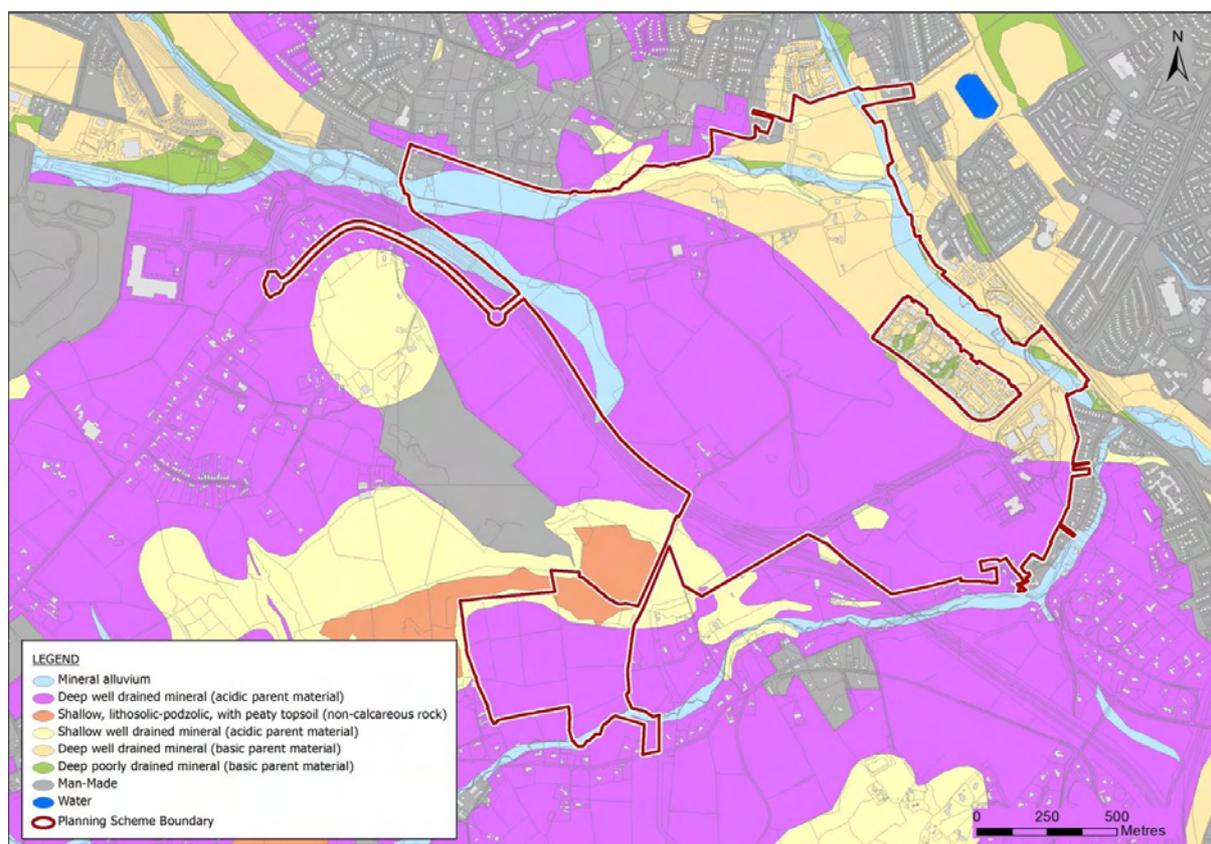
Source: Dún Laoghaire-Rathdown County Council (2011)

<sup>10</sup> Based on 2.5 persons per unit

### 3.5 Soil

It is an extremely complex, variable and living medium and performs many vital functions including: food and other biomass production, storage, filtration and transformation of many substances including water, carbon, and nitrogen. Soil has a role as a habitat and gene pool, serves as a platform for human activities, landscape and heritage and acts as a provider of raw materials. Such functions of soil are worthy of protection because of their socio-economic as well as environmental importance.

Soil types, as classified by Teagasc in co-operation with the Forest Service, EPA and GSI, are mapped on Figure 3.4. The most common soil type in the Planning Scheme area is identified as being 'deep drained mineral (acidic parent material)' soils. Other soils include 'mineral alluvium' which are found along areas including the reaches of the Loughlinstown River and the Carrickmines Stream, 'deep well drained mineral (basic parent material)' soils in the north east of the site and two types of shallow soils that are found in areas generally to the west of the M50. New residential, commercial and transportation developments and site preparation works, including those in recent years, have resulted in an extent of soil being sealed off across the site.



**Figure 3.4 Soil Types**

Source: Teagasc in co-operation with the Forest Service, EPA and GSI (2006)

### 3.6 Water

#### **Potential Pressures on Water Quality and the Water Framework Directive**

Human activities, if not properly managed, can cause deterioration in water quality. Pressures exerted by human activities include the following: sewage and other effluents discharged to waters from point sources, e.g. pipes from treatment plants; discharges arising from diffuse or dispersed activities on land; abstractions from waters; and structural alterations to water bodies.

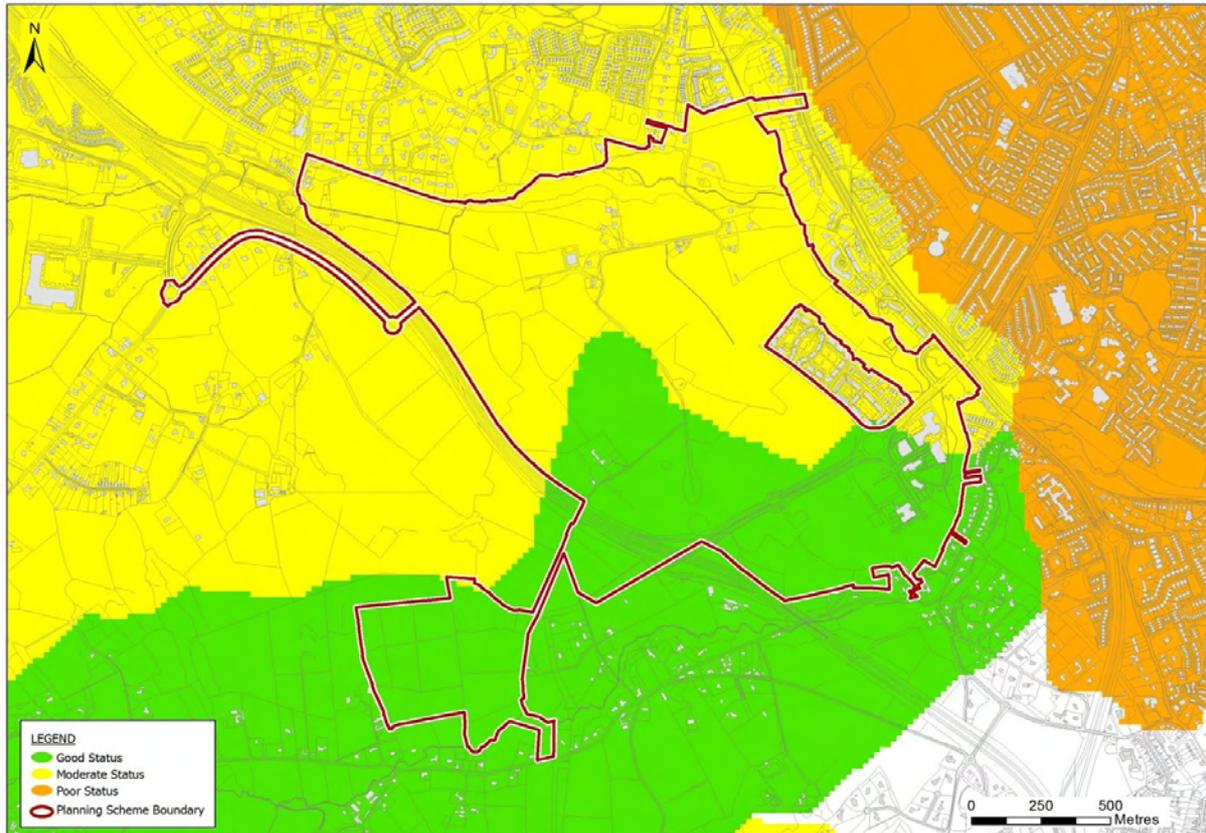
Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD requires that all Member States implement the necessary measures to

prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving "good status" by 2015. All public bodies are required to coordinate their policies and operations so as to maintain the good status of water bodies which are currently unpolluted and improve polluted water bodies to good status by 2015. For the purpose of implementing the WFD, Ireland has been divided into eight river basin districts or areas of land that are drained by a large river or number of rivers and the adjacent estuarine / coastal areas. Local Authorities located in the Eastern River Basin District - including Dún Laoghaire-Rathdown County Council - have prepared a River Basin Management Plan and Programme of Measures. The Plan identifies the status of water bodies within the RBD and provides objectives in order to implement the requirements of the WFD.

### The Status of Waters

Figure 3.5 illustrates the status of surface water catchments within and surrounding the Planning Scheme area. The catchment of the Carrickmines Stream - which encompasses the northern part of Planning Scheme area - is identified as being of moderate status while the catchment of the Loughlinstown River - which encompasses the southern part of the Planning Scheme area - is identified as being of good status. Based on this data, there is a problem with regard to the catchment of the Carrickmines Stream in that it will need improvement in order to comply with the objectives of the WFD. Groundwater underlying the Planning Scheme area is classified as being of Good Status. The ERBD Management Plan and associated Programme of Measures include provisions to help ensure that these water bodies meet the objectives of the WFD. The Planning Scheme and the County Development Plan 2010-2016 both contribute towards the achievement of the objectives of the WFD and the ERBD Management Plan.

The WFD requires that Registers of Protected Areas (RPAs) are compiled for a number water bodies or part of water bodies which must have extra controls on their quality by virtue of how their waters are used by people and by wildlife. All groundwater underlying the area is listed on the RPA for Drinking Water. The Loughlinstown River is also listed on this RPA.



**Figure 3.5 WFD Status of Surface Waters**

Source: EPA (2011)

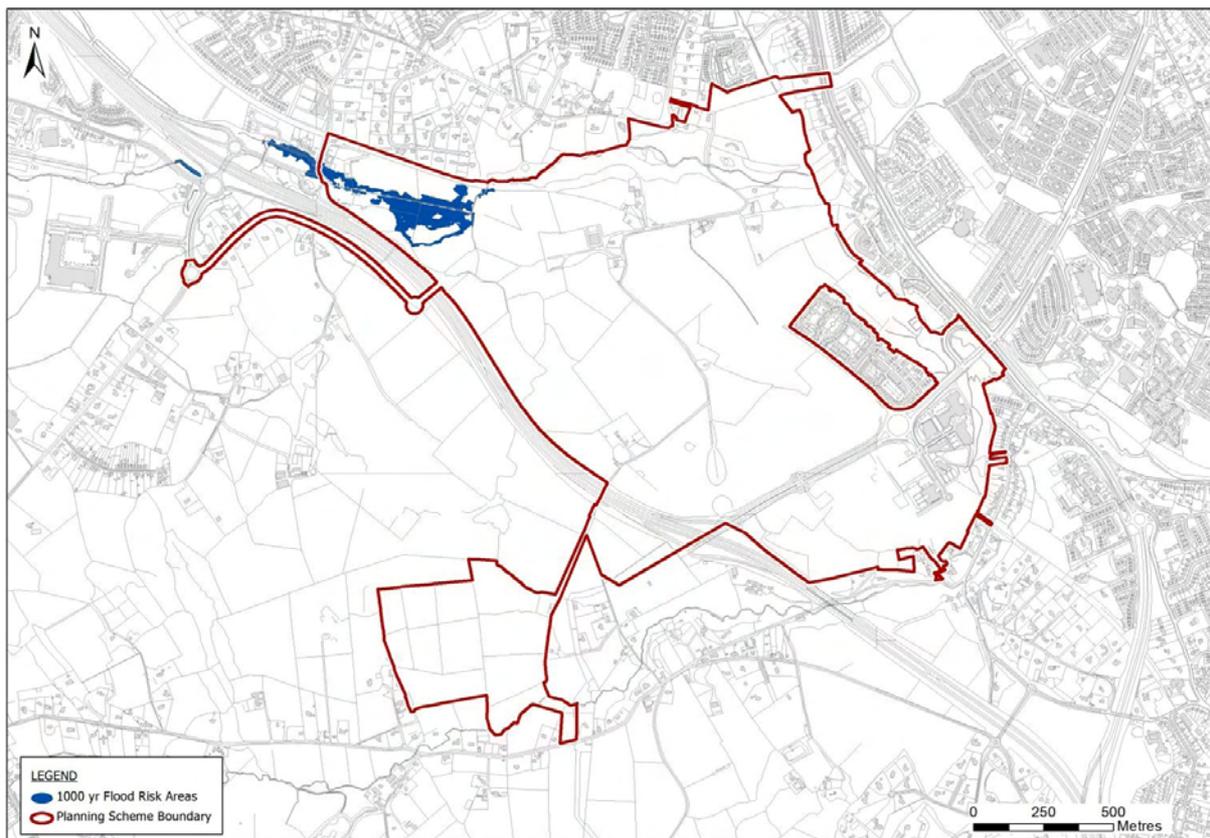
## Flooding

Flooding is an environmental phenomenon which, as well as having economic and social impacts, could in certain circumstances pose a risk to human health.

In November 2009 the DEHLG published The Planning System and Flood Risk Management Guidelines for Planning Authorities. These are aimed at ensuring a more consistent, rigorous and systematic approach which will fully incorporate flood risk assessment and management into the planning system. Planning authorities are required to undertake flood risk identification, assessment and management processes as appropriate when preparing or varying Local Area Plans and when consideration of applications for planning permission.

A detailed flood risk assessment was carried out on all significant watercourses (Carrickmines River, Shanganagh River and Foxrock Stream) in the SDZ prior to the introduction of the Planning System and Flood Risk Management Guidelines for Planning Authorities in November 2009. This assessment identified out of bank flooding, for a flood event greater than the 1 in 100 year flood event, in six general locations in the SDZ. The Planning Authority identified only one of these floodplain locations where development is being considered, namely in Priorsland.

To accord with the new Guidelines a more detailed flood risk assessment and management plan was completed for the Priorsland area, for the more extreme 1 in 1000 year flood event (see Figure 3.6). The management plan identified measures to manage the flood risk in this area. In the other areas where no development is proposed it is not considered, having consulted with the OPW, necessary to carry out further Flood Risk Assessments.



**Figure 3.6 1 in 1000 Flood Envelope at Priorsland**

Source: RPS for Dún Laoghaire-Rathdown County Council (2012)

## 3.7 Air and Climatic Factors

### Ambient Air Quality

In order to protect human health, vegetation and ecosystems, EU Directives set down air quality standards in Ireland and the other Member States for a wide variety of pollutants. These pollutants are generated through fuel combustion, in space heating, traffic, electricity generation and industry and, in sufficient amounts, could affect the well-being of the areas inhabitants. The EU Directives include details regarding how ambient air quality should be monitored, assessed and managed.

In order to comply with air quality standards directives, the EPA measures the levels of a number of atmospheric pollutants. For the purposes of monitoring in Ireland, four zones are defined in the Air Quality Standards Regulations 2002 (SI No. 271 of 2002). The Planning Scheme area falls within Zone A. Air quality in Zone A is currently good. Legislative objectives governing air and climatic factors in Cherrywood were not identified by the assessment as being conflicted with.

### Noise

- The Environmental Noise Directive

Noise is unwanted sound. The Environmental Noise Regulations (SI No. 140 of 2006) transpose into Irish law the EU Directive 2002/49/EC relating to the assessment and management of environmental noise, which is commonly referred to as the Environmental Noise Directive or END. The END defines a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise.

The END does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of the competent authorities. Limit values are left to each member state. At this point in time, Ireland does not have any statutory limit values.

- Noise Action Plan and Noise Model

As required by the END, Dún Laoghaire-Rathdown County Council in conjunction with Dublin City Council, South Dublin County Council and Fingal County Council, produced the Dublin Area Noise Action Plan and Noise Model in 2008.

The Action Plan is aimed at managing Environmental Noise. The noise model maps that were carried out as part of the Plan show colour coded areas in the Dublin Agglomeration based on sound levels.

- Noise Assessment for the Planning Scheme

Consideration of the Noise Action Plan and Model early in the preparation of the Planning Scheme highlighted that transportation related noise sources are the primary contributors to the existing noise environment in Cherrywood. As a result of these considerations, a Noise Assessment was commissioned and undertaken by AWN Consulting in order to strategically assess the impact of the existing noise environment on the Planning Scheme area.

The study found that the M50 is the primary transportation corridor through the Planning Scheme area, and as a result is the dominant noise source, and that other national/local roads and light rail sources also contribute to the overall noise environment and these sources.

The maps provided by the assessment together with accompanying guidance for development with regard to noise levels have influenced the Planning Scheme's Primary Land

Uses Map as well as influencing the insertion of a Noise Sensitivity Objective into the Planning Scheme.

### **Sustainable Mobility**

Travel is a source of:

1. Noise;
2. Air emissions; and
3. Energy use (38.8% of Total Final Consumption in Ireland in 2010 was taken up by transport, the largest take up of any sector)<sup>11</sup>.

Land-use planning contributes to what number and what extent of journeys occur. By addressing journey time through land use planning and providing more sustainable modes and levels of mobility, noise and other emissions to air and energy use can be minimised. Furthermore, by concentrating populations, greenfield development - and its associated impacts - can be minimised and the cost of service provision can be reduced.

Maximising sustainable mobility will also help Ireland meet its emission target for greenhouse gases - to limit the increase in combined emissions during the five-year period 2008-2012 to 13 per cent above 1990 levels - that comes from the internationally agreed Kyoto Protocol.

### **Energy and Sustainability**

In 2009, CODEMA carried out the "Cherrywood Vision and Sustainability Toolkit". The report set out to define extensive and transparent criteria or guidance to form a framework for a sustainable development vision to be used to aid planners and developers to facilitate a coherent 'whole site' strategy for sustainability.

An energy assessment of Cherrywood was carried out in 2011, also by CODEMA on behalf of the Council. The proposed development was assessed under current building regulations as well as two alternative construction scenarios. The purpose of the report is to allow Dún Laoghaire Rathdown County Council to make more informed decisions about how to attain better energy efficiency standards while increasing the profile of the cutting edge development proposed at Cherrywood.

## **3.8 Material Assets**

### **Waste Water**

Foul sewerage within the Planning Scheme area discharges to the Shanganagh Wastewater Treatment Works (SWTW) which are located approximately 2km to the east. The SWTW is currently being upgraded as part of the Shanganagh Bray Wastewater Project, to cater for existing and all projected future catchment development flows.

### **Drinking Water**

- Drinking Water Supply

Water supply to the Cherrywood Planning Scheme area is taken account of by and relies upon elements of the following:

- The Dublin Supply Project – Major Source;
- Dublin Water Supply Storage Study 2007; and,
- The Old Connaught Woodbrook Water Supply Scheme (OCWWSS)

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<sup>11</sup> Sustainable Energy Ireland (2011) *Energy in Ireland 1990 – 2010*

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. This is outside the ability of the Planning Scheme to resolve and will require continual review by the Council.

- **Drinking Water Quality**

Under Section 58 of the Environmental Protection Agency Act 1992 the EPA is required to collect and verify monitoring results for all water supplies in Ireland covered by the European Communities (Drinking Water) Regulations, 2007. The EPA publishes their results in annual reports which include Remedial Action Lists (RALs). The RAL identifies water supplies which are not in compliance with the Regulations mentioned above.

The most recently published EPA RAL (EPA, 2011) includes the Roundwood Water Supply due to treatment and management issues identified by an EPA Audit Observation. The RAL recommends that the replacement of the Callow Hill Tunnel, use of covered storage reservoir and upgrade of disinfection system.

## **Waste**

Dún Laoghaire-Rathdown County Council currently has no landfill site or any active waste treatment facilities in its functional area; hence the vast bulk of waste that arises in the county is collected locally and transferred to facilities outside the county such as those at Kill and KTK Landfill at Kilcullen, County Kildare.

There are currently a number of “bring centres” for recyclables available for public use in the county.

## **Transport**

Cherrywood is well situated adjacent to the strategic national road network. It has access to the M50 motorway at Lehaunstown interchange, which directly links the site into the national inter-urban motorway network and also provides vehicular access to centres to the south (Bray / Wicklow), the north (Sandyford / Dundrum) and the west (Tallaght / Blanchardstown). The site also has access to the N11 dual carriageway at Wyattville interchange, which provides access to Dublin city centre via Cornelscourt, Stillorgan, UCD and Donnybrook.

The Cherrywood area is served by the N11 QBC and the No.7 bus route. The Luas Green Line traverses the Cherrywood Planning Scheme area with stops at Carrickmines, Brennanstown, Lehaunstown, Cherrywood and Bride's Glen.

The Cherrywood Planning Scheme area suffers from high levels of severance due to the steep topography of the Carrickmines and Bride's Glen river valleys and the M50 motorway. The surrounding road network, particularly the N11, is not an attractive environment for cyclists and pedestrians due to the type, speed and volume of the traffic.

## **3.9 Cultural Heritage**

### **Archaeological Heritage**

Archaeological heritage is protected under the National Monuments Acts (1930-2004), Natural Cultural Institutions Act 1997 and the Planning Acts. The Record of Monuments and Places (RMP) is an inventory, put on a statutory basis by amendment to the National Monuments Act 1994, of sites and areas of archaeological significance, numbered and mapped. The term ‘monument’ includes all man-made structures of whatever form or date except buildings habitually used for ecclesiastical purposes. All monuments in existence before 1700 A.D. are automatically considered to be historic monuments within the meaning of the Acts.

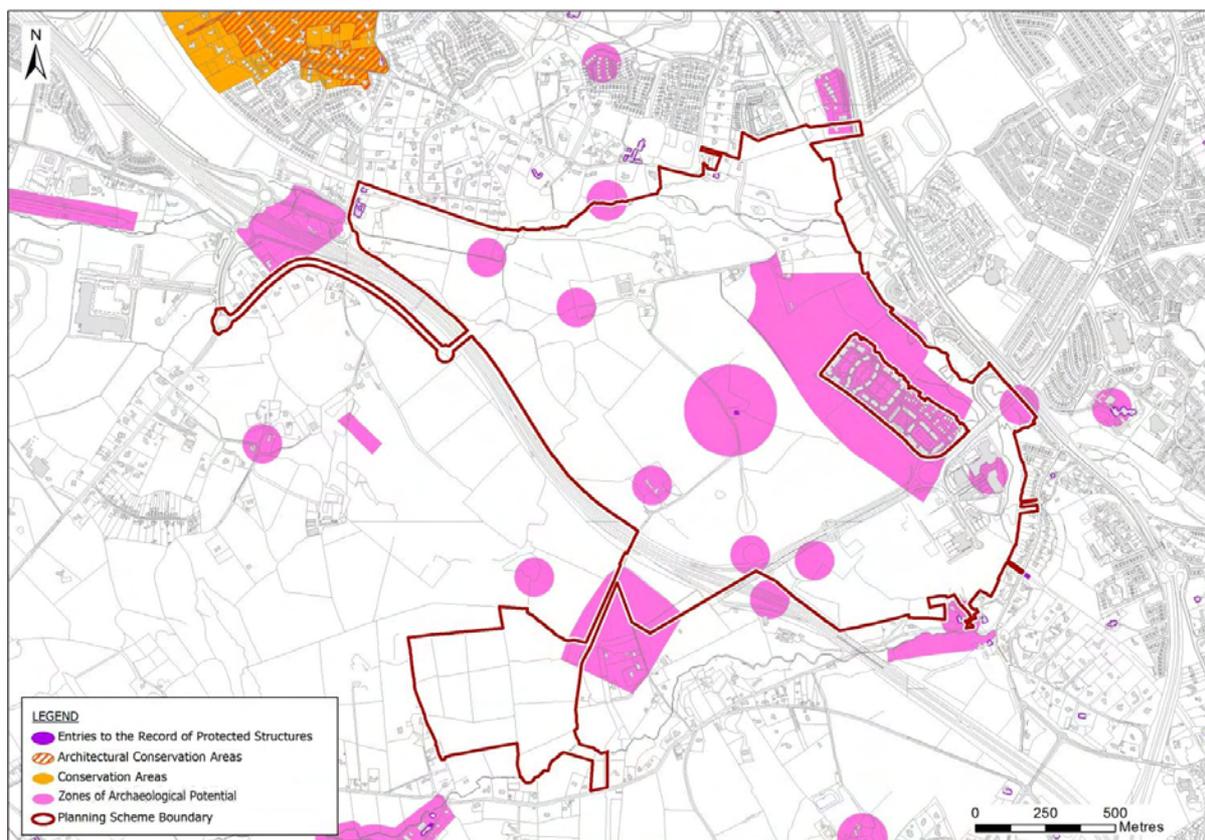
There are 31 monuments and places listed in the RMP in the Planning Scheme area. The area has a rich heritage of archaeology, spanning from the Mesolithic (middle stone age) through to the Medieval and Post-Medieval periods, and has a significant military history dating from 13<sup>th</sup> to 18<sup>th</sup> Centuries. Entries to the RMP include Tully Church and 2 associate high crosses, a wedge tomb at Laughanstown, Carrickmines Castle, lying at the north-west boundary of the Planning Scheme area, a dolmen at Brennanstown, the zone of archaeological potential for this monument lies within the Planning Scheme area. Significant archaeological excavations in the Cherrywood area have taken place over the last 15 years associated with the South Eastern Motorway, the Luas B1 Line, residential and other developments which have indicated a high potential for further archaeological material yet to be identified. Entries to the RMP are mapped on Figure 3.7.

### **Architectural Heritage**

The term architectural heritage is defined in the Architectural Heritage (National Inventory) and Historic Monuments Act 1999 as meaning all: structures and buildings together with their settings and attendant grounds, fixtures and fittings; groups of structures and buildings; and, sites which are of technical, historical, archaeological, artistic, cultural, scientific, social, or technical interest.

The Record of Protected Structures (RPS) is legislated for under the Planning and Development Acts 2000-2010. Protected Structures are defined as structures, or parts of structures that are of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view. There are 9 entries to the RPS that are situated within the Planning Scheme area and another 5 which are situated on the borders of the Planning Scheme boundary - these are mapped on Figure 3.7.

The Planning and Development Acts 2000-2010 provide the legislative basis for the protection of areas known as Architectural Conservation Areas (ACAs). An ACA is a place, area or group of structures or townscape which is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures, whose character it is an objective to preserve in a development plan. The Foxrock ACA lies to the north of the Planning Scheme area and part of this ACA is mapped on Figure 3.7.



**Figure 3.7 Cultural Heritage Designations**

Source: Dún Laoghaire-Rathdown County Council (2010)

## 3.10 Landscape

### Baseline

The Planning Scheme area is part of the current edge between the City's continuous urbanised area and the less developed urban fringe areas. The latter comprise open fields interspersed with dwellings located along the network of roads in the area.

The surrounding area lies along the transition between the eastern foothills of the Wicklow Mountains and the coastal plain of the Irish Sea.

The Planning Scheme is located in an area centred on a low hill [74mOD] in a valley between Killiney Hill [152mOD] and Carrickgollogan [246mOD]. The hill lies at the confluence of two tributaries of the Loughlinstown River - which gives it localised topographic prominence when seen from within these deeply incised, steep-sided stream corridors.

Only two elevated areas offer panoramic views across the Planning Scheme area, the areas around Killiney Hill to the north east and the areas around Ticknick/Rathmichael to the south-west. Viewed from these more distant areas, the Planning Scheme area is perceived in two distinctive contexts as follows:

- When viewed from elevated areas to the north east, the Planning Scheme area will form the foreground to a panorama of hills of ever increasing height that culminate in the skyline formed by the Wicklow mountains;

- When viewed from the south-west, the Planning Scheme area will be seen in the context of the fully urbanised suburbs of Carrickmines, Cabinteely, Sallynoggin, Killiney, Ballybrack and Loughlinstown.

New residential, commercial and transportation developments and site preparation works, including those in recent years have resulted in changes to the visual appearance of lands within and surrounding the Planning Scheme area however legislative objectives governing landscape and visual appearance were not identified by the assessment as being conflicted with.

### **County Development Plan 2010-2016 Designation**

The formal designation of the character of the landscape is contained within County Development Plan 2010-2016 at Appendix F – Landscape Character Assessment – which notes that Character Unit 14 Cherrywood/Rathmichael ‘is undergoing dramatic change with the introduction of the Luas B1 line and the development of the Cherrywood Science and Technology Park.’

The relevant formal description of the sensitivity/strategy of this landscape contained within that appendix states ‘Development within the Cherrywood Rathmichael (sic) shall take into account the features of landscape importance within the site.’

The County Development Plan 2010-2016 at Table 9.1 lists relevant Prospects to be preserved as;-

- Carrickgollogan from Ballybrack (e.g. Church Road and Churchview Road)
- Carrickgollogan from Bray Road (Shankill to Bray area)
- Three Rock Mountain and Two Rock Mountain from the Ballybrack Road
- Glencullen Mountain and Valley from the Ballybrack Road

### **Key Sensitivities in the landscape surrounding the Planning Scheme area**

The elements that most strongly establish the distinctive character of the surrounding landscape are listed below. The significance of the effects on the character and appearance of the landscape will be in proportion to the degree that these elements are affected.

- Panoramic view of the edge of the city meeting the foothills of the Wicklow Mountains with the distant skyline – as seen from elevated areas to the north east.
- Panoramic Views of the coast – including Killiney Hill – with foreground and middle distance views of mature suburbs with associated trees and landmark spires.
- Localised views of high amenity woodlands along stream corridors.

### **Key Landscape Sensitivities within the Planning Scheme area**

The elements that most strongly establish the distinctive character of the landscape are listed below. The significance of the effects on the character and appearance of the landscape will be in proportion to the degree that these elements are affected.

- The integrity of the lands around Tully Church – i.e. the context of the Church and its associated setting of trees, Lehaunstown Lane and the panoramic views from the nearby hill top.
- The natural quality of the steep-sided stream valleys that enclose the north and east of the site.
- Occasional panoramic views from vantage points towards the surrounding landscape features – including Killiney hill, the coast and the Wicklow Mountains and its foothills.
- The context and setting of items of cultural heritage.

### 3.11 Strategic Environmental Objectives

Strategic Environmental Objectives (SEOs) are methodological measures against which the environmental effects of the Planning Scheme can be tested. If complied with in full, SEOs would result in an environmentally neutral impact from implementation of the Planning Scheme. The SEOs are set out under a range of topics and are used as standards against which the provisions of the Planning Scheme can be evaluated in order to help identify areas in which potential adverse impacts may occur. SEOs are distinct from the objectives of the Scheme and are developed from international and national policies which generally govern environmental protection objectives. Such policies include those of various European Directives which have been transposed into Irish law and which are intended to be implemented within the Planning Scheme area.

**Table 3.1 Strategic Environmental Objectives**

SEO Code	SEO
<b>B1</b>	To ensure compliance with the Habitats and Birds Directives with regard to the protection of Natura 2000 Sites and Annexed habitats and species <sup>12</sup>
<b>B2</b>	To ensure compliance with Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function act as stepping stones - are of major importance for wild fauna and flora and essential for the migration, dispersal and genetic exchange of wild species
<b>B3</b>	To avoid significant impacts on relevant habitats, species, environmental features or other sustaining resources in Wildlife Sites and to ensure compliance with the Wildlife Acts 1976-2010 with regard to the protection of species listed on Schedule 5 of the principal act
<b>HH1</b>	To protect human health from exposure to incompatible landuses
<b>S1</b>	To avoid damage to the hydrogeological and ecological function of the soil resource in Cherrywood
<b>W1</b>	To maintain and improve, where possible, the quality and status of surface waters
<b>W2</b>	To prevent pollution and contamination of ground water
<b>W3</b>	To comply as appropriate with the provisions of the Planning System and Flood Risk Management: Guidelines for Planning Authorities (DEHLG, 2009)
<b>M1</b>	To serve new development with adequate and appropriate waste water treatment
<b>M2</b>	To serve new development with adequate drinking water that is both wholesome and clean
<b>C1</b>	To reduce travel related emissions to air and to encourage modal change from car to more sustainable forms of transport
<b>CH1</b>	To protect archaeological heritage including entries to the Record of Monuments and Places and/or their context
<b>CH2</b>	To protect as appropriate architectural heritage including entries to the Record of Protected Structures and their context
<b>L1</b>	To minimise significant adverse visual impacts within and adjacent to the Planning Scheme area

<sup>12</sup> 'Annexed habitats and species' refer to those listed under Annex I, II & IV of the EU Habitats Directive and Annex I of the EU Birds Directive.

## Section 4 Alternative Scenarios

### 4.1 Description of the Alternative Plan Scenarios

One of the critical roles of the SEA is to facilitate an evaluation of the likely environmental consequences of a range of alternative scenarios for accommodating future growth at the Planning Scheme lands in Cherrywood.

#### **Alternative Scenario 1: The Cherrywood Common Infrastructure Implementation Plan**

Following the adoption of the County Development Plan 2004-2010, a Master Plan was devised for Cherrywood in 2007. At that time, it was decided to examine the feasibility of this plan in terms of the infrastructural requirements and phasing of development. This became the Cherrywood Common Infrastructure Implementation Plan 2008. This plan formed the basis of the County Council's request to the Government for the SDZ designation in 2008.

The Plan envisaged a new Town of c. 34,300 resident population, and an employment population of c. 17,600, with the masterplan area divided into ten development zones for a progressive phased development of the area. Having regard to the phased and considered approach to the development of Cherrywood as laid out in the Implementation Plan, it is a realistic option to examine.

The Block Plan map from the Plan is shown provided as Figure 4.1.

#### **Alternative Scenario 2: 2010-2016 County Development Plan zonings**

This alternative involves reproducing the current 2010-2016 County Development Plan zonings. The lands within the SDZ boundary are currently covered by the following zoning provisions:

- Objective DC: To protect, provide for and/or improve mixed-use district centre facilities.
- Objective E: To provide for economic development and employment.
- Objective F: To preserve and provide for open space with ancillary active recreational amenities.
- Objective A: To protect and/or improve residential amenity.
- Objective A1: To provide for new residential communities in accordance with approved local area plans.
- Objective B: To protect and improve rural amenity and to provide for the development of agriculture.
- Objective G: To protect and improve high amenity areas.

The current 2010-2016 County Development Plan zonings generally provide for a mixed use district centre, supported by extensive employment, residential and open space areas. There is one area, the A1 zoned lands, which require the provision of an approved local area plan. Other than these A1 lands, all other lands within the SDZ area are capable of being utilised, in accordance with their current zoning. This is therefore a realistic option for the Planning Scheme.

Current 2010-2016 County Development Plan zonings are shown on Figure 4.2.

#### **Alternative Scenario 3: Developers'/Landowners' submissions, January 2011**

The Cherrywood Common Infrastructure Implementation Plan was written and submitted to the DEHLG in 2008. The SDZ designation was signed in 2010. Having regard to this time span, the Planning Authority invited the developers/landowners to make a written submission setting out any new issues they wished to have considered in the Planning Scheme. Their submissions were received in January 2011. These submissions suggested a lower density focus for the plan area, a reduced infrastructure provision due to the reduced level of growth in the surrounding areas and a revised

phasing of development. New land uses were also proposed. The combined landowners' submissions are therefore a realistic alternative proposal for the Planning Scheme.

It was not appropriate to prepare a map for this scenario due to both the inconsistent coverage of lands referred to in the submissions across the SDZ lands and the varying levels of detail provided with regard to these lands.

#### **Alternative Scenario 4: The Planning Scheme**

This alternative (see Figure 4.3<sup>13</sup>) sets out the form, scale and nature of development and supporting infrastructure to enable the delivery of growth that is economically sound, environmentally friendly, and supportive of healthy communities - growth that enhances quality of life.

Central to the alternative is Cherrywood Town Centre which was designated as a District Centre under the Retail Strategy for the Greater Dublin Area 2008-2016, providing up to 35,000sq.m of net lettable retail floorspace. There are also three Village Centres: Priorsland, Tully Village and Lehaunstown, each with an appropriate range and scale of retail, commercial, community and other facilities.

The proposed infrastructure within Cherrywood has the potential to accommodate a resident population of 20,800<sup>14</sup> and a working population of 17,500.

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<sup>13</sup> The boundary and land uses shown on Figure 4.3 in this section are that which were adopted as part of the Planning Scheme.

A change to the boundary of the Draft Planning Scheme was made in the south-western corner of the SDZ before the Scheme was adopted. This change would not be likely to result in significant environmental effects.

A change to the land uses of the Draft Planning Scheme was made in the south of the SDZ before the Scheme was adopted (an area of High Intensity Employment Uses was changed to Residential). This change would not be likely to result in significant environmental effects.

A number of changes were made to the Planning Scheme on foot of modifications specified by An Bord Pleanála on approval of the Scheme. These changes would not be likely to result in significant environmental effects.

<sup>14</sup> Note that this figure was reduced from the Draft Planning Scheme figure of 25,000.

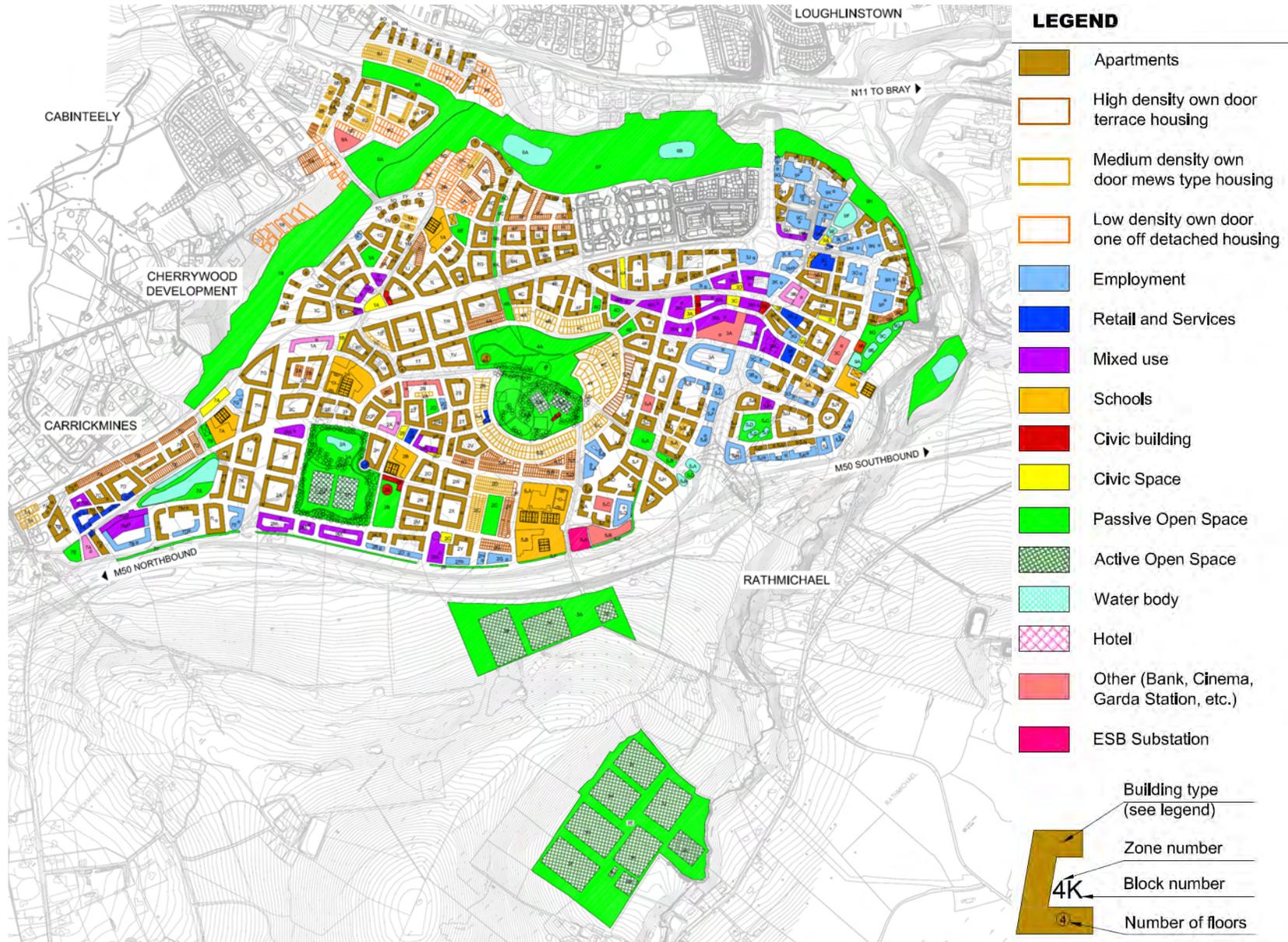
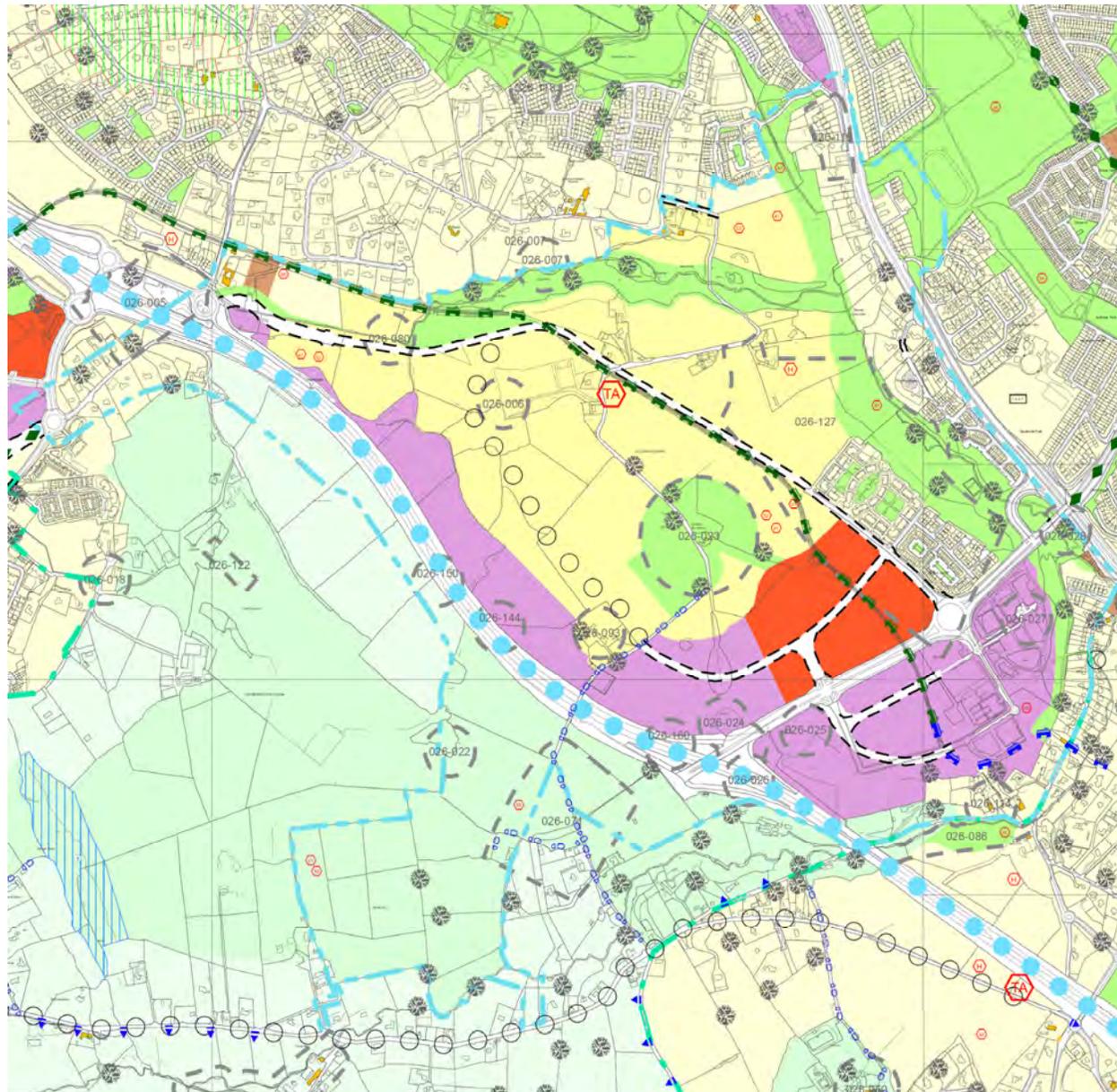


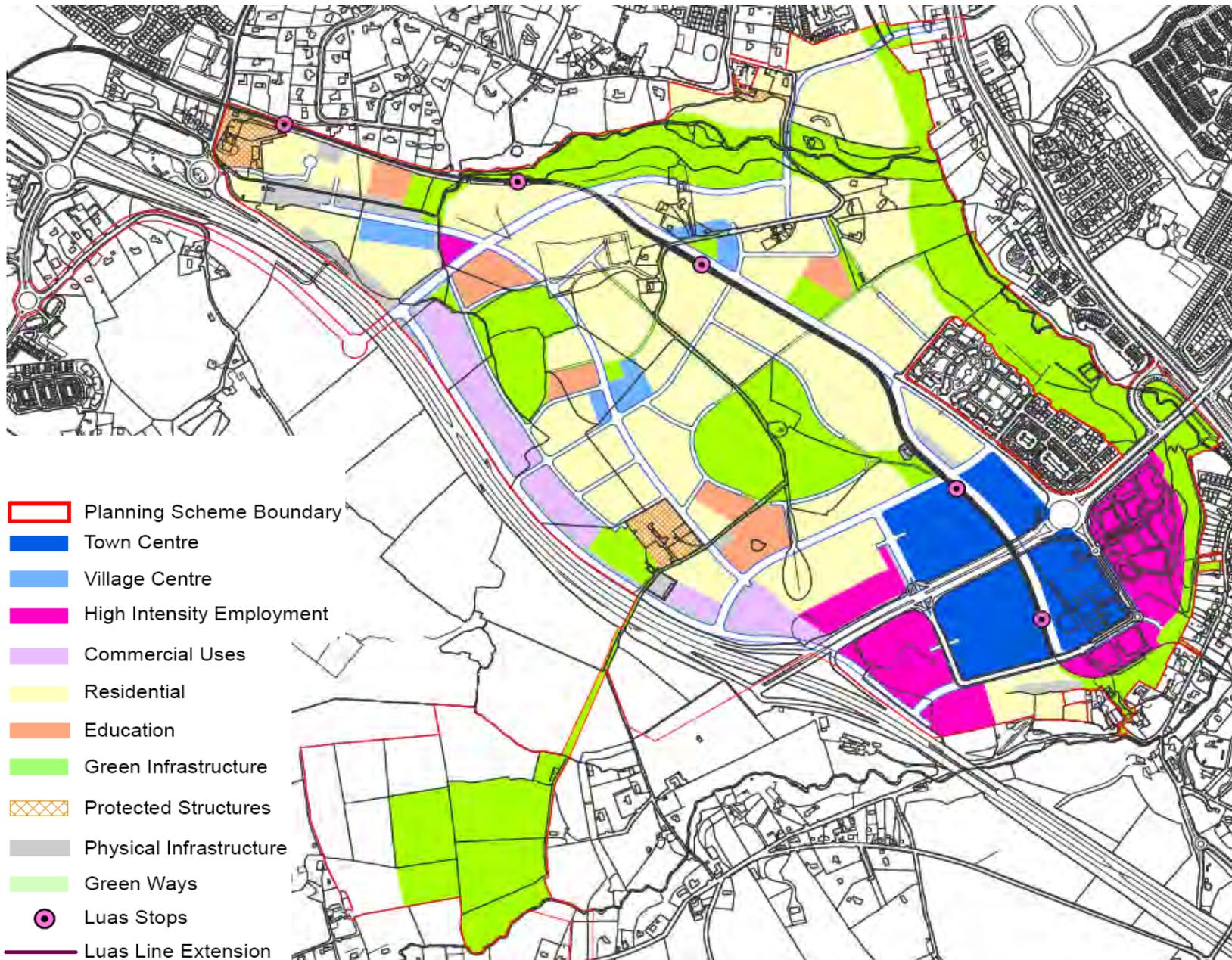
Figure 4.1 Alternative Scenario 1: *The Cherrywood Common Infrastructure Implementation Plan – Block Plan*



**USE ZONING OBJECTIVES**

Objective A	To protect and-or improve residential amenity.	
Objective A1	To provide for new residential communities in accordance with approved local area plans.	
Objective A2	To provide for the creation of sustainable residential neighbourhoods and preserve and protect residential amenity.	
Objective B	To protect and improve rural amenity and to provide for the development of agriculture.	
Objective DC	To protect, provide for and-or improve mixed-use district centre facilities.	
Objective E	To provide for economic development and employment.	
Objective F	To preserve and provide for open space with ancillary active recreational amenities.	
Objective G	To protect and improve high amenity areas.	
Objective GB	To protect and enhance the open nature of lands between urban areas.	
Objective MH	To improve, encourage and facilitate the provision and expansion of medical/hospital uses and services.	
Objective MTC	To protect, provide for and-or improve major town centre facilities.	
Objective NC	To protect, provide for and-or improve mixed-use neighbourhood centre facilities.	
Objective OE	To provide for office and enterprise development.	

**Figure 4.2 Alternative Scenario 2: 2010-2016 County Development Plan zonings**



**Figure 4.3 Alternative Scenario 4: *The Planning Scheme Primary Land Uses Map***

## 4.2 Evaluation of Alternative Scenarios

This section summarises the evaluation of the Alternative Scenarios that is found in Section 7 of the Environmental Report which provides a detailed description of the evaluation of Scenarios against both the existing environment and Strategic Environmental Objectives (both of which are summarised within Section 3 of this report).

### Alternative Scenario 1: The Cherrywood Common Infrastructure Implementation Plan

- **Environmental Effects**

- Likely to Improve Status of SEOs

By providing 'Passive Open Space' zoning in certain locations Scenario 1 would improve the status of habitats, species, ecological connectivity and water quality protection as well as facilitating flood risk management. This zoning would also contribute towards the minimisation of impacts upon visual sensitivities and archaeological heritage.

This Scenario contributes towards maximising the uptake in smarter, more sustainable modes of transport by providing for development adjacent to the Luas and other public transport routes and by providing for social infrastructure.

- Potential Conflict with status of SEOs

Scenario 1 potentially conflicts with the status of habitats, species and ecological connectivity because of the population provided for by this scenario. In addition potential conflicts would arise due to the footprint of development.

This Scenario potentially conflicts with water services provision due to the magnitude of development proposed.

Due to the mix and extent of uses this Scenario potentially conflicts with efforts to achieve sustainable mobility.

Archaeological, architectural and landscape considerations would be considered on a site by site, application by application basis under this Scenario thereby providing the potential for cumulative adverse effects upon these environmental components.

There would be potential conflicts with flood risk management and water quality due to new development in areas such as the north western corner of the SDZ lands.

There would be potential conflicts with the status of groundwater and the function of soil.

There would be potential conflicts with human health as a result of exposure to noise levels along the M50.

- **Planning Effects**

Pros

- This plan sets out the required infrastructure for the area based on a master plan, which transcended land ownership and is cognisant of the principles of good urban design and planning.
- Carrying capacity of the lands and the required infrastructure set out.
- Clear vision provides certainty to the markets.
- Scale and form of the proposed development area is set out in detail.
- Provides for schools, open space and other social infrastructure.

- Phased approach based on the infrastructure required for each zone.

#### Cons

- Excessive retail provision in the form of showrooms and retail services which are contrary to the Retail Strategy for the Greater Dublin Area 2008-2016 and the County Development Plan 2010-2016.
- Excessive focus on apartments.
- Plan was made at the peak of the property boom and infrastructure requirements reflect this.

### **Alternative Scenario 2: 2010-2016 County Development Plan zonings**

- **Environmental Effects**

- Likely to Improve Status of SEOs

By providing 'Objective G' zoning in certain locations Scenario 2 would improve the status of habitats, species, ecological connectivity and water quality protection as well as facilitating flood risk management. This zoning would also contribute towards the minimisation of impacts upon visual sensitivities and archaeological heritage.

This Scenario contributes towards maximising the uptake in smarter, more sustainable modes of transport by providing for development adjacent to the Luas and other public transport routes.

- Potential Conflict with status of SEOs

Scenario 2 potentially conflicts with the status of habitats, species and ecological connectivity because of the footprint of development provided - less conflict than Scenario 1 as likely population would be lower.

This Scenario potentially conflicts with water services provision and water services infrastructure and capacity would be needed to ensure the mitigation of potential conflicts.

Due to potentially fragmented or isolated development which has inadequate connectivity and legibility and the lack of planned social aspects, this Scenario potentially conflicts with efforts to achieve sustainable mobility.

Archaeological, architectural and landscape considerations would be considered on a site by site, application by application basis under this scenario thereby providing the potential for cumulative adverse effects upon these environmental components.

There would be potential conflicts with flood risk management and water quality due to new development in areas such as the north western corner of the SDZ lands.

There would be potential conflicts with the status of groundwater and the function of soil.

There would be potential conflicts with human health as a result of exposure to noise levels along the M50.

- **Planning Effects**

#### Pros

- Development on all the SDZ lands except A1 zone can go ahead assessed on a case-by-case basis.

Cons

- No overall vision for the future of the SDZ development lands, this may reduce the market confidence in the area and discourage investment.
- Development will continue to be assessed on a site-by-site basis without an agreed masterplan, potentially leading to fragmented or isolated development, which has inadequate connectivity and legibility. Although cumulative environmental effects were considered at a county level as part of the Dún Laoghaire-Rathdown County Development Plan 2010-2016, cumulative effects would have the potential to occur at the Cherrywood lands.
- Lack of planning of social infrastructure including schools and public open space.

**Alternative Scenario 3: Developers’/Landowners’ submissions, January 2011**

• **Environmental Effects**

- Likely to Improve Status of SEOs

By providing for a reduced quantum of development in certain locations Scenario 3 would improve the status of habitats, species, ecological connectivity and water quality protection as well as facilitating flood risk management. This quantum would also contribute towards the minimisation of impacts upon visual sensitivities and archaeological heritage.

This Scenario contributes towards maximising the uptake in smarter, more sustainable modes of transport by providing for development adjacent to the Luas and other public transport routes.

- Potential Conflict with status of SEOs

Scenario 3 potentially conflicts with the status of habitats, species, ecological connectivity and water quality protection as well as flood risk management because of the footprint of development especially in certain areas adjacent to the Carrickmines / Loughlinstown Rivers.

This Scenario potentially conflicts with water services provision and water services infrastructure and capacity would be needed to ensure the mitigation of potential conflicts.

By providing for a reduced quantum of development in certain locations this scenario would reduce the viability of the Luas, which was planned on higher residential figures, this Scenario potentially conflicts with efforts to achieve sustainable mobility.

Archaeological, architectural and landscape considerations would be considered on a site by site, application by application basis under this scenario thereby providing the potential for cumulative adverse effects upon these environmental components.

There would be potential conflicts with the status of groundwater and the function of soil.

There would be potential conflicts with human health as a result of exposure to noise levels along the M50.

• **Planning Effects**

Pros

- Flexible plan responsive to markets, particularly in terms of provision of more suburban type residential developments.
- Many developments are ready to go based on existing infrastructure and lower growth projections for neighbouring areas and this existing infrastructure should be used to capacity in order to kick start development.

#### Cons

- Lack of agreement among developers as to the type of plan they want – some prefer an LAP, others Planning Scheme and others multiple Planning Schemes.
- Don't want to invest in further infrastructure and each developer argues that they are ready to go based on existing infrastructure already in place. If each developer started immediately there would not be enough infrastructure to accommodate this.
- Many of the developers' submissions lack planning of social infrastructure including schools and public open space.
- Reduced quantum of residential provided while on the other hand increased quantum of retail development, such that the quantum is excessive and as there is a mismatch between population and retail provision. Not an efficient use of the SDZ lands and this would impact on the viability of the Luas, which was planned based on higher residential figures.
- Lack of road link above grade between north and south of Wyattville Link Road, which will reduce connectivity between both sides and put pressure on at grade junctions.
- Provision of a large quantum of retail warehousing, retail club and sports retail proposed would impact on established retail warehousing at the Park Carrickmines, contrary to County Development Plan 2010-2016 Policy (Section 7.3.11) and regional policy.
- Development of an office based business park without any residential development would mean that one area would be dead after 6pm and at weekends.
- There is an inadequate provision of houses and duplexes across the plan area. By removing residential development in the proposed town centre this will reduce the capacity of lands in other parts of the plan area to provide for these typologies.
- A reduction of the provision of residential development across land holdings and the provision of more suburban typologies, would reduce the carrying capacity of the lands overall and therefore shrink the size of the town centre and other village centres.
- The RPA have indicated that a significant reduction in residential numbers will impact on the viability of the Luas.

#### Alternative Scenario 4: The Planning Scheme

- **Environmental Effects**
  - Likely to Improve Status of SEOs

By providing Green Infrastructure uses in stream valleys along the northern, eastern and south-eastern boundaries of the site, Scenario 4 would improve the status of habitats, species, ecological connectivity and water quality protection as well as facilitating flood risk management. The Green Infrastructure uses would also contribute towards the minimisation of impacts upon visual sensitivities, archaeological heritage and groundwater status and the protection of soil functions.

This Scenario contributes towards maximising the uptake in smarter, more sustainable modes of transport by providing for: considered uses, densities and configurations and development adjacent to the Luas and other public transport routes; Greenways; and social and physical infrastructure.

Commercial and Employment Uses along the M50 contribute towards the protection of human health.

Protected Structures Designations have been identified across the site. These will contribute towards the protection of architectural heritage.

- o Potential Conflict with status of SEOs

Although under Scenario 4 potential conflicts exist, the integration of environmental considerations into the Planning Scheme minimises conflicts with the status of habitats, species, ecological connectivity, water quality protection, groundwater status and soil function as well as flood risk management and visual and cultural sensitivities.

This Scenario potentially conflicts with water services provision and water services infrastructure and capacity would be needed to ensure the mitigation of potential conflicts.

There would be potential conflicts with the status of groundwater and the function of soil.

Scenario 4 would result in the least amount of potential conflicts with human health as a result of exposure to noise levels and these would be likely to be localised.

- **Planning Effects**

Pros

- The Planning Scheme accords with higher level Plans/Strategies with regard to strategic development that is coordinated with local authorities, public authorities and other bodies as appropriate.
- The plan accords with the hierarchy set out in the County Development Plan 2010-2016.
- The plan is informed by the natural and man-made heritage, topography, views, flooding issues, and this is married with an appropriate open space network, appropriate buffering of sensitive areas to form a plan for a sustainable town.
- The Plan is based on infrastructural capacity studies, which shows that the lands have the capacity to carry the proposed development.
- Clear policies and objectives are provided which indicates overall quantum of development, land uses, maximum and minimum densities and plot ratios.
- The Planning Scheme provides policies and objectives in relation to the overall design of the proposed development, including the maximum heights, the external finishes of structures and the general appearance and design.
- The Planning Scheme provides coherent policies and objective relating to transportation, including public transportation, the roads layout, the provision of parking spaces and traffic management.
- The Planning Scheme provides policies and objective relating to the provision of services on the lands, including the provision of waste and sewerage facilities and water, electricity and telecommunications services and gas infrastructure.
- The Planning Scheme provides policies and objective relating to minimising any adverse effects on the environment, including the natural and built environment, and on the amenities of the area.
- The Planning Scheme provides policies and objective relating to the provision of amenities, facilities and services for the community, including schools, crèches and other education and childcare services.
- The provision of social and physical infrastructure is phased with development.
- Fast track of planning applications once the Final Planning Scheme is adopted.
- Clarity on long term vision as the life of a Planning Scheme is different to County Development Plan.

Cons

- Due to the statutory process, the Planning Scheme cannot facilitate development immediately.
- Amendments to the approved Planning Scheme are time consuming.

### 4.3 The Selected Alternative Development Scenario

The Alternative Scenario for the development of Cherrywood which emerged from the planning process is Scenario 4 – this Scenario contributes towards the protection of the environment and conforms with high level planning objectives.

By complying with appropriate mitigation measures - including those which have been integrated into the Planning Scheme - potential adverse environmental effects which could arise as a result of implementing this scenario would be likely to be avoided, reduced or offset.

Alternative Scenario 4 was developed by the Planning Team and made as the Planning Scheme by the Elected Members having regard to both:

1. The environmental effects which were identified by the SEA and are detailed above; and
2. Planning - including social and economic - effects which are identified alongside environmental effects above.

Section 8 of the Environmental Report evaluates the individual policies and objectives which have been prepared to realise Scenario 4 (the selected scenario).

In April 2014, An Bord Pleanála decided to approve the Planning Scheme for a variety of reasons, subject to a number of modifications – none of these modifications would be likely to result in significant environmental effects above those envisaged by the original assessment.

Section 5 and Figure 5.1 captures how the development of the Primary Land Uses Map for the Planning Scheme was informed by environmental sensitivities.

### 4.4 Appropriate Assessment and Flood Risk Assessment

The AA Screening process that was undertaken alongside the preparation of the Planning Scheme concluded that no Natura 2000 Sites are deemed to be at risk of likely significant effects of implementing the Scheme.

A detailed flood risk assessment was carried out on all significant watercourses in the SDZ which identified out of bank flooding, for a flood event greater than the 1 in 100 year flood event, in six general locations in the SDZ. The Council identified only one of these floodplain locations where development is being considered, namely in Priorsland. To accord with the Flood Guidelines a more detailed flood risk assessment and management plan<sup>15</sup> was completed for the Priorsland area. The management plan identified measures to manage the flood risk in this area.

The preparation of the Planning Scheme, SEA, AA and FRA has taken place concurrently and the findings of the AA and FRA have informed both the Planning Scheme and the SEA.

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<sup>15</sup> RPS for Dún Laoghaire-Rathdown County Council (2012) *Flood Risk Assessment and Management Study at Priorsland, Carrickmines*

## 4.5 Residual Adverse Effects

Significant residual adverse effects likely to occur - considering the extent of detail provided by the Planning Scheme and assuming that all mitigation measures are complied with by development - are identified for each of the environmental components below:

Environmental Component	Significant Residual Adverse Effects
Biodiversity and Flora and Fauna	Loss of an extent of non-protected habitats and open ground arising from the replacement of semi-natural land covers with artificial surfaces
Population and Human Health	None
Soil	Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces
Water	Fluvial and pluvial flood related risks remain due to uncertainty with regard to extreme weather events
Air and Climatic Factors	None
Material Assets (Water Services)	None
Architectural Heritage	Potential alteration to the context and setting of architectural heritage (Protected Structures) however these will occur in compliance with legislation
Archaeological Heritage	Potential alteration to the context and setting of archaeological heritage (Recorded Monuments) however this will occur in compliance with legislation Potential loss of unknown archaeology however this loss will be mitigated by measures integrated into the Planning Scheme
Landscape (Visual) <sup>16</sup>	Interrelationship with alteration to the context and setting of areas of cultural heritage A local change in the appearance of panoramic vistas from elevated areas to the north-east and south-west within the larger landscape area.

<sup>16</sup> Once completed, the Planning Scheme will result in a permanent change to the appearance and character of the site and the surroundings. The quality of individual spaces with the public realm and the appearance of individual buildings or schemes cannot be predicted because this will depend on the skill of the designers involved. However, on the basis of the planning scheme as currently prepared it can be ascertained with a high level of certainty that the residual effects of the project will be as identified.

Note that:

- The proposed development will not impinge the skyline of panoramic views towards Killiney Hill or the Coast in the distance. The appearance and character of the foreground and middle distance will change as open areas become developed. Views from this area are intermittent.
- The proposed development is over 2 km from this viewing point and will not impinge the skyline of panoramic views towards the Wicklow Mountains or in the distance. The appearance and character of the middle distance will change as open areas become developed. Views become increasingly screened and/or intermittent by buildings and trees from closer viewing positions further south-west along the Wyattville road and associated links and bridges.
- On the basis of an evaluation of the effects of existing developments within the Planning Scheme area it appears that it will be possible to maintain visual connections to surrounding skyline as well as coastal and upland features that surround the location of the Planning Scheme.

## **Section 5 Mitigation and Monitoring Measures**

### **5.1 Mitigation**

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Planning Scheme.

Potential beneficial effects of implementing the Cherrywood Planning Scheme have been and will be maximised and potential adverse effects have been and will be avoided, reduced or offset through:

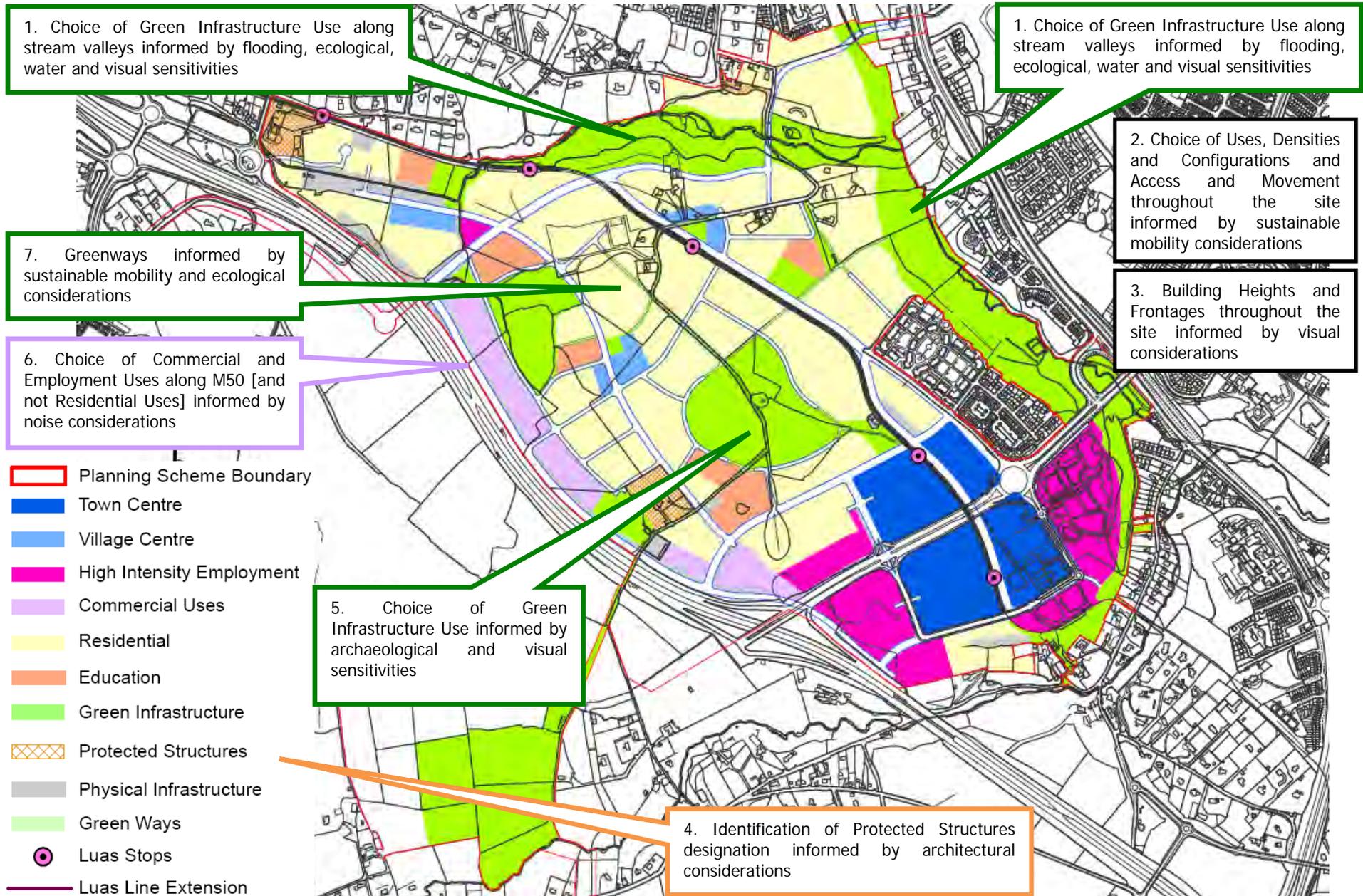
- The consideration of alternatives for the Planning Scheme (see summary provided in Section 4);
- Mitigation through communication of environmental considerations and integration of these considerations into the Planning Scheme Land Uses Layout Map (see Figure 5.1); and
- Adherence to measures which have been integrated into the Planning Scheme (see Table 5.1 which summarises how likely significant effects - if unmitigated - are linked to relevant mitigation measures - which have been integrated into the Planning Scheme - and indicators which will be used for monitoring).

### **5.2 Monitoring**

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. The Environmental Report contains proposals for monitoring the Planning Scheme which are adopted alongside the Scheme. Monitoring enables, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

The Environmental Report identifies indicators - which allow quantitative measures of trends and progress in the environment over time. Measurements for indicators generally come from existing monitoring sources.

A stand-alone Monitoring Report on the significant environmental effects of implementing the Planning Scheme will be prepared before development is commenced in the Second Growth Area (Development Areas 1, 2 and 3) and, subsequently, before development is commenced in the Third Growth Area (Development Areas 6, 7 and 8) (for the sequencing and phasing of development see Chapter 7 in the Planning Scheme). This report will address the indicators that are set out on Table 5.1.



**Figure 5.1 Mitigation through Integration of Environmental Considerations into the Planning Scheme Primary Land Uses Map**

**Table 5.1 SEA Summary Table: Likely Significant Effects, Mitigation Measures and Indicators for Monitoring**

Likely Significant Effect, if unmitigated	Mitigation Measure Reference(s) from Planning Scheme and CDP 2010-2016 <sup>17</sup>	Primary Indicator(s) for Monitoring
Loss of biodiversity with regard to Natura 2000 Sites	CDP Policy LHB27 (Biodiversity and Flora and Fauna I, II and III)	B1: Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive
Loss of biodiversity with regard to ecological connectivity	Objectives: PD 17, GI 3, GI 9, GI 10, GI 15, GI 16, GI 19, GI 20, GI 21, GI 22, GI 30, GI 35, GI 36, GI 38, GI 39, GI 40, GI 41, GI 42, GI 46 to GI 52, GI 5 to GI 70, GI 75, GI 76 and DA 30	B2: Percentage loss of functional connectivity without remediation resulting from development provided for in the Planning Scheme
Loss of biodiversity with regard to Wildlife Sites and species listed on Schedule 5 of the Wildlife Act 1976	Objectives: PD 17, GI 3, GI 9, GI 10, GI 15, GI 16, GI 19, GI 20, GI 21, GI 22, GI 30, GI 35, GI 36, GI 38, GI 39, GI 40, GI 41, GI 42, GI 46 to GI 52, GI 54 to GI 70, GI 75, GI 76 and DA 30	B3i: Number of significant impacts on relevant habitats, species, environmental features or other sustaining resources in Wildlife Sites resulting from development provided for in the Planning Scheme B3ii: Number of significant impacts on the protection of species listed on Schedule 5 of the Wildlife Act 1976
Spatially concentrated deterioration in human health	Objectives: PD 31, GI 40, DA 20 and DA 42 CDP Policy LHB27 (Air and Noise I)	HH1: Occurrence (any) of a spatially concentrated deterioration in human health arising from environmental factors resulting from development provided for in the Planning Scheme, as identified by the Health Service Executive and Environmental Protection Agency
Damage to the hydrogeological and ecological function of the soil resource	Objectives: GI 63 and GI 64	S1: Soil extent and hydraulic connectivity
Adverse impacts upon the status of water bodies	Objectives: GI 16, GI 30, GI 61, GI 63 to GI 67, GI 72 and DA 30 CDP Policy LHB27 (Water Protection II and IV)	W1: Classification of Overall Status (comprised of ecological and chemical status) under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009) W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC
Increase in the risk of flooding	Objectives: PD 17, PD 20, PI 7 to PI 11, GI 10, GI 15, GI 16, GI 21, GI 40, GI 57 to GI 61 CDP Policy LHB27 (Flooding III)	W3: Number of incompatible developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk

<sup>17</sup> For Mitigation through Integration of Environmental Considerations into the Planning Scheme Primary Land Uses Map see Figure 5.1.

Likely Significant Effect, if unmitigated	Mitigation Measure Reference(s) from Planning Scheme and CDP 2010-201618	Primary Indicator(s) for Monitoring
Failure to provide adequate and appropriate waste water treatment	Objective: PI 12 CDP Policy LHB27 (Waste Water I)	M1i: Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Planning Scheme M1ii: Preparation of a Water Services Strategic Plan - in compliance with the Water Services Act - for the functional area of the Council
Failure to comply with drinking water regulations and serve new development with adequate drinking water that is both wholesome and clean	Objectives: PI 1 to PI 5 CDP Policy LHB27 (Drinking Water II)	M2i: Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Planning Scheme M2ii: Preparation of a Water Services Strategic Plan - in compliance with the Water Services Act - for the functional area of the Council
Failure to contribute towards sustainable transport and associated impacts	Objectives: PD 10, PD 24, PD 25, PD 26, PI 13, PI 14, PI 16, PI 17 to PI 19, PI 20, PI 21, PI 22, PI 23, PI 24, GI 1, GI 3, GI 15, GI 17, GI 20, GI 21, GI 23 to GI 29, GI 31 to GI 33, GI 35, GI 40, GI 41, GI 74 to GI 78, DA 1, DA 10, DA 13, DA 19, DA 36, DA 43, DA 46 and DA 47	C1: Percentage of population working within the Planning Scheme area travelling to work by public transport or non-mechanical means
Effects on entries to the Record of Monuments and Places and other archaeological heritage	Objectives: H 1 to H 12, GI 38	CH1: Percentage of entries to the Record of Monuments and Places - including Zones of Archaeological Potential (and the context of the above within the surrounding landscape where relevant) - protected
Effects on entries to the Records of Protected Structures and other architectural heritage	Objectives: H 13 to H 66, DA 34	CH2: Percentage of entries to the Record of Protected Structures (and/or their context within the surrounding landscape where relevant) protected

<sup>18</sup> For Mitigation through Integration of Environmental Considerations into the Planning Scheme Primary Land Uses Map see Figure 5.1

Likely Significant Effect, if unmitigated	Mitigation Measure Reference(s) from Planning Scheme and CDP 2010-201619	Primary Indicator(s) for Monitoring
Occurrence of adverse visual impacts	Objectives: PD 21, PD 27, PD28, PD29, GI 9, GI 19, GI 22, GI 37, GI 38, GI 39, GI 40, GI 41, GI 42, GI 43, GI 44 to GI 48, GI 78, DA 3, DA 11, DA 34 and DA 38	<p>L1: The protection and enhancement of all key vistas and views designated by the Dún Laoghaire-Rathdown County Development Plan 2010-2016</p> <p>L2: The protection and enhancement of all views and panoramas to key local vantage points and civic buildings in the surrounding area, and within the Planning Scheme itself as identified in Chapter 2 of the Planning Scheme</p> <p>L3: The incorporation of key vantage points/panoramas within core areas of new development</p> <p>L4: The creation of a sense of place and coherence/ appreciation for the overall setting and context of Cherrywood</p> <p>L5: The establishment of principal visual axes of the public realm incorporate vistas towards significant external landscape features that enhance the character and distinctiveness of the Planning Scheme Area</p> <p>L6: The protection and enhancement of views towards local skylines formed by the enclosing ridges of the deeply incised stream corridors adjacent to and within the Planning Scheme</p>

<sup>19</sup> For Mitigation through Integration of Environmental Considerations into the Planning Scheme Primary Land Uses Map see Figure 5.1.