

# **ENVIRONMENTAL REPORT**

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**OF THE**

## **PROPOSED BALLYCULLEN OLDCOURT LOCAL AREA PLAN 2013-2019**

### **STRATEGIC ENVIRONMENTAL ASSESSMENT**

#### **South Dublin County Council**

County Hall

Tallaght

Dublin 24



**OCTOBER 2013**



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## List of Abbreviations

<b>CSO</b>	Central Statistics Office
<b>DOEHLG</b>	Department of the Environment, Heritage and Local Government
<b>DOECLG</b>	Department of the Environment, Community and Local Government
<b>EIA</b>	Environmental Impact Assessment
<b>EPA</b>	Environmental Protection Agency
<b>EU</b>	European Union
<b>GSI</b>	Geological Survey of Ireland
<b>LAP</b>	Local Area Plan
<b>NHA</b>	Natural Heritage Area
<b>NIAH</b>	National Inventory of Architectural Heritage
<b>NTA</b>	National Transport Authority
<b>NSS</b>	National Spatial Strategy
<b>RBD</b>	River Basin District
<b>RMP</b>	Record of Monuments and Places
<b>RPS</b>	Record of Protected Structures
<b>SAC</b>	Special Area of Conservation
<b>SEA</b>	Strategic Environmental Assessment
<b>SEO</b>	Strategic Environmental Objective
<b>SI No.</b>	Statutory Instrument Number
<b>SPA</b>	Special Protection Area
<b>WFD</b>	Water Framework Directive

# Glossary

## Biodiversity and Flora and Fauna

Biodiversity is the variability among living organisms from all sources including inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems' (United Nations Convention on Biological Diversity 1992).

Flora is all of the plants found in a given area.

Fauna is all of the animals found in a given area.

## Biotic Index Values (Q Values)

The Biotic Index Values, or Q values, are assigned to rivers in accordance with biological monitoring of surface waters - low Q ratings, as low as Q1, are indicative of low biodiversity and polluted waters, and high Q ratings, as high as Q5, are indicative of high biodiversity and unpolluted waters. Good status as defined by the Water Framework Directive equates to approximately Q4 in the national scheme of biological classification of rivers as set out by the Environmental Protection Agency.

## Environmental Problems

Annex I of Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27 June 2001, on the assessment of the effects of certain plans and programmes on the environment (the Strategic Environmental Assessment Directive) requires that information is provided on 'any existing environmental problems which are relevant to the plan or programme', thus, helping to ensure that the proposed strategic action does not make existing environmental problems worse.

Environmental problems arise where there is a conflict between current environmental conditions and ideal targets. If environmental problems are identified at the offset they can help focus attention on important issues and geographical areas where environmental effects of the plan or programme may be likely.

## Environmental Vectors

Environmental vectors are environmental components, such as air, water or soils, through which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings.

## Mitigate

To make or become less severe or harsh

## Mitigation Measures

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing a human action, be it a plan, programme or project. Mitigation involves ameliorating significant negative effects. Where there are significant negative effects, consideration should be given in the first instance to preventing such effects or, where this is not possible, to lessening or offsetting those effects. Mitigation measures can be roughly divided into those that: *avoid* effects; *reduce* the magnitude or extent, probability and/or

severity of effects; *repair* effects after they have occurred; and *compensate* for effects, balancing out negative impacts with other positive ones.

## **Protected Structure**

Protected Structure is the term used in the Planning Act of 2000 to define a structure included by a planning authority in its Record of Protected Structures. Such a structure shall not be altered or demolished in whole or part without obtaining planning permission or confirmation from the planning authority that the part of the structure to be altered is not protected.

## **Recorded Monument**

A monument included in the list and marked on the map which comprises the Record of Monuments and Places that is set out County by County under Section 12 of the National Monuments (Amendment) Act, 1994 by the Archaeological Survey of Ireland. The definition includes Zones of Archaeological Potential in towns and all other monuments of archaeological interest which have so far been identified. Any works at or in relation to a recorded monument requires two months notice to the Department of the Environment, Heritage and Local Government under section 12 of the National Monuments (Amendment) Act, 1994.

## **Scoping**

Scoping is the process of determining what issues are to be addressed, and setting out a methodology in which to address them in a structured manner appropriate to the plan or programme. Scoping is carried out in consultation with the appropriate bodies.

## **Strategic Actions**

Strategic actions include: *Policies*, which may be considered as inspiration and guidance for action and which set the framework for plans and programmes; *Plans*, sets of co-ordinated and timed objectives for the implementation of the policy; and *Programmes*, sets of projects in a particular area.

## **Strategic Environmental Assessment (SEA)**

Strategic Environmental Assessment (SEA) is the formal, systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt it.

## **Strategic Environmental Objective (SEO)**

Strategic Environmental Objectives (SEOs) are methodological measures which are developed from international, national and regional policies which generally govern environmental protection objectives and against which the environmental effects of the Draft Plan can be tested. The SEOs are used as standards against which the provisions of the Draft Plan can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, if unmitigated against.



# Section 1 SEA Introduction and Background

## 1.1 Introduction and Terms of Reference

This is the Environmental Report prepared as part of the Strategic Environmental Assessment (SEA) of the Ballycullen Oldcourt Local Area Plan (LAP).

The aim of the Environmental Report is to identify:

1. The existing environmental issues in the Ballycullen Oldcourt LAP area;
2. The likely significant effects on the environment when the Plan is implemented;
3. How the impact on the environment can be reduced or prevented; and
4. How to monitor environmental impacts over the lifetime of the Plan.

The Environmental Report has guided the preparation of objectives, policies and development alternatives for the Ballycullen Oldcourt Local Area Plan with the aim of achieving sustainable development in the County without causing adverse harm to the environment.

Strategic Environmental Assessment is a process which was adopted into Irish Law in 2004. While the requirement for a mandatory Strategic Environmental Assessment for Local Area Plans applies only to areas in which the population is in excess of 5,000 persons<sup>1</sup>, South Dublin County Council is also of the opinion that development in the Ballycullen Oldcourt LAP area is likely to potentially have significant effects on the environment, in particular having regard to the archaeological sensitivity of the area and the presence of protected species.

The SEA has been carried out in order to comply with the provisions of the European SEA Directive and national SEA Regulations and in order to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of growth

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<sup>1</sup> If all of the LAP lands were developed at the higher levels of the density lands proposed the calculations would be likely to just exceed 5,000 persons.

in the Ballycullen Oldcourt LAP area. This report should be read in conjunction with the Ballycullen Oldcourt Local Area Plan.

## 1.2 SEA Definition

Environmental assessment is a procedure that ensures that the environmental implications of decisions are taken into account before the decisions are made. *Environmental Impact Assessment*, or EIA, is generally used for describing the process of environmental assessment which is limited to individual projects such as waste incinerators, housing developments or roads whereas *Strategic Environmental Assessment*, or SEA, is the term which has been given to the environmental assessment of plans, and other strategic actions.

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 insure that these effects are appropriately addressed at the earliest appropriate stage of decision-making on a par with economic and social considerations.

The kind of development that occurs in Ballycullen Oldcourt and where it occurs will be significantly determined by the implementation of the Ballycullen Oldcourt Local Area Plan. Real improvements in environmental management and planning can be achieved in Ballycullen Oldcourt by anticipating the effects and avoiding areas in which growth cannot be sustainably accommodated and by directing development towards more compatible and robust receiving environments.

## 1.3 Legislative Context

The requirement to carry out a Strategic Environmental Assessment stems from the Strategic Environmental Assessment Directive (2001/42/EC) which states:

*'The objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans.....with a view to promoting sustainable development.....'*

The Directive was introduced into Irish Law in 2004, through the European Communities (Environmental Assessment of Certain Plans & Programmes) Regulations 2004, S.I. No. 435 of 2004 and the Planning and Development (Strategic Environmental Assessment) Regulations 2004-2011.

In 2004, the Department of the Environment, Heritage and Local Government also released Guidelines for Planning Authorities on the implementation of the SEA Directive<sup>2</sup>.

### **1.4 Implications for the Council and the Elected Members**

The above legislation requires certain plans and programmes which are prepared by South Dublin County Council to undergo SEA. The findings of the SEA are expressed in an Environmental Report which is submitted to the Elected Members at the same time as the Draft Plan. The Environmental Report is an assessment of the existing environment within the LAP area, and the impacts of the proposed development policies of the Draft Plan on the existing environment. The Environmental Report is a parallel but separate process to that of producing the Local Area Plan.

Article 8 of the SEA Directive requires that the Environmental Report, the opinions expressed by the environmental authorities and the public, and the outcome of any transboundary consultation, must be taken into account during the preparation of the plan and before its adoption.

When the Plan is adopted, a formal SEA Statement must be made public, summarising, inter alia: how environmental considerations have been integrated into the Plan; and, the reasons for choosing the Plan as adopted over other alternatives detailed in the Environmental Report.

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<sup>2</sup> Implementation of SEA Directive (2001/42/EC) Assessment of the Effects of Certain Plans and Programmes on the Environment. Guidelines for Regional and Planning Authorities. November 2004.



## Section 2 SEA Methodology

### 2.1 Introduction

This section details how the SEA for the Ballycullen Oldcourt Local Area Plan has been undertaken. The SEA process has been carried out alongside the preparation of the Plan. The findings of the SEA were communicated to the

Plan making team in South Dublin County Council on an ongoing basis from the outset in order to allow for their integration into the Plan thus minimising the potential for significant negative environmental effects arising from implementation of the plan. The methodology for the SEA is outlined in the table below.

Action	Comments
<b>1. Screening</b>	While an Environmental Report is not mandatory for Local Area Plans of less than 5000 population, South Dublin County Council determined that development in the Ballycullen Oldcourt LAP area was likely to potentially have significant effects on the environment. Consequently, it is including Strategic Environmental Assessment as part of the production of the LAP
<b>2. Scoping Issues Paper</b>	A Scoping Issues Paper was prepared containing baseline environmental data which was sent to the Environment Authorities in March 2013.
<b>3. Consultation with the Environmental Authorities</b>	Submissions received from the Environmental Authorities.
<b>4. Preparation of Environmental Report and Draft Local Area Plan</b> <ul style="list-style-type: none"> <li>○ <b>Environmental Objectives Established</b></li> <li>○ <b>Assessment of Alternative Scenarios</b></li> <li>○ <b>Mitigation Measures Detailed</b></li> <li>○ <b>Monitoring Measures Detailed</b></li> </ul>	Establishment of SEA team to create policy consistent documents and to examine the effects on the environment of implementing the objectives and policies. <ul style="list-style-type: none"> <li>○ Objectives and Polices created in Proposed Ballycullen Oldcourt Local Area Plan assessed in Environmental Report and alternative Development Scenarios for the area examined.</li> <li>○ Favoured scenario chosen.</li> <li>○ Mitigation measures discussed and chosen.</li> <li>○ Monitoring incorporated into existing methods.</li> </ul>
<b>5. SEA Statement</b>	At the end of the process, a statement will be issued by the Council summarising: <ul style="list-style-type: none"> <li>○ how environmental considerations</li> </ul>

	<ul style="list-style-type: none"> <li>○ have been integrated into the plan,</li> <li>○ how the environmental report and the submissions and observations made to the planning authority on the Proposed Plan and Environmental Report have been taken into account during the preparation of the plan.</li> <li>○ the reasons for choosing the plan, as adopted, in the light of the other reasonable alternatives dealt with, and</li> <li>○ the measures decided upon to monitor the significant environmental effects of implementation of the plan.</li> </ul>
<p><b>6. Monitoring the Ballycullen Oldcourt Local Area Plan</b></p>	<p>Monitoring significant environmental effects over the lifetime of the Ballycullen Oldcourt Local Area Plan</p>

**Table 2.1 Summary of SEA Methodology**

## 2.2 Scoping

In consultation with the relevant authorities, the scope of environmental issues to be dealt with by the SEA together with the level of detail to which they are to be addressed was broadly decided on after preliminary data collection.

The SEA Scoping Issues Paper sets out a description of the Ballycullen Oldcourt LAP area and a baseline of environmental data (grouped under the environmental themes/receptors – biodiversity, flora and fauna, population and human health, soil and landscape, water, air, climate, material assets and cultural heritage including architectural and archaeological).

Scoping of the SEA was continuous with certain issues being selected for further examination after preliminary data was obtained. Scoping helped the SEA to become focused upon the important issues, such as those relating to existing and potential environmental issues and environmental problems<sup>3</sup>, thereby avoiding

<sup>3</sup> Annex I of the SEA Directive requires that information is provided on 'any existing environmental problems which are relevant to the plan or programme', thus, helping to ensure that the proposed strategic action does not make existing environmental problems worse. Environmental problems arise where there is a conflict between current environmental conditions and ideal targets. If environmental problems are identified at the offset they can help focus attention on important issues and geographical areas where environmental effects of the plan or programme may be likely.

resources being wasted on unnecessary data collection.

An SEA Scoping Issues Paper was issued to the designated Environmental Authorities in March 2013 in order

- to identify the significant environmental issues to be taken into consideration in the making of the new Plan
- to form a basis for consultation with the statutory bodies
  - Environmental Protection Agency (EPA);
  - Department of Environment, Community and Local Government (DOEHLG);
  - Department of Communications, Energy and Natural Resources (DCNR)
  - Department of Arts, Heritage and the Gaeltacht
  - Department of Agriculture, Food and the Marine (DAFM)
- to identify and consult on the environmental objectives, which will be used to ensure the integration of the environment into the preparation of the Ballycullen Oldcourt LAP and which will also be used to identify the likely significant effects on the environment;
- to identify the baseline information and data gaps.

Submissions were received from the Environmental Protection Agency (EPA) and the Dept of Agriculture, Food and the Marine.

The following are the Existing Problems / Environmental Considerations of note arising from the scoping exercise and from the consultations;

- While there are no environmentally designated sites, there is potential for significant loss to the Biodiversity Network
- There is an existing problem of flooding just outside the area due to inadequate surface water infrastructure. There is a noise issue along the heavily trafficked M50
- There is a low usage of public transport and non-vehicular means of travel by the existing population
- There is the potential for archaeological impact on sites which are not entered into the Record of Sites and Monuments

The Information Gaps are:

- No County Biodiversity Plan
- Limited information on Air Quality

The findings of the SEA were communicated to the plan making team on an ongoing basis from the outset in order to allow for their integration into the Ballycullen Oldcourt LAP thus minimising the potential for significant negative environmental effects arising from implementation of the Plan.

## **2.3 Environmental Baseline Data**

The SEA Directive requires that information on the baseline environment be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected and the likely evolution of the current environment in the absence of the strategic action. Data was collected to describe the environmental baseline in the Ballycullen Oldcourt LAP area from currently available relevant environmental sources. Information is also provided on existing environmental problems which are relevant to the County. The likely evolution of the current environment in the absence of the Ballycullen Oldcourt LAP is also described.

## **2.4 Strategic Environmental Objectives**

The making of the new Ballycullen Oldcourt LAP is considered within the context of a hierarchy of policies, plans and strategies which include international, EU, national, regional and local levels. These policies, plans, strategies and guidelines are critical in the derivation of Environmental Objectives for the Ballycullen Oldcourt area.

## **2.5 Alternatives**

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment.

Taking into account the objectives and the geographical scope of the Local Area Plan, alternatives were formulated through consultation with the EPA, the Ballycullen Oldcourt LAP Team and a number of Departments in South Dublin County Council.

## **2.6 The SEA Environmental Report**

In the Environmental Report, which will be placed on public display alongside the Draft Ballycullen Oldcourt LAP, the likely environmental effects of the Draft Plan and the alternatives are predicted and their significance evaluated with regard to the environmental baseline. The Environmental Report provides the decision-makers, the Elected Members, who decide whether or not to adopt the Draft Plan, as well as the public, with a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of growth in South Dublin. Mitigation measures to prevent or reduce significant adverse effects posed by the Plan, or to maximise any benefits arising, are proposed. The alternatives are also presented in this report, as are measures concerning monitoring.

The Environmental Report may be required to be added to by means of an addendum should a Draft Ballycullen Oldcourt LAP which includes elements that have not been evaluated by the

SEA and which may be likely to have significant environmental effects, be placed on display or adopted.

It should be noted that the SEA Directive aims to avoid duplication of the assessment whereby a strategic action forms part of a hierarchy - if certain matters are more appropriately assessed at different levels of the hierarchy in which the Ballycullen Oldcourt LAP is positioned, or, if certain matters have already been assessed by a different level of the hierarchy then additional assessment is not needed.

## 2.7 The SEA Statement

When the Ballycullen Oldcourt LAP is adopted the final stage of the SEA process is undertaken i.e. the SEA Statement. This document is published and sent to the Environmental Authorities. It is required to include information on: how environmental considerations have been integrated into the Ballycullen Oldcourt LAP - highlighting the main changes to the Plan which resulted from the SEA process; how the Environmental Report and consultations have been taken into account - summarising the key issues raised in consultations and in the Environmental Report indicating what action, if any, was taken in response; and the reasons for choosing the Plan in the light of the other alternatives, identifying the other alternatives considered, commenting on their potential effects and explaining why the Plan was selected.

The SEA Statement must include information on how environmental considerations have been integrated throughout the process. It must also describe how the preferred alternative was chosen to introduce accountability, credibility and transparency into the strategic decision-making process.

## 2.8 Legislative Conformance

This report complies with the provisions of the SEA Regulations and is written in accordance with Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004-2011 (SI No. 436 of 2004 and SI No. 201 of 2011). Table 2.2 (overleaf) is a reproduction of the checklist of information to be contained in the

Environmental Report (DEHLG, 2004)<sup>4</sup> and includes the relevant sections of this report which deal with these requirements.

## 2.9 Difficulties Encountered

There are still a number of data gaps in the Baseline information for Ballycullen Oldcourt. These are detailed below;

- The lack of a Biodiversity Plan for South Dublin.
- An incomplete Landscape Character Assessment for South Dublin.
- Lack of information on air quality

A Biodiversity Plan will be commencing shortly and is expected to be finalised by 2013. Some, though not all, of the information gaps caused by the absence of a Biodiversity Plan and a detailed Landscape Character Assessment have been addressed in the Heritage Plan.

## 2.10 Planning Authority Team

A SEA team comprising of one planner has been established in order to examine the significant environmental impacts which may result from the implementation of the new Local Area Plan; this planner is part of the Local Area Plan project team.

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<sup>4</sup> DEHLG (2004) *Implementation of SEA Directive (2001/42/EC): Guidelines for Regional Authorities and Planning Authorities* Dublin: Government of Ireland.

**Table 2.2 Checklist of Information included in this Environmental Report**

<b>Information Required to be included in the Environmental Report</b>	<b>Corresponding Section of this Report</b>
(A) Outline of the contents and main objectives of the Plan, and of its relationship with other relevant plans and programmes	Sections 4 and 5
(B) Description of relevant aspects of the current state of the environment and the evolution of that environment without implementation of the Plan	Section 3 and Appendix I
(C) Description of the environmental characteristics of areas likely to be significantly affected	Sections 3, 4, 7 and 8
(D) Identification of any existing environmental problems which are relevant to the Plan, particularly those relating to European protected sites	Section 3
(E) List environmental protection objectives, established at international, EU or national level, which are relevant to the Plan and describe how those objectives and any environmental considerations have been taken into account when preparing the Plan	Sections 4, 6, 7 and 9
(F) Describe the likely significant effects on the environment	Section 7 and 8 and Appendix I
(G) Describe any measures envisaged to prevent, reduce and as fully as possible offset any significant adverse environmental effects of implementing the Plan	Section 9
(H) Give an outline of the reasons for selecting the alternatives considered, and a description of how the assessment was undertaken (including any difficulties)	Sections 2, 6 and 7
(I) A description of proposed monitoring measures	Section 10
(J) A non-technical summary of the above information	Appendix I
(K) Interrelationships between each Environmental topic	Addressed as it arises within each Section

# Section 3 Ballycullen Oldcourt Baseline Environment

## 3.1 Introduction

The environmental baseline within Ballycullen Oldcourt is described in this section. This baseline together with the Strategic Environmental Objectives, which are outlined in Section 4, is used in order to identify, describe and evaluate the likely significant environmental effects of implementing the Proposed Local Area Plan and in order to determine appropriate monitoring measures.

The Ballycullen Oldcourt Local Area Plan lands are located on the urban fringe where it adjoins the foothills of the Dublin Mountains, the principal natural amenity of South Dublin as shown in Figure 3.2 on the 1:50,000 Ordnance Survey Map. The southern limit of the zoned lands closely follows the 120m. contour which generally reflects the height limit of suburban development. The area is bounded on the east by the M50 Motorway and on the west by the Bohernabreena Road. Dublin City Centre is located approximately 12 kilometres to the northeast of the LAP lands, with Tallaght Town Centre located approximately 2/3 kilometres to the north west of the LAP lands

A large proportion of the Plan Lands remain undeveloped (approx 93.5 ha. i.e. 85%). These undeveloped lands are zoned 'Objective A1, for new residential development (approx. 90 ha.) and 'Objective F', to preserve and provide for open space and recreational amenities (approx. 3.5 ha). Approximately 25 hectares of undeveloped lands zoned 'Objective A1' are the subject of existing permissions that are yet to commence or recommence. All of the lands that are subject to extant permissions are located on the eastern side of the Plan Lands.

The environmental baseline is described in line with the legislative requirements, encompassing the following components as required by the Planning and Development Regulations (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004), and as further amended by Planning and Development Regulations (Strategic Environmental Assessment) Regulations 2011 (SI No. 201 of 2011);

- Biodiversity
- Fauna
- Flora
- Population
- Human Health,
- Soil
- Water
- Air
- Climatic Factors
- Material Assets
- Cultural Heritage including Architectural and Archaeological Heritage
- Landscape

The interaction between environmental topics will be considered in the Environmental Report as the Plan progresses. GIS mapping is used to assist this process. Sources of baseline data includes information from statutory agencies, internal departments within the Council, the internet, local publications, planning applications and Environmental Impact Statement<sup>5</sup> relating to major residential and infrastructure schemes.

## 3.2 Population

### 3.2.1 Profile

The Plan Lands straddle three different District Electoral Divisions namely Firhouse Village, Firhouse Ballycullen and Bohernabreena.

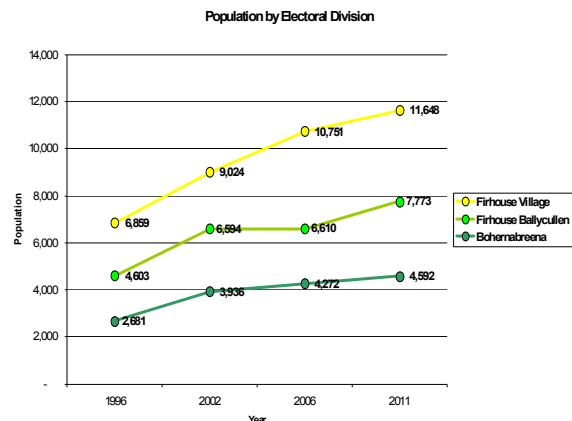
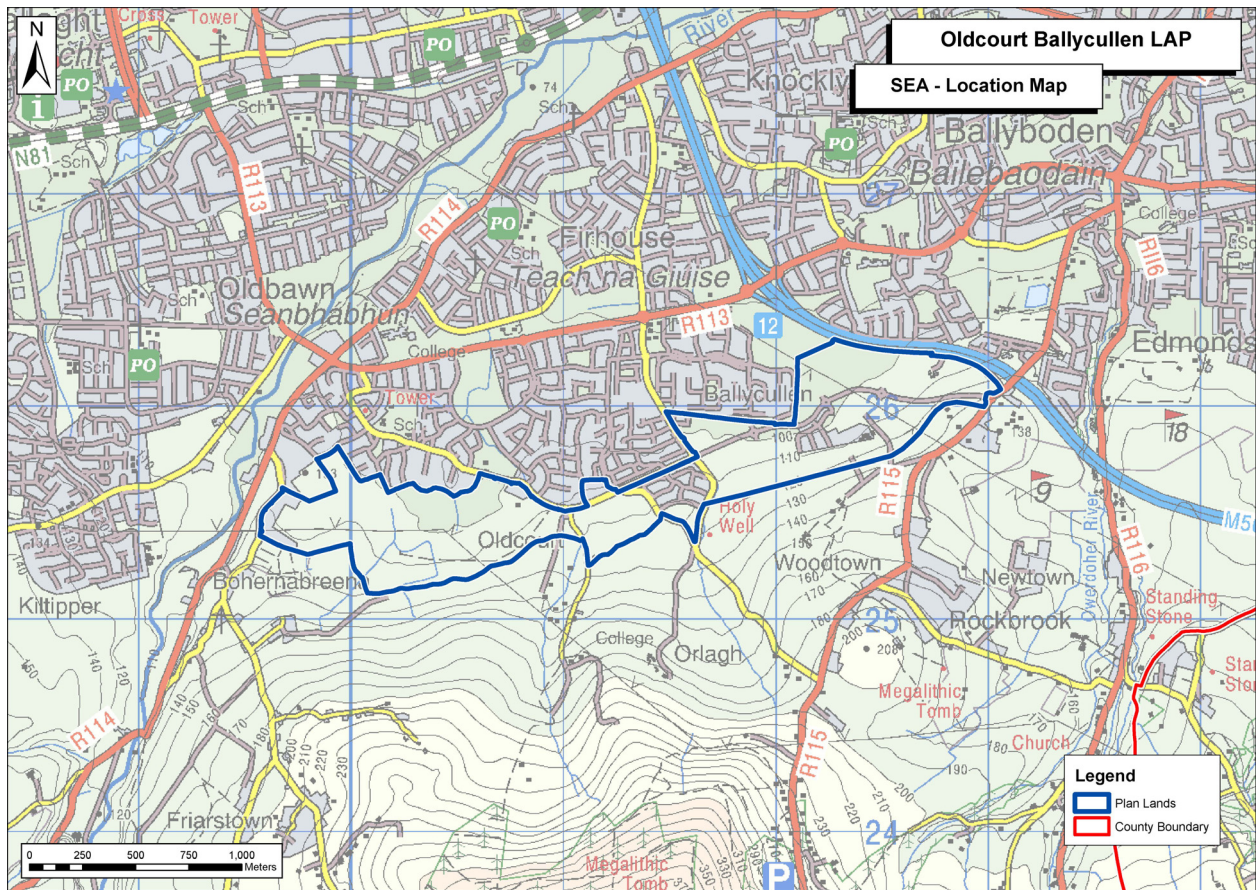


Figure 3.1 Population by ED 1996-2011

<sup>5</sup> Deane Homes, Ref SD04A/0393 EIS for residential development of c.800 dwelling units and SD05A/0818 application for 520 dwellings by Mountbrook Homes Ltd.



**Figure 3.2 Ordnance Survey Map of South Dublin 1:50,000**

All three divisions grew in population between 2006 and 2011. Firhouse-Ballycullen experienced the highest population growth at 17.6% (from 6,610 – 7,773 people), followed by Firhouse Village at 8.3% (10,751 – 11,648 people) and Bohernabreena at 7.5% (4,272 – 4,592).

While the LAP lands are spread across three electoral divisions, Bohernabreena, Firhouse Village and Firhouse/Ballycullen, the Census 2011 Small Areas recording system allows an accurate estimate of the population in the LAP area of 1324 persons. Twenty five percent (25%) of the population are aged twelve or under with sixty eight percent (68%) are in the band between twenty and fifty five years of age. Of the 386 families in the proposed LAP area, 34% are Pre-Family and 54% are in the Pre-School, Early School and Pre Adolescent family cycle.

In the category "Private households by type of accommodation", 55% are described as being Houses/Bungalows and 45% as being Flats/Apartments. The "Permanent private households by type of occupancy" indicates that 74% are owner occupier with the balance (26%)

being rented (split roughly 50:50 between private and public). The occupancy per housing unit is 2.5 persons per dwelling in the proposed LAP area compared to 2.9 persons per dwelling in South Dublin overall. One hundred and three (16%) of the six hundred and thirty four permanent dwellings in the proposed LAP area were unoccupied on the night of the Census (April 2011).

The economic status of the 979 persons aged 15 years and over in the Town Centre shows an "at work" and "unemployed" rate of 76% and 9% respectively. This compares with a South Dublin County rate of 52% employed and 12% unemployed.

The existing population aged five years and over (968 persons), categorised by means of travel to work, school or college indicates that 17% of this population use public transport or non-vehicular means compared to a County figure of 35%.

### **3.2.2 Population Issues: Existing Problems / Environmental Considerations**

- Substantial population using non public transport or motorized vehicular means of travelling to work, school or college

### **3.2.3 Population and Human Health.**

The impacts relevant to the SEA in terms of human health are usually those which arise as a result of interactions with environmental vectors (i.e. environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm and can be transported so that they come into contact with human beings). The impact of development on human health is also influenced by the extent to which new development is accompanied by appropriate infrastructure and the maintenance of the quality of water, air and soil. These aspects are dealt with in subsequent sections.

### **3.2.4 Human Health Issues: Existing Problems / Environmental Considerations**

Issues of concern include increased amounts of traffic and in particular, the effect of emissions and traffic noise from the M50 on human quality of life, see Section 3.8. Associated with the quality of life issue is the need to provide for and maintain areas of urban green space.

Provision of clean drinking water for existing and proposed areas is another issue of concern. The recent growth of Dublin has seen greater pressure being put on existing water sources for the County. While the water standard in the county is currently considered very high (see sections 3.7 and 3.9.3), a significant future source of drinking water is required. Monitoring and ensuring that the contaminated sites of concern, such as obsolete landfills, illegal dumps, contaminated soils sites, do not pollute ground or river waters is another issue of concern.

### **3.2.5 Evolution of Population and Human Health in the Absence of a Local Area Plan**

Residential development would occur on the already zoned but undeveloped green-field lands. Increased travel by private transport will increase emissions to air, as well as increasing noise impacts upon new and existing residential communities.

## **3.3 Biodiversity (flora, fauna)**

### **3.3.1 Introduction**

The enhancement of biodiversity, preservation of natural amenities, integrity of wildlife corridors and protection of the natural environment are all important issues to be addressed in the preparation of the Ballycullen Oldcourt Local Area Plan and in the accompanying Environmental Report.

### **3.3.2 Designated Natural Heritage Areas**

There are no designated biodiversity areas affected by the proposed Local Area Plan which have a recognised National, European Union or International protection status. There is one Natural Heritage Area (pNHA), however, in the vicinity of the LAP lands. The Dodder Valley proposed Natural Heritage Area is located within a kilometre of the plan lands; (Figure 3.4)

Information has been extracted from two Environmental Impact Assessments for the area, Deane Homes SD04A/0393 and SD05A/0818.

#### **SITE NAME: DODDER VALLEY. SITE CODE: 000991**

This stretch of the River Dodder extends for about 2 kilometres between Firhouse bridge and Oldbawn bridge in the south-west of Dublin city. The vegetation consists of woodland scrub mainly of Willow (*Salix* spp.). Understorey vegetation contains Early Purple Orchid (*Orchis mascula*) and Bugle (*Ajuga reptans*). Forty-eight species of bird have been recorded recently in the area. Part of the river bank supports a Sand Martin colony of up to 100 pairs. This site represents the last remaining stretch of natural river bank vegetation of the Dodder in the built up Greater Dublin Area.

There are currently no groups of trees covered by Tree Protection Orders within the LAP lands.

### 3.3.2.1 Natura 2000 sites

Natura 2000 refers to an ecological network of protected areas in the territory of the European Union. In May 1992, the European Communities adopted legislation (Habitats Directive 92/43/EEC) designed to protect the most seriously threatened habitats and species across Europe. This legislation complements the Birds Directive (79/409/EEC) which was subsequently codified<sup>6</sup> under Directive 2009/147/EC due to its several previous amendments. These two Directives are the basis of the creation of the Natura 2000 network of protected areas.

There are no Natura 2000 sites located within the proposed LAP lands although the three Natura 2000 sites within South Dublin County (Glenasmole valley SAC, Wicklow Mountains SAC, and Wicklow Mountains SPA) are just located a few kilometers to the south west. The impacts of the plan lands on these Natura sites, as well as other Natura 2000 sites in adjoining counties, has been addressed in the Appropriate Assessment screening report.

### 3.3.3 Primary Ecological Corridors.

Article 10 of the Habitats Directive recognises the importance of ecological networks as corridors and stepping stones for the movement of wildlife. Migration, movement and the long term genetic health of species is assisted through creating linked networks for biodiversity purposes.

The Directive requires that connectivity and areas of ecological value which lie outside of the designated ecological sites are maintained. The Directive recognises the need for the management of these areas through land use planning and development policies. The networks are considered imperative in connecting areas of biodiversity within the County to each other, thus avoiding the creation of isolated islands of habitat. These corridors are particularly important for mammals, small birds and bats.

The County has a number of undeveloped or protected corridors of land, which act as links from the surrounding countryside, through the

County and into the denser urban core of Dublin City such as the Dodder Valley, the Grand Canal and the Liffey Valley.

Further elements to be considered within any habitat or green network include streams, wet ditches, hedgerows of biodiversity and heritage importance which form barony or townland boundaries, and stepping stone areas such as defunct quarries, ponds, pools and areas of woodland or substantial tree-lines.

**Local Area Plan Lands:** A majority of the LAP lands (85%) are currently undeveloped. These lands consist largely of medium sized field system.

Extensive residential development has occurred in the eastern part of the plan lands at Ballycullen in recent years and in addition, there are parts of this area that remain as an open construction areas from which the topsoil has been removed or other areas where topsoil has been deposited.

The LAP lands are crossed by two streams which are tributaries of the River Dodder, the Ballycullen Stream and the Oldcourt Stream and tributary. There has been partial culverting of the Ballycullen Stream as part of the Dalriada residential development and partial culverting of the Oldstream following the upgrading of the Oldcourt Road (an additional stream, the Whitestown Stream, has already been culverted as part of residential development).

As an action of the South Dublin County Heritage Plan 2010-2015, a Habitat Mapping Project of the County was carried out and completed in February 2012. Habitat mapping was undertaken using desktop and consultation information in conjunction with aerial photography and GIS datasets. All of the habitats were mapped to Level II of the Heritage Council habitat classification system (Fossitt, 2000).

The plan lands in Ballycullen Oldcourt have been identified under three main categories- built land, improved grasslands (agricultural and amenity) and recolonised bare ground. Improved agricultural grassland – GA1 (located principally in the western areas of the plan lands) relates to intensively managed or highly modified agricultural grassland that has been reseeded and/or regularly fertilised, and is now heavily grazed and/or used for silage making. A small amount of amenity grassland – GA2 (located in the eastern area of the plan lands in

<sup>6</sup> Codified/Codification- The process of collecting and restating the law of a jurisdiction in certain areas, usually by subject, forming a legal code, i.e. a codex (book) of law.

the residential developments) relates to grassland which is improved, or species-poor, and is managed for purposes other than grass production. It includes amenity, recreational or landscaped grasslands, but excludes farmland. Most areas of amenity grassland have been reseeded and are regularly mown to maintain very short swards. Fertilisers and herbicides are often applied but there is rarely any grazing by livestock. Built land (15% of the plan lands), incorporates all buildings (domestic, agricultural, industrial and community) other than derelict stone buildings and ruins. It also includes areas of land that are covered with artificial surfaces of tarmac, cement, paving stones, bricks, blocks or astroturf (e.g. roads, car parks, pavements, runways, yards, and some tracks, paths, driveways and sports grounds. There is quite extensive amounts of recolonised bare ground - ED3 adjoining the developed area where building has ceased.

The habitat mapping report also identified the linear woodland/scrub areas i.e. hedgerows and treelines, within the plan lands. While it is noted that this is not substitute for a detailed hedgerow survey where the species diversity and condition would be examined, it does illustrate the connectivity and corridors that remain in the plan lands in the form of hedgerows and treelines.

It has also been noted within the plan lands, the presence of a number of hedgerows along townland boundaries. These can date from medieval times or even earlier. Older hedgerows are richer in plant and animal species as well as being of historical and cultural value. (Figure 3.3).

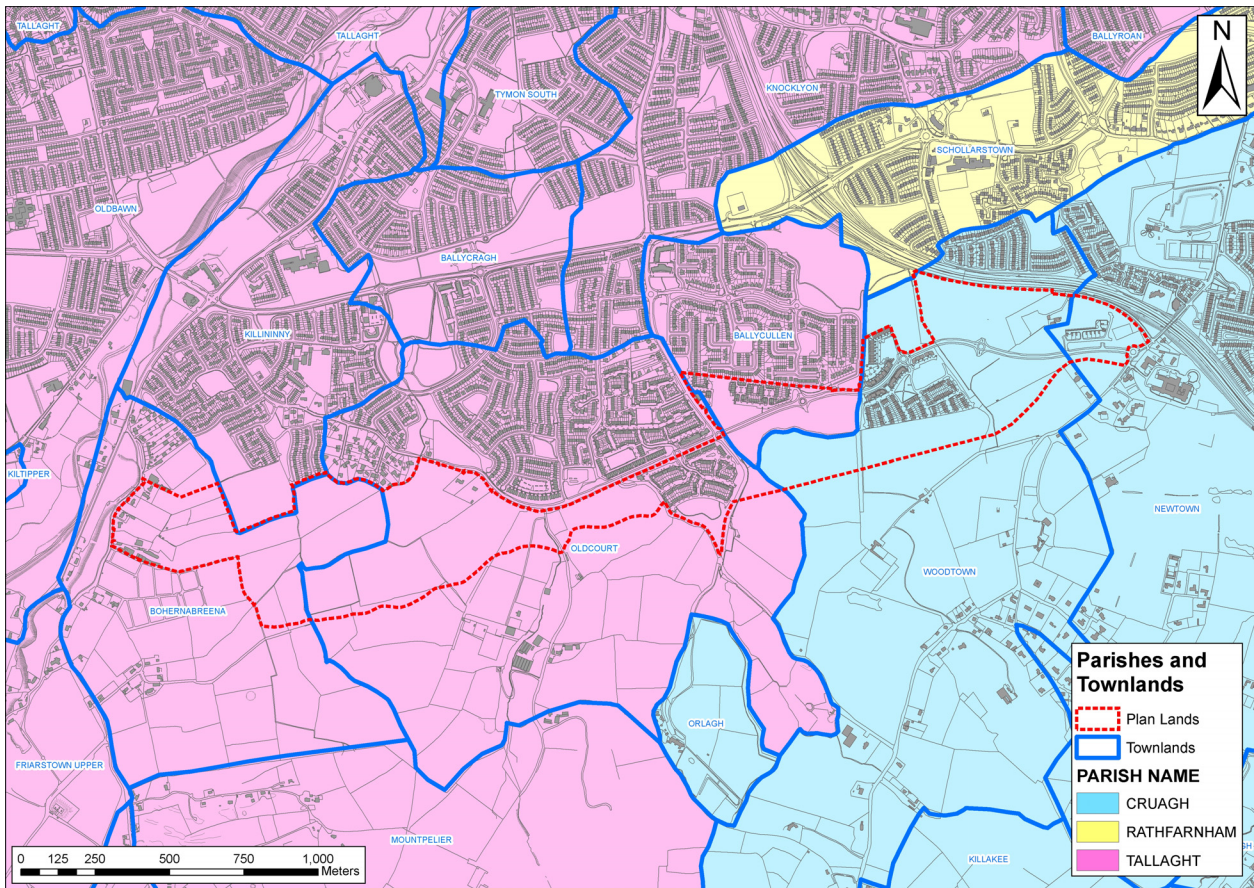


Figure 3.3 Ballycullen Oldcourt Parish Map

### 3.3.3.1 Fauna (Bats)

The EU Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive 1992), seeks to protect rare and vulnerable species, including all species of bats, and their habitats and requires that appropriate monitoring of populations be undertaken. All species of bat found in Ireland are listed on Annex IV of the Directive, while the Lesser Horseshoe bat is further protected under Annex II. Furthermore, all bat species are protected under the Wildlife Act (1976) and Wildlife [Amendment] Act (2000) which make it an offence to willfully interfere with or destroy the breeding or resting place of these species.

In a recent survey carried out by Bat Conservation Ireland and the Centre for Irish Bat Research (January 2012), analysis was carried out of the county examining the areas of greatest bat occurrence and areas where bats may be particularly vulnerable.

Analyses were carried out at a 5km resolution using the CORINE landcover, altitudinal, climatic and other datasets. This analysis is based on bat records available from 2000 to 2009 and it is noted that results may change as further records and more widespread and detailed habitat datasets become available over time. Most or all of South Dublin County is included in the core ranges of the common pipistrelle,

soprano pipistrelle, Leisler's bat and Natterer's bat.

Approximately half the county is included in the whiskered bat's core range. The survey concluded that the Annex II list species Lesser horseshoe bat is confined in Ireland to counties along the western seaboard, so is absent from County Dublin and South Dublin County Council area. A small proportion of the core range of the Nathusius' pipistrelle occurs in County Dublin but this includes more than two 5km squares in South Dublin County. Apart from the above two species (Lesser Horseshoe Bat and Nathusius' pipistrelle), the Daubenton's bat has next the most restricted distribution in the whole county with just 35% of Co. Dublin included in its core range. This species, however, is found in South Dublin County and the west of the county is likely to sit within the Daubenton's core range.

As noted in the recent survey carried out by Bat Conservation Ireland and the Centre for Irish Bat Research (2012), all of South Dublin County, is included in the core ranges of the common pipistrelle, soprano pipistrelle, Leisler's bat and Natterer's bat. Approximately half the county is included in the whiskered bat's core range. Therefore all of the plan lands provide suitable habitats and foraging grounds for bats; the sensitivity of the area should be reflected in the policies of the LAP in order to afford adequate protection to bats and other protected species.

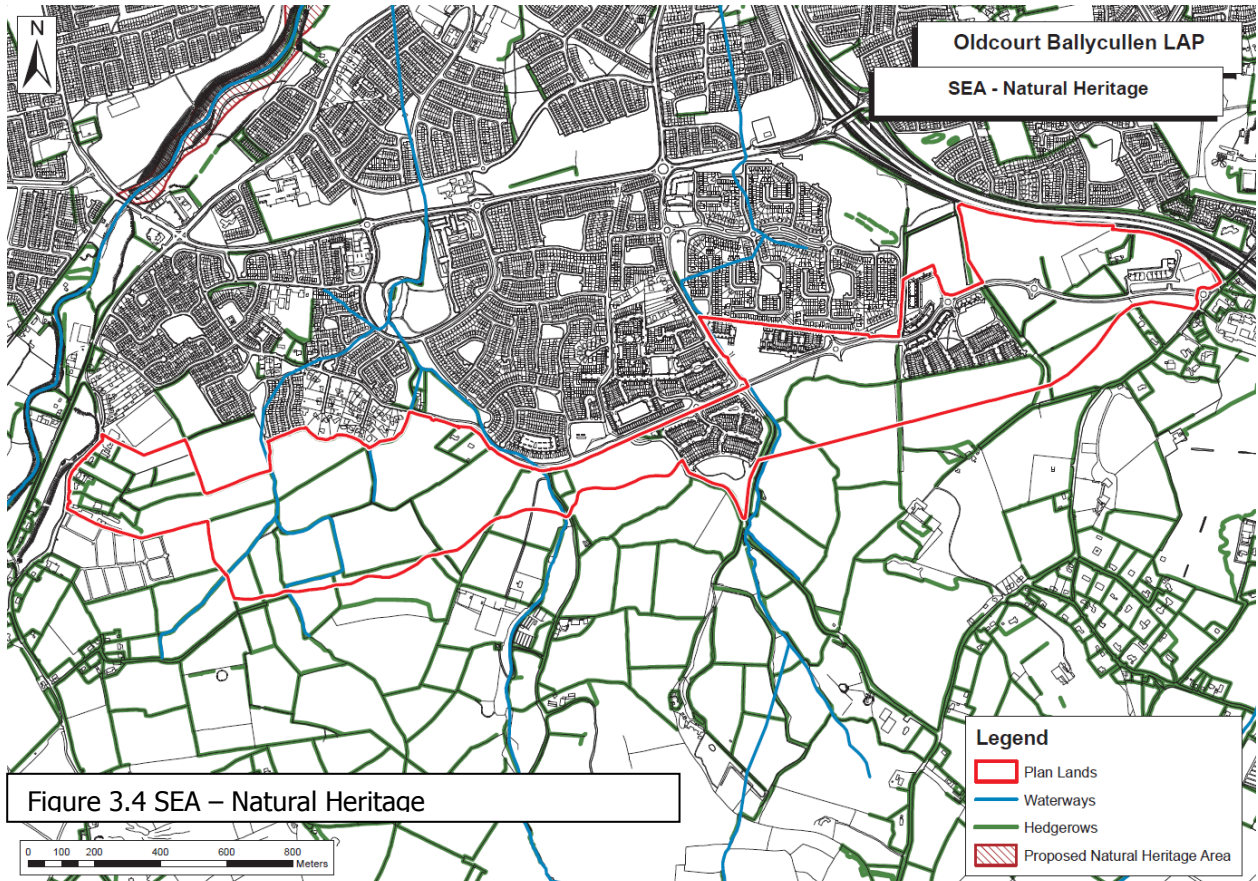


Figure 3.4 SEA – Natural Heritage

### 3.3.3.2 Fauna (General)

Information on Fauna within the LAP area has been derived from an Environmental Impact Assessment of one of the sites where permission was granted for extensive residential and some retail and community infrastructure provision (Deane Homes SD04A/0393).

"Bird activity in the site was confined mainly to the hedgerows, birds typical of this habitat were seen such as blackbird (*Turdus merula*), wood pigeon (*Columba palumbus*), blue tit (*Parus caeruleus*), starling (*Sturnus vulgaris*) and chaffinch (*Fringilla coelebs*). Other species observed included hooded crow (*Corvus corone cornix*) and magpie (*Pica pica*).

There were no direct signs of mammals noted during the field survey, though it is probable that a range of species utilises the site especially given the dense cover of gorse where present. The presence of trails and trampling of grass, which is not attributed to livestock is further evidence of mammals foraging in the area. No evidence of a badger sett was uncovered.

Mammals, which may be likely to forage in the area, given the surrounding environment, include:

Rodents  
Bat species  
Badgers (*Meles meles*)  
Hedgehogs (*Erinaceus europaeus*)  
Foxes (*Vulpes vulpes*)  
Rabbits (*Oryctolagus cuniculus*)

The overall evaluation of the ecological significance of the site was "Moderate Local Value" (using the Regini 2000 Guidelines)".

### 3.3.4 Aquatic Biodiversity, Flora and Fauna

There is limited information available on the aquatic biodiversity in the Ballycullen and Oldcourt streams and their tributaries and other drainage ditches. Kick sampling was carried out at two locations in the stream on the Deane Homes site. The results were analysed and values assigned using the EPA scheme of Biotic Indices or Quality (Q) Values and their relationship to water quality. The evaluation of a water quality rating is based on the relative abundance of groups of indicator organisms. Owing to a dominance of group C and D taxa,

this sample was assigned a Q-value of 2 — 3 indicative of moderate pollution.

The Ballycullen and Oldcourt streams (both partially culverted) discharge to the River Dodder. The River Dodder is exceptional amongst most urban rivers in the area supporting Atlantic salmon (*Salmo salar*), a species listed in Annex II & V of the EU Habitats Directive. Populations of Sea Trout (*Salmo trutta morpha trutta*) in addition to resident Brown Trout (both *Salmo trutta morpha fario* and *S. trutta morpha lacustris*) are also found. A significant fish kill on the river, just above where the Ballycullen and Oldcourt streams join, occurred in March 2013.

### 3.3.5 Biodiversity: Existing Problems and Environmental Considerations

- Significant habitat fragmentation has already occurred in the south-eastern LAP land area due to hedgerow removal during development,
- Residential developments in the Ballycullen have utilised pre-SuDS surface water disposal methods. Need to use Sustainable Urban Drainage Systems as a means of preventing surface water runoff into a system that has capacity problems
- Need to establish a Biodiversity Network, along the hedgerows, existing streams and ditches, SuDS areas etc.

### 3.3.6 Evolution of Biodiversity, Flora and Fauna in the Absence of a Local Area Plan

In the absence of the Local Area Plan, development would continue to expand into Greenfield sites as these sites are already zoned. The opportunity to create a robust biodiversity network within the LAP lands would be lost. Ecological connectivity could not be provided, resulting in further habitat fragmentation through the removal of hedgerows.

### 3.4.1 Landscape

Landscapes are areas which are perceived by people and are made up of a number of layers: landform, which results from geological and

geomorphological history; landcover, which includes vegetation, water, human settlements, and; human values which are a result of historical, cultural, religious and other understandings and interactions with landform and landcover.

Development Plan 2004-2010 (Figure 3.5). The plan lands are located within the Firhouse and the Bohernabreena Character Areas as identified in the Landscape Character Area Assessment in the County Development Plan 2010-2016 (Figure 3.5).

South Dublin County Council undertook a partial Landscape Character Assessment in 2004 as part of the preparation of the County

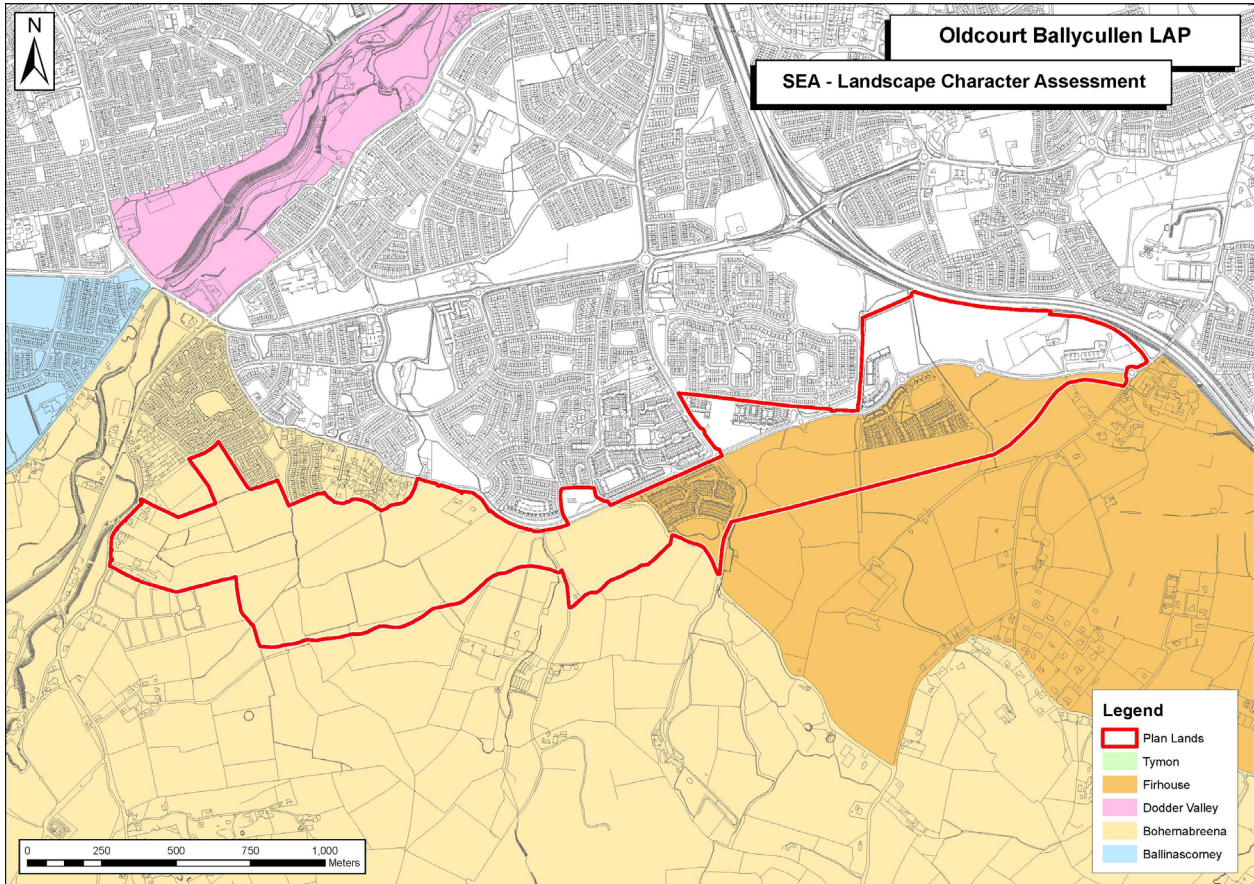


Figure 3.5 Ballycullen Oldcourt – Landscape Character Assessment

Location	Description	Issues of Sensitivity
11. <i>Firhouse.</i>	Comprising upland urban fringe farmland and urban parkland. Well maintained field boundaries and mature deciduous planting. Substantial areas rezoned for development in 2004 Plan	<ul style="list-style-type: none"> <li>• Close proximity to the urban fringe and to the Dublin mountains</li> <li>• A number of regional roads run through the area, bringing traffic</li> <li>• Development encroachment at Ballycullen, Woodtown and Rockbrook which are zoned for residential development and residential and community facilities</li> <li>• Area suffers from strong urban related development pressure, which may result in pressure to rezone low intensity recreational uses for additional development</li> </ul>
12. <i>Bohernabreena.</i>	Characterised by upland farms with dense field patterns, changing to mountainous heath and woodland, interspersed with large coniferous plantations. Large reservoirs, surrounded by deciduous planting, are located in the centre of the uplands area	<ul style="list-style-type: none"> <li>• Encroachment at the urban fringe of Oldcourt, Woodtown and Newtown</li> <li>• Rich in cultural heritage</li> <li>• Source of the River Dodder</li> <li>• Scenic reservoirs and cSAC lands in Glenasmole</li> <li>• Coniferous plantations at Mountpelier, Kilakee and Cruagh</li> <li>• Pressure for one-off housing development</li> </ul>

Table 3.1 South Dublin County Development Plan 2010-2016 - Landscape

### **3.4.2 Landscape Protection-European, National and Local Levels**

The Planning and Development Act, 2000 (as amended), introduced requirements for preservation of the character of the landscape and made statutory provision for areas of special amenity and landscape conservation areas<sup>7</sup>. As a result of this requirement, the Department of Environment and Local Government, issued draft *Landscape and Landscape Assessment Guidelines- Consultation Draft of Guidelines for Planning Authorities*, in June 2000, which had several aims including increasing awareness of landscape issues, providing guidance to planners, and also introducing specific requirements for planning control within local authorities.

The Landscape Character Assessment (LCA) is a tool for identifying the features that give a locality its particular 'sense of place' and can be used to categorise the landscape into areas of similar character. LCA grew out of the European Landscape Convention (ELC), the first international convention to focus on the protection, management and planning of all landscapes in Europe. The UK and Ireland ratified the convention and it became binding on 1 March 2007. LCA is another tool in aid of sustainable development and biodiversity protection and is important for planning efforts.

The Guidelines set out concepts of landscape character, value and sensitivity and how these should be assessed, and introduce the method of Landscape Character Assessment as a means of examining and categorising landscapes of all values, and not just landscapes that traditionally would have been associated with terms such as outstanding or beautiful and in turn were generally dealt with by strict planning control.

At a national level, it is proposed to consolidate, revise and extend the National Monuments Acts 1930 to 2004. One of the main objectives of the proposed Bill will include the provision of a single piece of consolidated and modernised legislation to replace the existing National Monuments Acts dating 1930 to 2004. of historic landscapes in Ireland to date.

At a local level, the County Development Plan 2010-2016 contains a number of objectives for

<sup>7</sup> Landscape Character Assessment in Ireland: Baseline Audit and Evaluation March 2006; Julie Martin Associates

the protection of the landscape. In addition, there are a number of objectives to protect views from certain roads; one such view is located outside the plan lands boundary along Woodstown on Stocking Lane. This protected view is from the road looking in a northerly direction across the plan lands towards Tallaght and Dublin City.

### **3.4.3 Ballycullen Oldcourt Landscape Character**

The partial Landscape Character Area Assessment for South Dublin County was carried out in 2003 and as such, increases in development and changes to land zonings in and around Ballycullen and Oldcourt area have changed to some degree. The Local Area Plan lands slope from south to north and the southern boundary of the LAP lands is generally defined by the 120 metre contour line.

The Firhouse Character Area is defined by its close proximity to the suburban housing estates of Firhouse, Ballyboden and Edmondstown, and the M50. A significant amount of development has taken place in Ballycullen and Woodtown area where a large proportion of lands are zoned for residential development and amenity. The landscape still retains a highly rural quality due to the large amount of urban parkland and the close proximity of the Dublin Mountains. The land rises steeply from 100 to 200m from Ballycullen to Woodtown, which is essentially at the foothills of the Dublin Mountains.

The Bohernabreena Character Area has its northern boundary at the urban fringe at Oldcourt, Woodtown and Newtown and extends southwards into the Dublin mountains, culminating at the mountain peak at Kippure, in the southern tip, which is surrounded by the Wicklow Mountains. The landscape type around Oldcourt is predominantly farmland with some of the lands utilised for active recreation. Much of the original field pattern and hedgerows are intact.

### **3.4.4 Landscape Issues: Existing Problems / Environmental Considerations**

The lack of a recent, thorough landscape assessment of the County is a significant data gap, leading to a lack of substantive knowledge about the current status of many of the elements noted in the 2003 assessment. The

key aspects and issues that need to be given consideration include

- Removal of hedgerows
- Landscape under considerable urban related development pressure
- The need to maintain the Landscape and particular protected views to the countryside thereby maintaining the relationship between the area and its surrounding setting

### **3.4.5 Evolution of Landscape in the Absence of a Local Area Plan**

In the absence of the Local Area Plan, it is likely that development would reduce the rural landscape further, removing hedgerows and impacting upon the surrounding rural area.

### 3.5 Geology and Soils

The Geological Survey of Ireland GSI has provided information on Bedrock, Soils, Groundwater Classification and Aquifer Vulnerability in the Ballycullen Oldcourt Area ([www.gsi.ie](http://www.gsi.ie)).

#### 3.5.1 Geology

The geology of South Dublin is comprised mainly of limestone, with a section of Granites and Igneous Intrusive rocks and Silurian and Ordovician Meta-sediments. The upland or southern areas of the County comprise the Granites and Silurian or Ordovician Meta-Impure Limestone. The underlying bedrock of the LAP lands is predominantly Lower to Middle Ordovician slates, greywacke and conglomerates, see Figure 3.6.

#### 3.5.2 Geothermal Energy

The Thermal Energy Resource Map of Ireland Final Report, released in July 2004 by Sustainable Energy Ireland indicated that Ireland is particularly well suited for the

utilisation of geothermal resources due to the temperate climate and rainfall levels which ensure year round rain-fall recharge.

The study indicates nine action areas or Major Recommendations as a result of its investigations. These recommendations are generally based around the promotion of pilot projects using geothermal resources due to a current lack of exploitation. One of the nine action areas supports a medium depth pilot borehole in an area with many potential users. The Blackrock-Rathcoole Fault is mentioned as an example location for such a pilot scheme. Mapping undertaken as part of the Thermal Energy Resource Report<sup>8</sup> appears to indicate that the majority of the South Dublin County area has similar levels of thermal heat resource available at depths of 2500m.

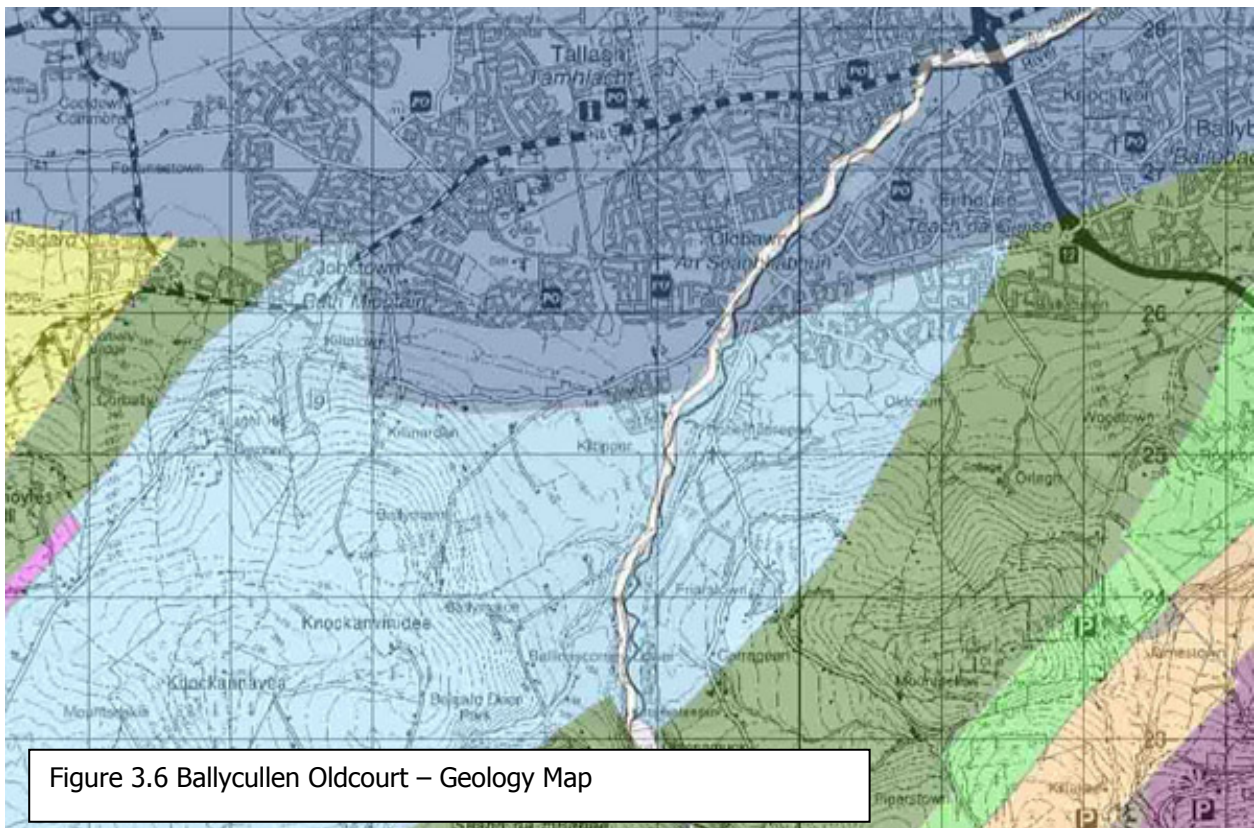


Figure 3.6 Ballycullen Oldcourt – Geology Map

<sup>8</sup> <http://esb2.net.weblink.ie/SEIGeoThermal/MapPage.asp>

### 3.5.3 Sites of Geological Interest.

There are a number of sites of Geological Interest which are listed in the County Development Plan 2010-2016; there are no sites of Geological Interest within the plan lands.

### 3.5.4 Soils

To date there is currently no legislation which is specific to the protection of soil resources. There is, however, currently an EU Thematic Strategy on the protection of soil which includes a proposal for a Soil Framework Directive which proposes common principles for protecting soils across the EU.

The LAP lands comprise of two soil types – Sandstone and Shale Till apart from two small sections of Limestone Till, see Figure 3.7.

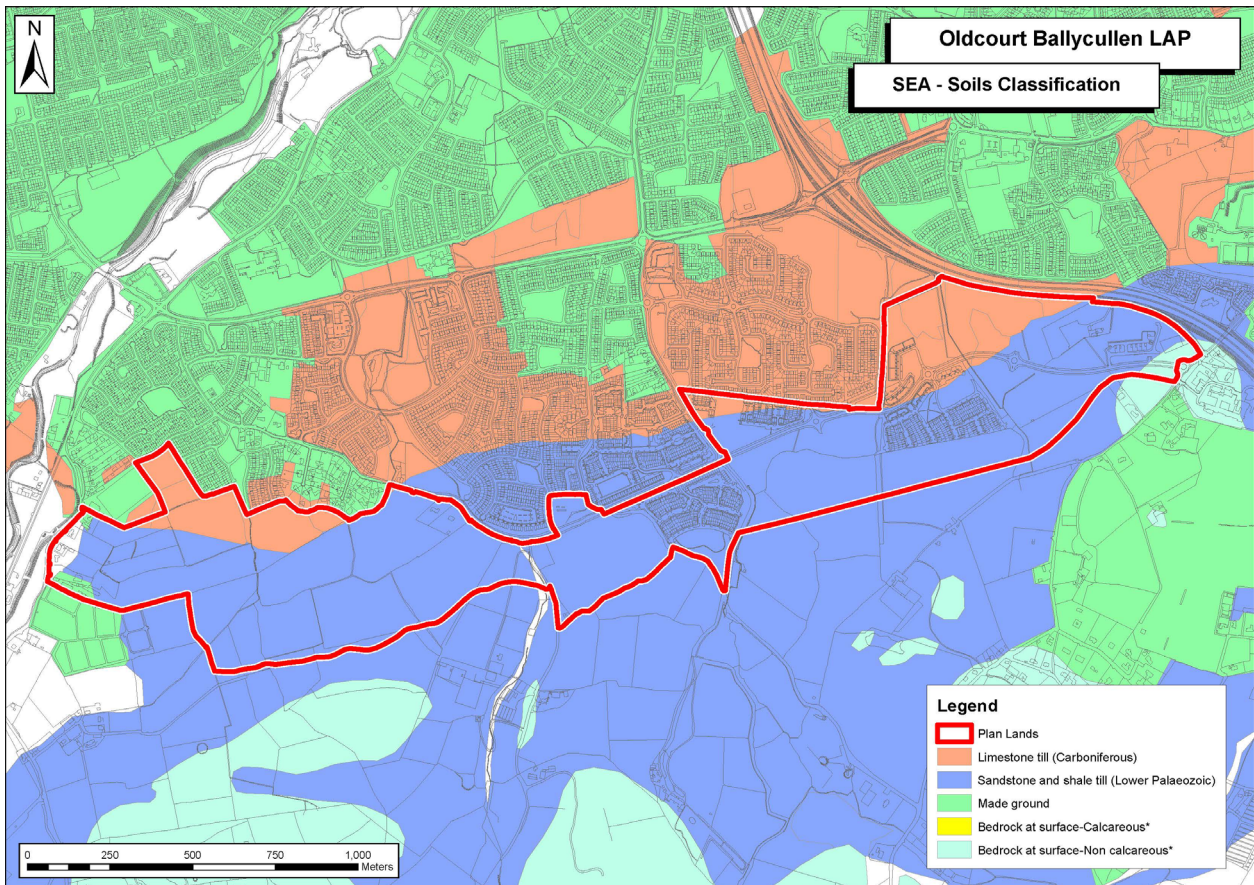


Figure 3.7 Ballycullen Oldcourt - Soils

### 3.5.4.1 Contaminated Soils

A number of sites (existing and closed) are located in the County which may have a negative affect on the soil resource in which they are located. These include contaminated areas such as old landfills. There have been 66 no. degraded sites identified by the South Dublin County Council Environment Department, as having potential to negatively affect receiving

waters and land uses. None of the Contaminated Sites are within the Ballycullen Oldcourt LAP area, although there are two sites immediately to the south of the LAP land see Figure 3.8. Both sites are understood to contain dry construction material; the file is closed on the smaller of the sites and the larger one is being monitored by the County Council, with a view to providing remedial action if required.

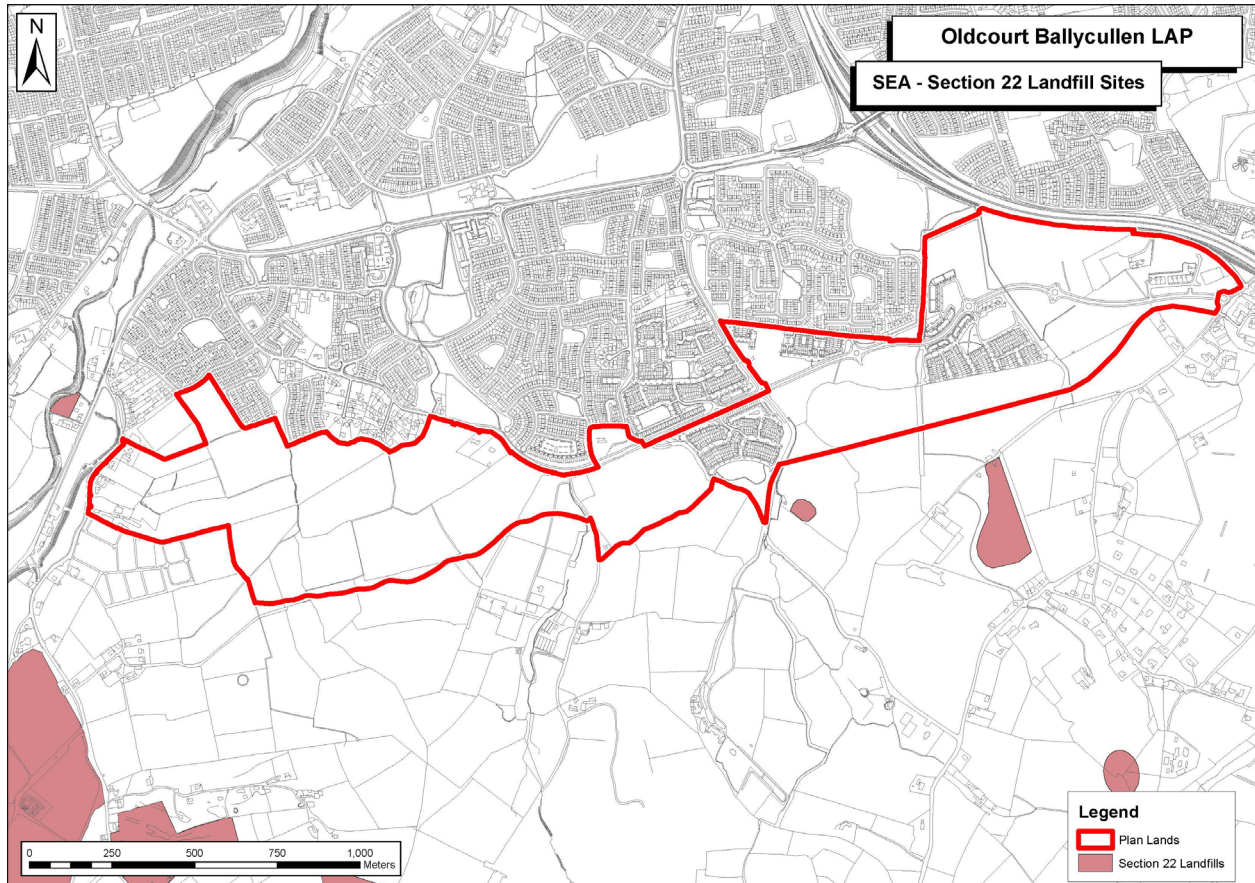


Figure 3.8 Ballycullen Oldcourt – Section 22 Landfill Sites

### 3.5.4.2 Extractive Industries

Quarrying has been historically undertaken throughout the County due to the presence of deposits of sand, gravel and accessible bedrock. Many of the older quarry operations in the Mountain areas are now closed. The largest quarry operating at present in South Dublin is the Roadstone Limestone Quarry at Belgard/Newlands Cross; this is located over 5km to the north-west of the LAP lands. There is another quarry located approx. 5km to the west of the LAP lands at De Selbyl Hill which extracts crushed stone (aggregate). Due to the distance of these quarries from the plan lands, it is unlikely that they will have a significant impact on the plan lands.

### 3.5.5 Soil and Geology Issues: Existing Problems / Environmental Considerations

Having regard to the location of the plan lands relative to the quarries and Section 22 contaminated soil sites within the County, it is considered that there are no existing problems or environmental concerns in relation to this matter.

### 3.5.6 Evolution of Geology/Soils in the Absence of the Local Area Plan

In the absence of a Local Area Plan, it is unlikely that there would be any impact on the geology and soil condition of the plan lands.

## **3.6 Agriculture and Forestry**

### **3.6.1 Agriculture**

Farmland in the Ballycullen Oldcourt LAP area can be categorised as "Urban fringe farmland" subject to urban development pressures due to proximity to Dublin Metropolitan area.

The LAP lands in the Ballycullen portion consist of partially developed residential lands, some unmanaged or abandoned agricultural (recolonised bare ground) land and a small amount of grassland. The western portion of the lands at Oldcourt is in active agricultural used as stocked grassland.

### **3.6.2 Forestry**

There is no forestry in the LAP area.

### **3.6.3 Agriculture and Forestry Issues: Existing Problems / Environmental Considerations**

Pressure for development on lands used for agriculture.

### **3.6.4 Evolution of Agriculture and Forestry in the Absence of a Local Area Plan**

The presence or otherwise of a Local Area Plan for Ballycullen Oldcourt would not have any effect on the maintenance of agricultural lands as these lands are already zoned for development.

## **3.7 Water**

### **3.7.1 Introduction**

The Ballycullen Oldcourt Local Area Plan lands are all located within the River Dodder catchment area.

### **3.7.2 The Water Framework Directive (WFD)**

The key piece of legislation governing water quality in Ireland is the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003), which transposed Directive 2000/60/EC (the Water Framework Directive, (WFD) into Irish law. The WFD sets out that a Member State shall implement the necessary measures to prevent deterioration of the status of all bodies of surface, ground estuarine and coastal water, and shall protect, enhance and restore all bodies of surface and ground water with the aim of achieving good ecological status by 2015.

#### **3.7.2.1 River Basin Districts and Water Bodies**

For the purposes of implementing the WFD, Ireland has been divided into eight river basin districts. South Dublin lies wholly within the Eastern River Basin. A characterisation report for this basin was prepared in September 2005. The Eastern River Basin Characterisation report indicates the main pressures and threats to the water-bodies in the basin achieving the status required under the WFD.

### **3.7.3 Rivers**

River Basin Management Plans (RBMPs) have been published for all River Basin Districts in Ireland in accordance with the requirements of the Water Framework Directive (WFD). The Ballycullen Oldcourt LAP lands are predominantly located within the Dodder 2 Catchment area with the eastern and western edges of the LAP land within the Owenadower Lower and Firhouse Catchments respectively

For the purposes of assessment under the WFD, three (3) main rivers drain lands in South Dublin. These are The Liffey, Dodder and Camac. These rivers are monitored by the EPA and South Dublin County Council. The Ballycullen Oldcourt plan lands are located within the Dodder 2 Catchment and the Firhouse Catchment of the Dodder River.

The Eastern River Basin District River Basin Management Plan 2009-2015 indicates that the overall status of the Dodder 2 Catchment is moderate<sup>9</sup> and that of the Firhouse Catchment is poor: it is an overall objective to restore the status of these sections of the Dodder river to 'good' by 2027 and 2021 respectively. (Table 3.3)

In general, the WFD requires our waters to achieve at least good status/potential by 2015, and that their status does not deteriorate. Having identified the status of waters, the next stage is to set objectives for waters. Objectives consider waters that require protection from deterioration as well as waters that require restoration and the timescales needed for recovery. Four default objectives have been set initially - Prevent Deterioration, Restore Good Status, Reduce Chemical Pollution and Achieve Protected Areas Objectives. These objectives have been refined based on the measures available to achieve them; the latter's likely effectiveness, and consideration of cost-effective combinations of measures. Where it is considered necessary extended deadlines have been set for achieving objectives in 2021 or 2027.

In addition to these default objectives, the Eastern River Basin Management Plan also recommends a series of measures needed to bring the Dodder 2 back to good status.

The additional measures for Dodder 2 include

- Further investigation/ monitoring required
- Develop septic system management programme
- Enforce regulations on septic systems
- Conduct awareness campaign for sustainable domestic water use, including rainwater harvesting and domestic soakaways for storm water
- Develop Habitat Suitability Curves for salmonids in Irish Rivers

	<b>Dodder 2 Catchment</b>	<b>Firhouse Catchment</b>
<i>Overall Status</i>	Moderate	Poor
<i>Objective</i>	Restore 2027	Restore 2021
<i>Risk</i>	At Risk	At Risk
<i>Heavily Modified</i>	No	No
<i>Macroinvertebrate Status</i>	Moderate	
<i>Physico-Chemical Status</i>	Good	
Hydromorphology status	Good	
Ecological status	Moderate	Poor

**Table 3.2: Status Report of the Dodder 2 and Firhouse Catchments<sup>10</sup>**

<sup>9</sup> Extended timescales have been set for certain waters due to technical, economic, environmental or recovery constraints. Extended timescales are usually of one planning cycle (6 years, to 2021) but in some cases are two planning cycles (to 2027).

<sup>10</sup> Source: [www.wfdireland.ie](http://www.wfdireland.ie)

### **3.7.4 Groundwater and Aquifer Vulnerability<sup>11</sup>**

The Geological Survey of Ireland (GSI) has undertaken a Groundwater Protection Scheme for South Dublin County. The overall aim of the Groundwater Protection Scheme, which has been undertaken jointly between the GSI and the Local Authority, is to preserve the quality of groundwater, particularly for drinking water purposes, for the benefit of present and future generations.

The aquifer on the main portion of the plan lands are located is rated as "Locally Important Aquifer – Bedrock which is Moderately Productive only in Local Zones". On the western portion of the plan lands, the aquifer is described as "Poor Aquifer – Bedrock which is Generally Unproductive".

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<sup>11</sup> Information on Groundwater and Aquifer Vulnerability from [www.gsi.ie](http://www.gsi.ie)

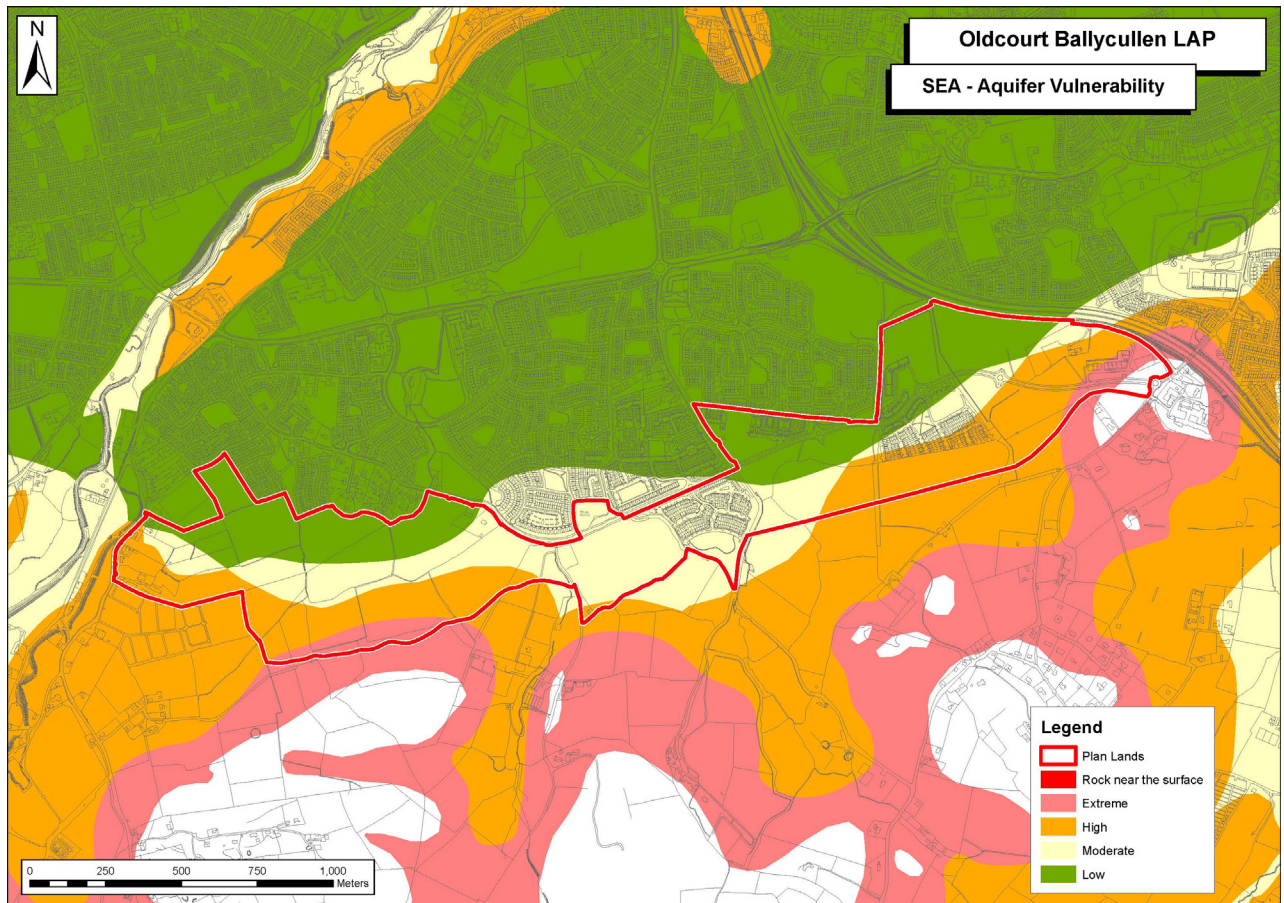
### 3.7.4.1 Aquifer Vulnerability

The groundwater vulnerability within the LAP lands varies from low to high to extreme vulnerability with a small portion of the plan lands have been identified as extreme vulnerability where the bedrock is close to the surface (Figure 3.9).

None of the water bodies within the Ballycullen Oldcourt LAP area have been listed on the WFD Register of Protected Areas (RPAs).

The Strategic Drainage Study for the Greater Dublin Area identifies that the groundwater in South Dublin is at risk from diffuse sources including inadequate urban sewerage systems and point sources including some contaminated land.

**Fig 3.9 Ballycullen Oldcourt LAP Aquifer Vulnerability**



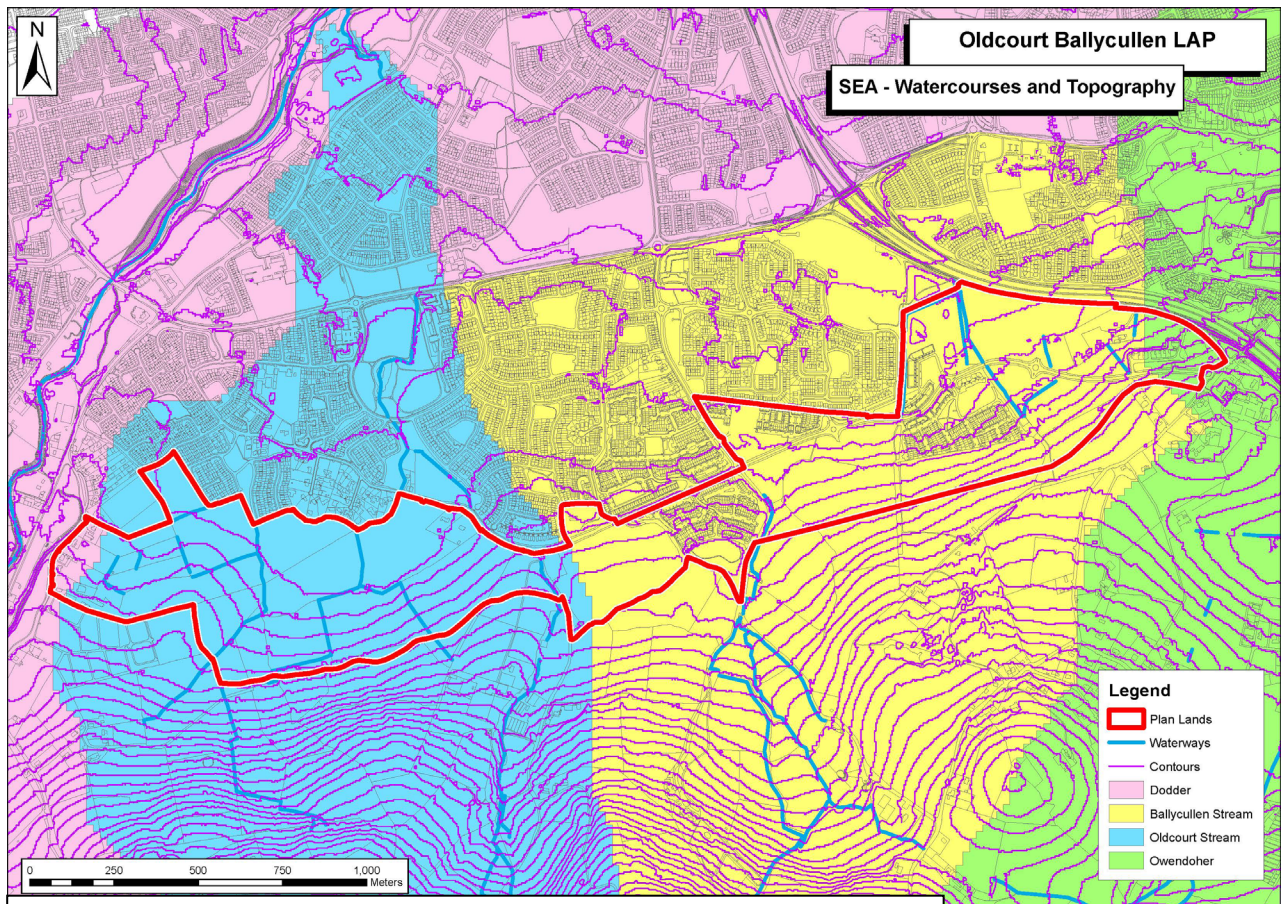
### 3.7.5 Surface Water

The Ballycullen Oldcourt LAP area is predominantly within the Dodder 2 catchment with the eastern edge of the LAP area being within the Owenadower Lower catchment: both water-bodies are tributaries of the River Dodder and have their source on Mountpellier Hill to the south, see Figure 3.10.

The LAP lands are crossed by two main streams which are tributaries of the River Dodder, the Ballycullen Stream and the Oldcourt Stream and tributary. There has been partial culverting of the Ballycullen Stream as part of the Dalriada residential development and partial culverting of

the Oldstream following the upgrading of the Oldcourt Road (an additional stream, the Whitestown Stream, has already been culverted as part of residential development).

The opportunity exists to provide a surface water drainage system based on the principal of SuDS on the undeveloped zoned land within the LAP. A series of hedgerows, some with accompanying ditches or swales, can be utilised in this approach.



**Figure 3.10 Ballycullen Oldcourt Watercourses and Topography**

### 3.7.6 Flooding.

The "The Planning System and Flood Risk Management – Guidelines for Planning Authorities 2009" indicate that catchment based Flood-Risk Management Plans are currently being developed by the OPW in consultation with Regional and Local Authorities. These will provide the focal point and strategic direction for flood risk management in the County. The use of the planning system is an integral part of flood risk management.

Issues raised in the Guidelines include: -

- Need to identify and safeguard flood plains;
- Implementation of Sustainable Drainage Systems;
- Flood risk is to be considered in Development and Local Area Plan SEA documents as key environmental criteria.
- The sequential approach to managing flood risks utilizing flood zones is to be undertaken.
- A justification test for development proposed within zones of flooding probability is to be provided.

Within South Dublin at present, the only complete Catchment Flood Risk Assessment Management Study (CFRAMS) to date is the River Dodder CFRAMS which was prepared as one of the pilot projects for the wider CFRAMS programme. However, while the LAP lands are within the Dodder catchment no flood risk modelling was carried out for these particular sections of streams.

#### 3.7.6.1 Information Sources

The Ballycullen Oldcourt LAP area is within the Dodder catchment. The flood risk information in relation to the catchment includes provisional data (OPW initial Preliminary Flood Risk Assessment - PFRA), alluvial soils as a surrogate for Flood Risk, OPW recorded Flood Events, the Dodder CFRAMS and information recorded by South Dublin County Council.

The Office of Public Works (OPW) Draft Preliminary Flood Risk Assessment (PFRA)<sup>12</sup> ,

<sup>12</sup> The OPW Draft Preliminary Flood Risk Assessment is currently closed for public consultation. It is part of the Catchment Flood Risk Management Programmes (CFRAMPs)

using fluvial and pluvial data modelling, has identified a number of areas in and around the plan lands which would be areas of potential flood risk (Figure 3.11 below). On the eastern side of the Oldcourt lands, , fluvial modelling identifies a 1% Annual Exceedance Probability (AEP) 100year event occurring along the Oldcourt Stream ( a section of alluvial soils is also present along side the Oldcourt Stream before it enters the LAP lands. On the Ballycullen Stream, the PFRA information indicates be areas of potential flood risk within the plan lands.

#### Flooding Downstream

Two surface water flooding incidents in August and September 2008 in Glenvara and Castlefield Estates in Firhouse,

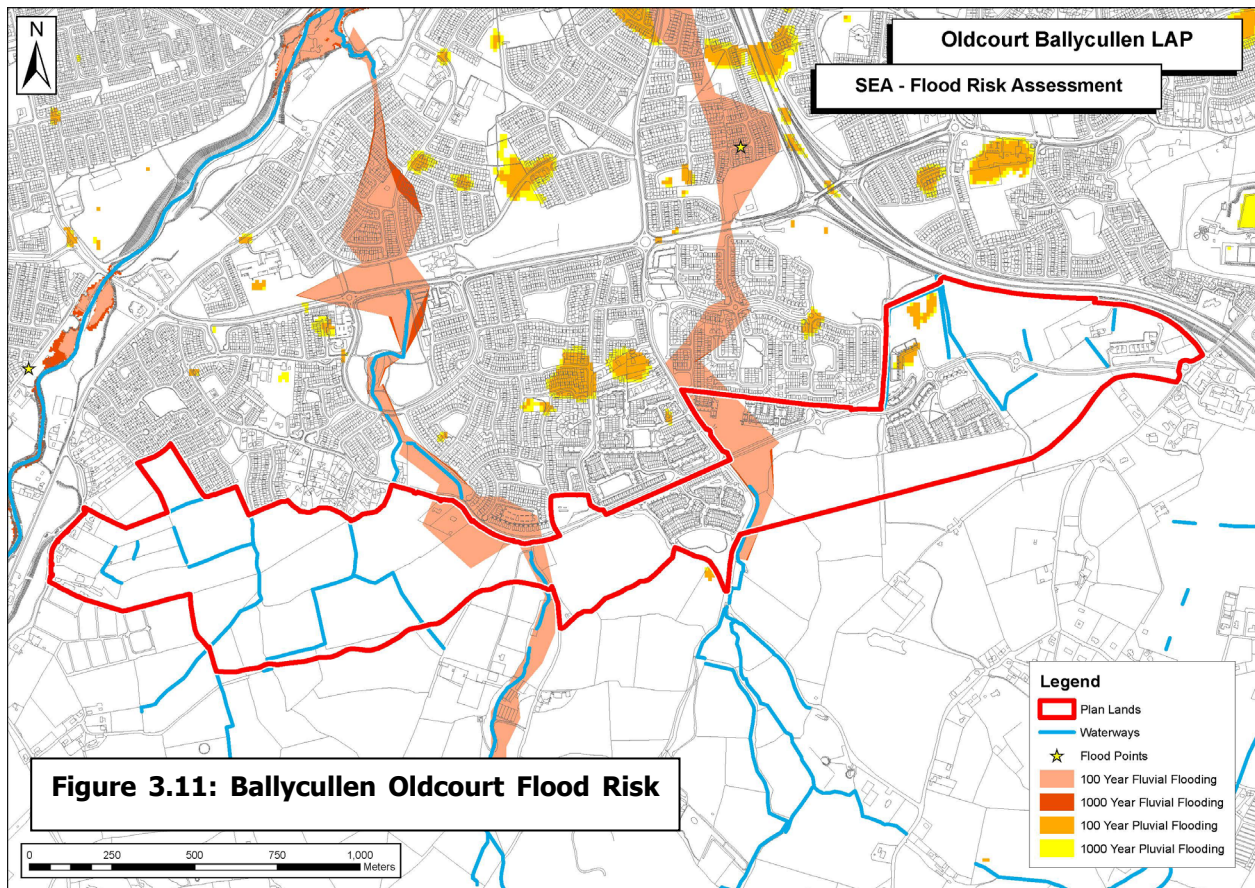
A significant flooding event occurred in the Castlefield and Glenvara estates in Firhouse in October 2011 with water escaped from 3 manholes from a section of the culverted Ballycullen Stream.

The Greater Dublin Strategic Drainage Study (GSDSDS) identified the Ballycullen Stream as having a number of hydraulic deficiencies at Glenvara Park. Significant flooding (greater than 25m<sup>3</sup>) was predicted in the vicinity of Glenvara Park from 3 manholes on the existing 1050 stream culvert for the 5 year return period storm. The GSDSDS addressed these hydraulic deficiencies in the Phase 3 Needs/Options Report in section 7.5 – Drainage Development Option 5 (DD05) which recommended " The existing 1050mm trunk sewer from the Ballycullen View Link Road, Glenvara Park to Ballycullen Road, Firhouse via Castlefield Manor will require approximately 750m of duplicating and the sewer along the Ballycullen View Link Road, Glenvara Park to the trunk sewer well required approximately 375m of existing 300/450mm pipe to be up graded to 525/600mmpipe<sup>13</sup>

which is a long-term strategy for the reduction and management of flood risk in Ireland.

<sup>13</sup>

<http://www.floodmaps.ie/View/FloodReports.aspx?Ty pe=Reports&FloodId=11684>



**Figure 3.11: Ballycullen Oldcourt Flood Risk**

### 3.7.7 Water Issues: Existing Problems / Environmental Considerations

Under the requirements of the WFD, South Dublin is expected to identify and manage the waters within the county and ensure that existing and proposed development in the County does not affect the achievement of 'Good' water status by 2015. The River Basin Management Plan for the ERBD notes the status of the Dodder 2 Catchment in South Dublin and projects a timeframe of 2027 for compliance with the WFD regarding rivers.

The groundwater vulnerability within the LAP lands varies from low to high to extreme vulnerability with a small portion of the plan lands have been identified as extreme vulnerability where the bedrock is close to the surface.

The sensitivity of these areas could impact on the groundwater within the county, should inappropriate development be allowed to take place in close proximity to these locations.

There are no Water Framework Directive Protected Areas in the Ballycullen Oldcourt Local Area Plan area identified as part of the River Basin Management Plan for the ERBD.

The River Basin Management Plan for the ERBD proposes management and monitoring for the Dodder.

Several areas of potential flood risk are also identified within the Ballycullen Oldcourt LAP land zoned for development. The requirements of the *"The Planning System and Flood Risk Management – Guidelines for Planning Authorities"* (2009), need to be taken into account in order to ensure that flooding in these areas does not impact on human health, property, or the ability to meet the requirements of the WFD or need to protect biodiversity.

The opportunity exists to provide a surface water drainage system based on the principal of SuDS on the undeveloped zoned land within the LAP. A series of hedgerows, some with accompanying ditches or swales, can be utilised in this approach.

While the residential development which has occurred within the plan lands made provision for the dealing with surface water runoff by

means of retention tanks, a Sustainable Urban Drainage System (SuDS) approach will be required in the new LAP in accordance with the policy as set out in the South Dublin County Development Plan 2010 – 2016.

The SuDS approach is also required to ensure that no additional surface water run-off from the development of the LAP land is added to the rivers, streams and surface water drainage which has already been shown to be inadequate to cater for the existing flows

### **3.7.8 Evolution of Water in the absence of a Local Area Plan**

In the absence of the Ballycullen Oldcourt Local Area Plan, if new development was not accompanied by appropriate waste water infrastructure/capacity, the likelihood of water bodies in South Dublin achieving WFD commitments would be reduced.

Significant adverse impacts upon the biodiversity and flora and fauna of the wider County would be expected as well as wider impacts on the transitional waters of the Liffey and Dublin Bay.

The replacing of semi-natural land cover types with artificial, more impervious surfaces is likely to lead to cumulative increases in run-off and peak flow conditions in the County's river bodies. These cumulative increases have the potential to - especially in combination with the occurrence of severe rainfall events – result in flooding.

## **3.8 Air Quality and Noise Pollution**

### **3.8.1 Air Quality**

Prevailing meteorological conditions for South Dublin are affected by the landmass of the Dublin Mountains. The prevailing wind sweeps down from the mountains and the south-west. Located at the base Montpelier Hill, which adjoins the foothills of the Dublin Mountains, the Ballycullen Oldcourt LAP area is directly affected by the prevailing wind which is of great importance for dispersing air-borne pollutants, especially ground level sources such as traffic emissions.

Air pollution can have a negative affect on the quality of life of residents of the County. Air pollution can be generated through home or

office heating, transport fuel combustion, energy generation and industry. In order to monitor, manage and reduce the amount of pollutants discharged to air, a number of EU Directives have been created and transposed to Irish law.

The EU Directive on ambient air quality and management (The Air Quality Framework Directive; 96/62/EC) has been transposed into Irish legislation by the Air Quality Standards Regulations 2002 and the Ozone Regulations 2004, which detail strategic objectives in relation to air quality and management. These objectives include setting pollution standards which will avoid, prevent and reduce harmful effects on human health and the environment, maintaining ambient air quality where it is of a good standard and improving it in other cases.

Four (4) daughter directives create additional limits for specific air pollutants. These deal with more commonly released pollutants such as sulphur dioxide, nitrogen dioxide, and nitrogen oxide, particulate matter and lead, and carbon monoxide and benzene, and less common, but equally hazardous pollutants such as ozone, arsenic, nickel and cadmium.

Studies indicate that in recent years, the focus of air pollution monitoring has shifted from black smoke, sulphur dioxide (SO<sub>2</sub>)(both from home heating) and lead (petrol based) to monitoring benzene, nitrogen oxide (NO<sub>x</sub>) and particle matter (PM<sub>10</sub>), which are derived from traffic based sources. Significant reduction of nitrogen oxides (NO<sub>x</sub>) from road transport is required if Ireland is to meet its commitments under the National Emissions Ceiling (NEC) Directive by 2010. The latest Air Quality report from the EPA<sup>14</sup> does not expect NO<sub>x</sub> emissions to meet the target date.

### **3.8.2 Air Quality Monitoring**

The Environmental Protection Agency (EPA) maintains a number of air monitoring stations within South Dublin County. The permanent location of the monitoring station is on the Old Bawn Road in Tallaght, approximately 3 kilometres from the plan lands. Monitoring is done using a continuous monitor for Sulphur Dioxide and Particulate Matter (PM<sub>10</sub>) at this station.

<sup>14</sup> EPA. Irelands Environment 2008. Air Quality. P43.

The latest available document 'Air Quality in Ireland Report (2011)' by the EPA indicated that none of the monitoring stations in South Dublin exceeded allowable limits during that year. The PM10 limit, however, was breached four times in 2011. The daily limit for PM10 is 50 ug/m<sup>3</sup>. The

limit is deemed breached if more than 35 exceedances occur during the year. The table below shows the number of exceedances at the station in South Dublin based on available data to 31st December 2011.

Station Name	Number of values greater than 50 ug/m <sup>3</sup> (year to date)	Station Location	Station Type	Data available to	Station Operator
Tallaght	4	Dublin 24	Suburban Background	31st December 2011	South Dublin County Council

**Table 3.4 Air Monitoring Exceedances at stations in South Dublin**

An air quality assessment was carried out in 2004 as part of an Environmental Impact Statement (EIS) for a proposed mixed use residential and commercial development in the south-east portion of the plan lands at Ballycullen (SD04A/0393). The analysis concluded that all air quality monitored did not exceed allowable limits and any increases in emissions during the short term construction period of the subject development would be mitigated against.

Given that traffic emissions generate a significant amount of airborne pollutants, the recent noise mapping exercise undertaken for South Dublin as a response to the EU Noise Directive is of interest. The mapping exercise (see Fig. 3.10) indicates that the greatest instances of noise pollution occur from roadways. It is likely that areas of greatest noise disturbance from roads would also have a high incidence of traffic generated air pollutants and this is very relevant in the Ballycullen section of the LAP land adjoining the M50 motorway.

### 3.8.3 Point Sources for Emissions in Air

There are three (3) sources of large scale industrial and agricultural activities monitored by the EPA. These are Integrated Pollution Prevention Control (IPPC) licenses, waste licenses and SEVESO licenses or sites. There are no licenses under the above categories present within the Ballycullen Oldcourt LAP area.

### 3.8.4 Noise Pollution and Noise Mapping

Noise pollution is considered to be one of the most damaging and prevalent forms of nuisance

and pollution within urban areas. High levels of traffic noise especially can have a detrimental effect on the quality of life, and on human health.

On foot of Directive 2002/49/EC (transposed into the Environmental Noise Regulations), the four local authorities within the agglomeration of Dublin (Dublin City Council, Fingal, Dún Laoghaire-Rathdown and South Dublin County Councils) have prepared a Noise Action Plan, including noise maps for the Dublin Agglomeration 2008-2013.

In conducting the noise mapping exercise, night and day time levels of greater than 55 decibels (db) and 70 (db) respectively, were considered to be undesirable. Figure 3.10 (below) is taken from 'Dublin Agglomeration Draft Action Plan' relating to the Assessment & Management of Environmental Noise. Numerals represent average decibel levels taken over a 24 hour period.

Proposals to reduce the impact of noise on human health include:-

- Abatement measures to reduce traffic flows,
- Speed reduction,
- Traffic relocation,
- Public transport, walking and cycling promotion.

The Ballycullen area has some high levels of environmental noise, originating from the M50 motorway, see Figure 3.12. Under Directive 2002/49/EC relating to the assessment and management of environmental noise, the EU has introduced the indicator LDEN, standing for the long term average sound level over the day, evening and night periods. The equal to or greater than 75 Lden (Db) represents the

highest band of roadside noise as measured by the National Roads Authority on National Primary Routes.

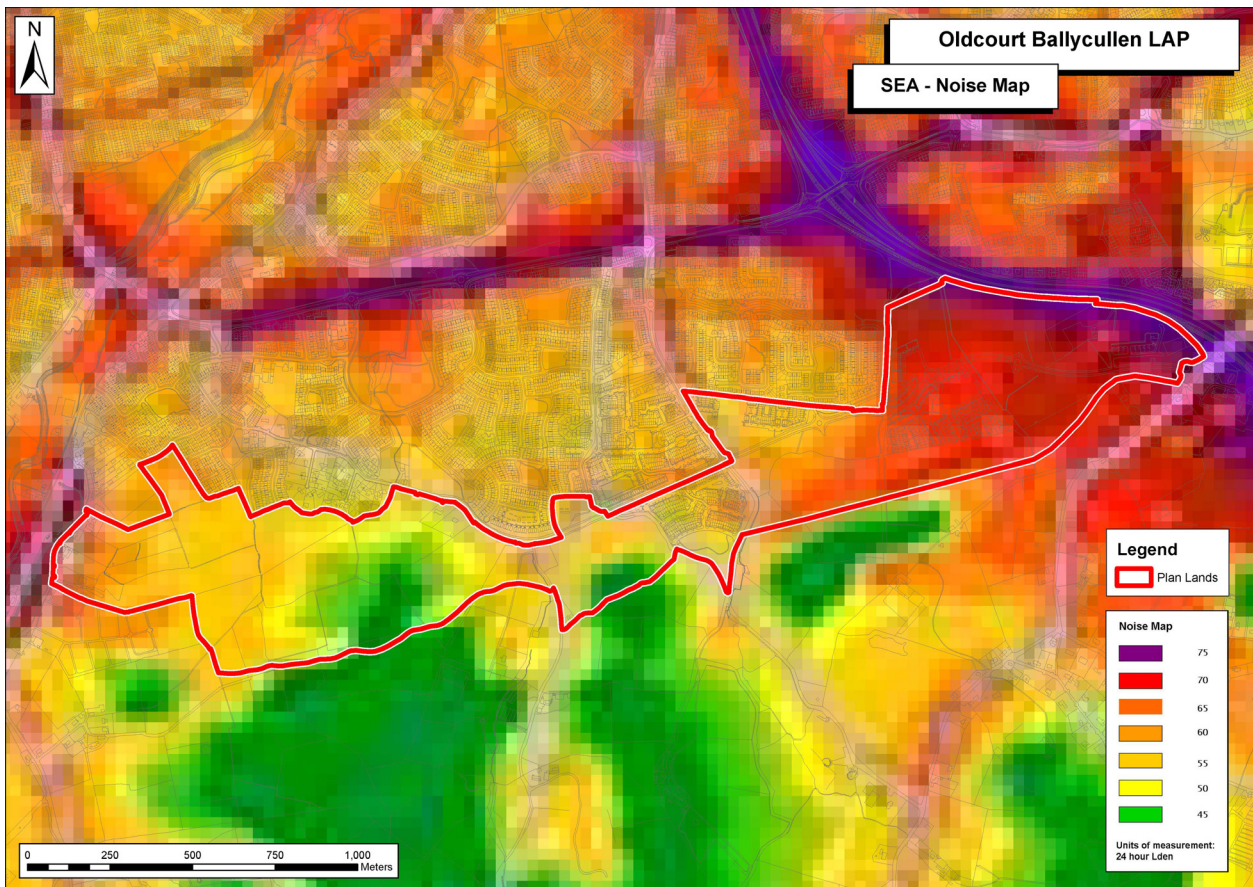
Mapping of the majority of the western area of the Plan Lands indicates that noise levels were below 55dB(A) level with the exception of small areas within the 55 to 59 dB(A) and 60 to 64dB(A) noise bands near and along the Bohernabreena Road. High noise levels in excess of 55dB(A) were mapped across the majority of the eastern area of the Plan Lands with the highest levels mapped along and adjacent to the M50 in two parallel continuous bands ranging from 70 to 74 dB(a) and above 74dB(A), which is the highest measurement available. According to the Draft Noise Action Plan, exposure of people to such noise levels can cause sever health problems with night time levels of 55dB(A) recommended as an interim target. The Noise levels in the LAP area is likely to increase short-term during the construction periods of any development but also in the longer term due to increased vehicular movement.

### 3.8.5 Air Quality and Noise Pollution Issues

The monitoring by the EPA has indicated that the air pollution elements of concern are those related to traffic emissions, while the Noise Mapping as part of the Dublin Agglomeration Draft Action Plan indicated that traffic congestion and movement were the issues of concern regarding noise pollution. The noise mapping would appear to indicate that the majority of noise occurs along the national road network, particularly the M50; this issue needs to be addressed in the Ballycullen Oldcourt Area Plan to remediate these impacts.

The Noise levels in the LAP area are likely to increase short-term during the construction period but also in the longer term due to increased vehicular movement.

In the absence of the Ballycullen Oldcourt Local Area Plan, the opportunity for the reduction of significant noise impact from the M50 on proposed housing would not be realised.



**Figure 3.12 Ballycullen Oldcourt Noise Map**

Increased amounts of private transport movements are a significant concern within the county. Large amounts of travel takes place along the M50 and increases in private car movements will result in an increase in emissions such as PM<sub>10</sub> and NO<sub>x</sub>.

### **3.8.6 Evolution of Air Quality and Noise Pollution in the Absence of a Local Area Plan**

In the absence of the Ballycullen Oldcourt LAP, there would be potential for residents in the lands adjoining the M50 being subjected to unacceptable noise levels.

### 3.9 Cultural and Material assets

The Cultural and Material Assets of the Ballycullen Oldcourt LAP area may be broken down into a number of relevant categories. These are:-

Material Assets.

- Waste Water;
- Drinking Water;
- Energy Infrastructure;
- Transport Infrastructure;

Cultural Assets.

- Architectural Heritage;
- Archaeological Heritage.

#### 3.9.1 Waste Water

The treatment of wastewater is governed by the Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC) transposed into Irish law by the Urban Waste Water Treatment Regulations 2001 (SI 254 of 2001). The Directive aims to protect the environment from the adverse effects of the wastewater discharges by ensuring that wastewater is appropriately treated before it is discharged to the environment.

In addition, the treatment of wastewater is relevant to the Water Framework Directive which requires all public bodies to coordinate their policies and operations so as to maintain the good status of water bodies which are currently unpolluted and bring polluted water bodies up to good status by 2015.

Development of Wastewater Treatment Works (WwTw) within the Greater Dublin Area has not kept pace with construction or the amount of zoned lands. The WwTw in Ringsend currently operates at a Population Equivalent (PE) of 1.9 million. The GSDS SEA (2008) indicates expansion at Ringsend to 2.16 million PE. Surveying and assessment is currently underway to ascertain expansion of the Ringsend WwTw to 2.4 million PE.

The GSDS Final Strategy Report states that the total 2002 population in the catchment areas

was 1,225,545 (958,861 for Ringsend)<sup>15</sup>. This amounts to 79.8% of the population for the full

<sup>15</sup> GSDS Final Strategy Report. Table 4.3 Population Equivalent loads by foul and WWTW catchment (2005).

Greater Dublin Area (including the functional areas of all seven local Authority areas, the population of which was 1,535,250). The population in the GSDS catchment areas was predicted to grow to 1,489,962 by 2011 and to 2,054,401 by 2031<sup>16</sup>. The population for the Ringsend Catchment was predicted to grow to 1,131,700 (2011) and 1,456,590 (2031)<sup>17</sup>.

Allowing for development growth without requisite wastewater treatment provision would conflict with the requirements of the Urban Wastewater Treatment Directive which requires the collection and high level treatment of wastewater, specifically those to be discharged to sensitive waters such as Dublin Bay.

Predicted development flows to 2031 indicate a need to plan for the expansion of the existing system. The majority of options examined within the GSDS indicate the capping of flows to Ringsend at 2.16 million PE and directing additional flows to another facility within the Greater Dublin Area<sup>18</sup>.

Aside from some rural areas, almost all of the waste water in the county is currently treated in Ringsend. The waters are treated to a tertiary standard. These waters are discharged to Dublin Bay, which contains a number of Natura 2000 sites. The Dublin City water treatment facilities (including Ringsend) are subject to separate operational consent and licensing procedures which are themselves required to be compliant with all applicable environmental Regulations and Directives, including the Water Framework and Habitats Directives.

It is considered that the loading to WwTw as a result of implementing the proposed Ballycullen Oldcourt Local Area Plan would be partially offset as a result of dropping loading in older parts of the county<sup>19</sup> (from a household size of 3.31 in 2002 to 2.18 in 2031) as well as reduced construction and occupation figures for new housing. It is noted that the result of the GSDS would be to increase the capacity of the WwTw at Ringsend to 2.16 million PE by 2014. It is considered that there would be adequate capacity at Ringsend to accommodate growth

<sup>16</sup> GSDS Final Strategy Report. Table 4.3 Population Equivalent loads by foul and WWTW catchment (2005).

<sup>17</sup> GSDS Final Strategy Report. Table 4.3 Population Equivalent loads by foul and WWTW catchment (2005).

<sup>18</sup> Final Environmental Report for the SEA of the GSDS (May 2008) Section 3.3

<sup>19</sup> GSDS Final Strategy Report. Table 4.3 Population Equivalent loads by foul and WWTW catchment (2005).

within the county until the upgrade is complete in 2014.

The Grand Canal Trunk Sewer (GCTS) services the plan lands; this sewer flow into the wastewater treatment works in Ringsend. The Council is cognisant of the need to ensure the requisite wastewater treatment provision to allow for development growth without which the development would conflict with the requirements of the Urban Wastewater Treatment Directive which 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 recent EPA operating license reinforce this aspect).

### **3.9.2 Waste Water: Existing Problems / Environmental Considerations**

- Ensure the requisite wastewater treatment provision to allow for development growth

### **3.9.3 Drinking Water**

#### **3.9.3.1 Existing and Future Water Supply**

Most of the treated water supply in South Dublin County is currently supplied from Dublin City Council via the Belgard Reservoir which is part of the overall Dublin Metropolitan Area network.

South Dublin is part of the Regional Water Steering Group with Dublin City Council acting as lead authority in assessing short and long term sources at a regional level to ensure water supply into the future. Consideration is being given at regional level to developing further capacity to meet the projected longer term demands.

The Ballycullen Oldcourt LAP area in the past suffered from inadequate water pressure; the deliverance of the Boherboy Water Supply Scheme, however, has improved this situation in recent years. The Boherboy Water Supply Scheme, completed in early 2013, involved a major upgrading and expansion of the water supply network and storage infrastructure in the areas of Saggart, Rathcoole, Brownsbarn, Citywest, the Southern parts of Tallaght and Ballycullen Oldcourt. This scheme provided

41km of new watermain, new reservoirs in Saggart through a 450mm watermain laid along the R120 and provided existing and future residents with a reliable modern water storage and supply infrastructure.

#### **3.9.3.2 Monitoring Drinking Water**

The Environmental Protection Agency (EPA) Provision and Quality of Drinking Water in Ireland Report 2006-2007 is the first assessment on the quality of drinking water in Ireland since new Regulations, the European Communities (Drinking Water) Regulations (No.2), 2007, came into force in March 2007. The EPA is now the supervisory authority over public water supplies and has new powers of enforcement over local authorities in this regard. The EPA now has enforcement powers to ensure that local authorities take action where there is a quality deficiency in a public water supply and can serve a legally binding direction on the local authority. Failure to comply with a direction is an offence which can lead to prosecution by the EPA.

The EPA Provision and Quality of Drinking Water in Ireland Report 2006-2007 indicates that South Dublin has exceeded the monitoring requirements as required by the European Communities (Drinking Water) Regulations (No.2), 2007. South Dublin County Council carried out analysis on an annual basis, exceeding the minimum monitoring requirements as outlined in the Regulations. The overall rate of compliance with water standards in South Dublin for 2010 to 2012 is as follows;

SDCC's monitoring of drinking water samples (approx. 4,000/year)  
2010 compliance of 99.8%  
2011 compliance of 99.8%  
2012 compliance of 99.7% (first 6 months)

The County Council continually monitor of all known waste depository sites in the County in order to preserve sources of drinking water from contamination. Compliance with the EPA requirements to actively manage risks identified in relevant catchments and continually assess the quality of the source water is required in order to ensure that treatment at plants is optimised.

### 3.9.4 Drinking water: Existing Problems / Environmental Considerations

- No issues identified

### 3.9.5 Energy Infrastructure

Ireland, and South Dublin, is bound by the EU Emissions Trading Scheme (ETS) established by EU Directive 2003/87/EC as part of the Kyoto Agreement. In order to comply with the commitments made as part of the Kyoto Agreement, 13.2% of the Nations power is to be produced from renewable resources. In the face of this, energy demand has increased 20% nationally over the last 5 years.

The White Paper on Energy published March 2007 and the National Climate Change Strategy 2007-2012, indicated that significant potential exists for renewable and bio-energy at regional level. Key points in the establishment of such energy sources include:-

- Securing supply;
- Ensuring supply consistently meets demand;
- Ensuring system can absorb disruptions to supply;
- Supplying reliable and secure networks.

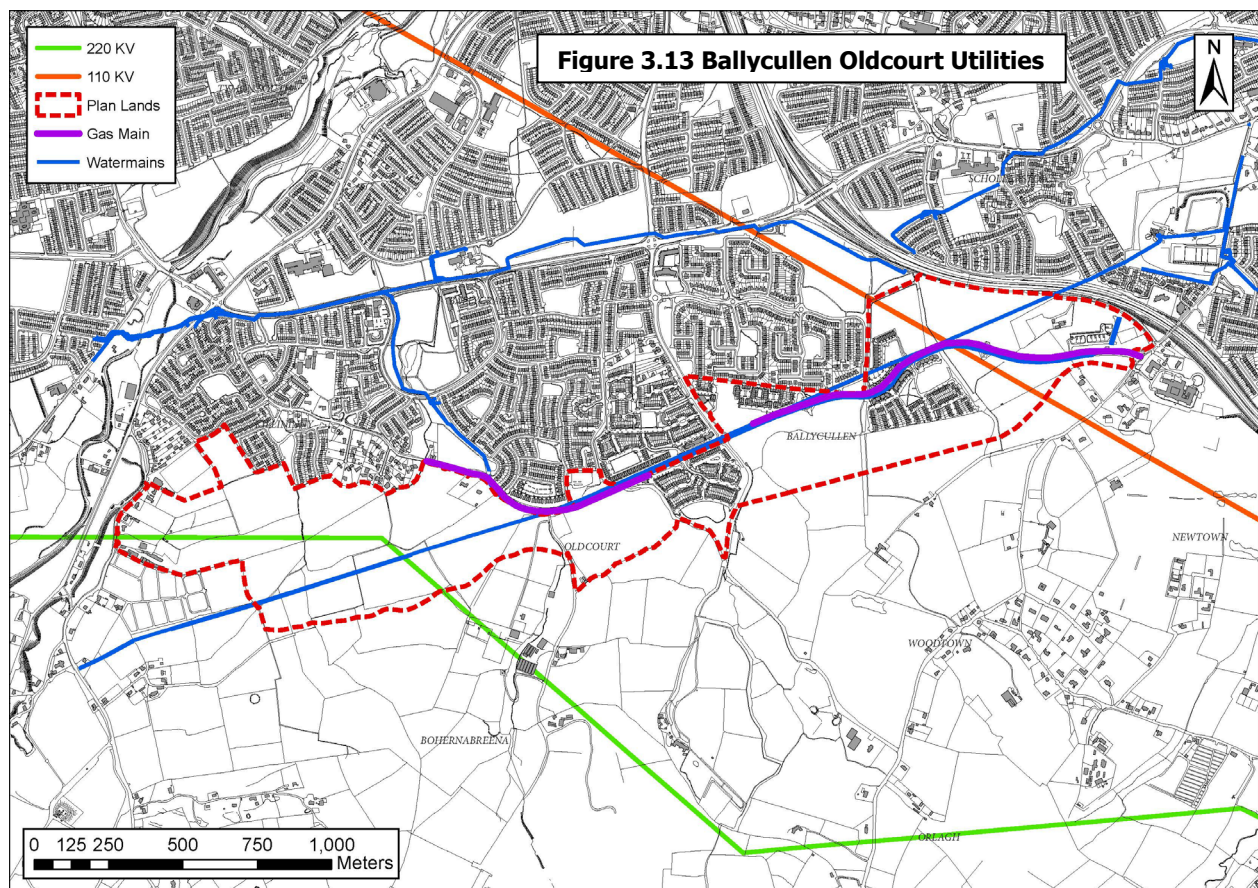
### 3.9.3.1 Networks

The networks for electricity, gas and fibre-optic are indicated in Figure 3.11 above. Some background information on the Electricity, Gas and Communications networks for the whole County area are outlined in the Environmental Report of the South Dublin County Council Development Plan 2010-2016.

As illustrated in Figure 3.13, the Plan Lands are traversed by a number of utility lines including watermains, a gasmain and overhead electrical transmission lines.

A 12" diameter Dublin Corporation Watermain and a 15" diameter Dublin Corporation Watermain both run parallel to each other through the majority of the Plan Lands along a north-east-south west axis. These watermains following part the route of the Oldcourt Road, Hunters Road and Stocking Avenue. Dublin City Council requires a minimum reservation of 5 metres to the north of the 15" watermain and 5 metres to south of the 12" watermain plus the distance between the parallel watermains.

The western area of the Plan Lands is partially traversed by 220kV overhead transmission lines. ESB requires a minimum lateral clearance of 30 metres on either side of the centre line of such



high voltage transmission lines. The 110kV lines that traverse the eastern section of the Plan Lands require a minimum lateral clearance of 23 metres from the centre line on either side. The 38 kV line that runs through Hunterswood has been undergrounded.

A gas main follows the Route of the Oldcourt Road, Hunters Road and Stocking Avenue.

### 3.9.6 Transport Infrastructure

#### 3.9.6.1 Background

##### Dublin Transport Office: A Platform for Change 2000-2016

The Dublin Transportation Office (DTO) Strategy 'A Platform for Change', outlines an integrated transportation strategy for the Greater Dublin Area for the period 2000-2016. It was prepared to support and complement the strategic land planning framework outlined in the Regional Planning Guidelines.

The Strategy envisages a wide range of benefits being achieved by 2016. These include:

- improved accessibility to work, leisure and retail opportunities,
- an improved transport system,
- people living within 10 minutes walking distance of public transport,
- reduced road congestion levels,
- reduced average journey times,
- improved
- environmental benefits
- safer and more pleasant urban residential areas, reduced accident levels and more convenient cycling facilities.

The Strategy is currently under review by the DTO in the Greater Dublin Area Draft Transport Strategy 2011-2030.

#### 3.9.6.2 Public Transport

In 2006 South Dublin County had the lowest percentage of people in the Dublin area travelling to work or school by train, Dart or Luas. Table 3.4 below indicates the percentages of people in the District Electoral Division within which the LAP area is located that are travelling to work or school by train, Dart or Luas.

Means of Travel	South Dublin	Ballycullen Oldcourt
On foot/Bicycle	19.3	3.6
Bus/Mini bus/coach	15.3	12.2
Train/DART/Luas	1.8	1.5
Car driver/Car Passenger	54.3	76.9

Table 3.4 Travel Modes within South Dublin and Ballycullen Oldcourt (by percentage)  
Source: CSO 2011

The Census 2011 information records that of the existing population of 968 within the proposed LAP area, aged five years and over, categorised by means of travel to work, school or college indicates that 17% of this population use public transport or non-vehicular means compared to a County figure of 35%.

The nearest Luas stop to Ballycullen Oldcourt is located at Tallaght Town Centre, approximately 3 to 4 kilometres to the north-west of the plan lands

A draft public transport accessibility study was carried out for the South Dublin County area in late 2010. The study examined the frequency of Main-line Rail, the Luas and bus services, dividing them into the categories high, medium and low accessibility levels as detailed in Figure 3.14 below. The plan lands are served by bus route operated by Dublin Bus running from Ballycullen Road/Knocklyon/Templogue to Dublin city centre (no. 15) and from Stocking Ave/Ballyboden to Dublin city centre (no. 15b); the frequency of this service is considered to be predominantly low to medium ( an upgrading of the bus service in 2012 is not represented on the public transport accessibility map), but there are significant areas within the LAP land that are not served by public transport. There are no Quality Bus Corridors (QBC's) located at present within the plan lands.

#### 3.9.6.3 Road Network

The plan lands are primarily situated to the south of the Stocking Avenue/ Hunter's Road / Oldcourt Road with the land being bookended on the eastern and western sides by the M50 and the Bohernabreena Roads respectively (neither which have direct access to the LAP lands). The Stocking Lane fly-over the M50 provides access to the Scholarstown and Ballyboden areas.

Access to the M50 is via the Firhouse Junction from the Killinney Road (R113). Access to Tallaght and the N81 is via the Old Bawn Road (R113) by means of the Old Mill junction which is at capacity. Previous plans to extend the Stocking Avenue / Hunters Road distributor Road across the Oldcourt lands via an underpass of Bohernabreena Rd, a bridge over the Dodder and a link to Kiltipper Rd were dropped in the South Dublin County Council Development Plan 2010 – 2016

This link would have allowed traffic from the Oldcourt area an alternative access to Tallaght and the west and would have helped to alleviate the Old Mill junction. With the development of the Ballycullen Oldcourt lands, the traffic volumes are likely to increase in the area and this junction will become further congested with reduced capacity and increased volumes of traffic thus increasing queuing and subsequent delays.

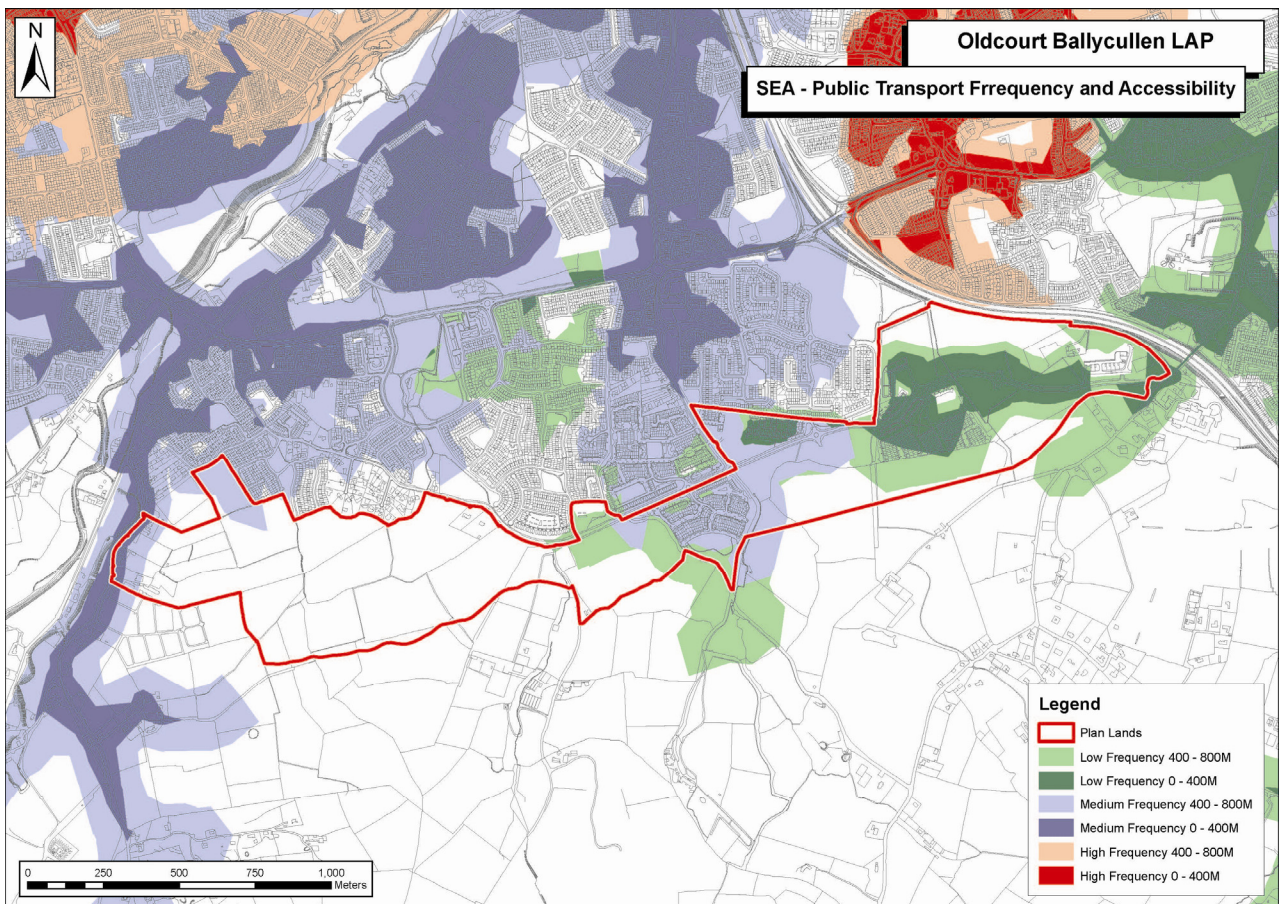
There is an identified lack of cycle ways and connecting footpaths located throughout the plan lands. The lack of connectivity permeability in the area reduces accessibility in terms of walking and cycling, increasing the amount of internalised car journeys which have to be taken for trips to school, shops, etc, and increasing potential for conflict with national and regional traffic.

### 3.9.6.4 Cycle Route Network

New cycle tracks continue to be provided in conjunction with new road schemes. The cycle lane network in the South Dublin County Council area now extends to approximately 150 km. There is funding currently available from the NTA in respect of new cycle-track schemes within the County. There is an identified lack of cycle ways and connecting footpaths serving some of the existing estates adjoining the LAP lands.

### 3.9.7 Material Assets Issues. Existing Problems / Environmental Considerations

It is considered that the completion of the GSDSDS will resolve the majority of issues regarding WwTw constraints in South Dublin up to 2031. This will allow for waste water treatment capable of serving sustainable and in



**Fig 3.14 Ballycullen Oldcourt LAP Public Transport Frequency and Accessibility Levels (Dec 2010)**

some instances, appropriate higher density development of the county, without any negative impact on the WFD. Notwithstanding the increased capacity of the WwTw for the County, sustainable development along high quality public transport corridors should form the basis for growth over the period of the Proposed Plan.

The Boherboy Water Supply scheme has provided consumers with a reliable, modern water storage and supply infrastructure that will benefit not only the existing population, but will also facilitate new development in the LAP lands. In terms of transport provision, there is a need to prioritise development where alternative modes of public transport are available planned and to make provision for improved cycle and walking routes within the LAP land.

### **3.9.8 Evolution of Material Assets in the Absence of a Local Area Plan**

It is not considered that the Water Supply or the Waste Water assets of the area would be significantly affected in the absence of a Local Area Plan; it is envisaged, however, that the opportunity to provide enhanced walking and cycling routes would be lost without the provision of a Plan.

### **3.9.9 Cultural Assets**

Heritage, by definition, means inherited properties, inherited characteristics and anything transmitted by past ages and ancestors. It covers everything, from objects and buildings, to the environment. Cultural heritage includes physical buildings, structures and objects complete or in part, which have been left on the landscape by previous and indeed current generations. The heritage assets which South Dublin possesses are a reminder of the predominantly rural history of the County. These structures and objects store the folk memory of the rural villages, such as Clondalkin, Lucan and Tallaght, now subsumed within the Dublin Metropolitan area.

Additionally, preserved buildings, remnant agricultural farm buildings and ancient walls and field systems also help acknowledge the recent past in places such as Ballycullen and Oldcourt, which are now subject to urban development pressure. The built form, materials and construction methods of older buildings help to illustrate to inhabitants of South Dublin the

continuity and adaptation of County both economically and socially.

The most important items of archaeological and architectural heritage in the county are recorded under Schedule 1- the Record of Monuments and Places, and Schedule 2- the Record of Protected Structures, of the current Development Plan. There are 154 Recorded Monuments and approx, 526 Protected Structures. The *National Inventory of Architectural Heritage (2002)* undertaken by Duchas and the Department of the Environment also highlights a representative sample of important architecture of the county.

There are no Recorded Monuments located within the Plan Lands. Two monuments, see Figure 3.15 are located to the south—west of the lands within and near Bohernabreena, which are as follows:

- RM Ref. DU021-061 – Bohernabreena Church Site
- RM Ref. DU022-027 – Bohernabreena Ringfort (Rath/Cashel)

#### **3.9.9.1 Archaeological Heritage**

The Archaeological Heritage report from the Environmental Impact Statement attached to Planning Application SD04a/0393 indicated that there are several important sites both within and outside the surrounding town-lands which highlight the potential for subsurface archaeological remains within the LAP area. The proposed LAP land is positioned overlooking a landscape which exhibits a diverse prehistoric and early medieval archaeological content. Within the environs of the proposed LAP area both ritual and secular activity are evident with the Bronze Age cemetery of Edmondstown (DU022:029) located 1km to the east in the Owendoher Valley while habitation sites such as fulachta fiadh and hut sites were excavated in the townlands of Oldcourt and Ballycullen. Indeed the settlement site of Oldcourt/Ballycullen is indicative of Bronze Age-Iron Age human utilisation of this landscape. A notable curvature in the northwestern townland boundary of Ballycullen shows a possible indication of a degraded enclosure site or as an area of archaeological potential.

Evidence for human occupation of the landscape in later periods takes the form of the possible Early Medieval well of St. Columkille (DU022:028) and an eighteenth century stone

cross. St.Columcilles Well, just outside the LAP boundary, is situated at the top of the Ballycullen road, close to the entrance gates of Orlagh College; it lies in the townland of Oldcourt. In the field beside the well, there is a large plain cross made of granite, matching a cross near to the Firhouse road, these crosses were erected in the 1850s when a disease of pleuropneumonia afflicted the dairy herds country wide.

A Report by Archaeological Technology Ltd., assessing the Oldcourt area, identifies thirteen features of archaeological potential which were recorded during aerial photographic analysis of the proposed development area in January 2007 – the majority being visible as circular dark areas or vegetation growth. These features may mark the location of enclosed circular sites such as early medieval ringforts, prehistoric fulacht fiadhs, burials or settlement centres. The report stated that while no recorded prehistoric sites or material have been recovered from the immediate development area, this is probably due to the absence of significant ground disturbance (other than tillage) which might bring such features to light.

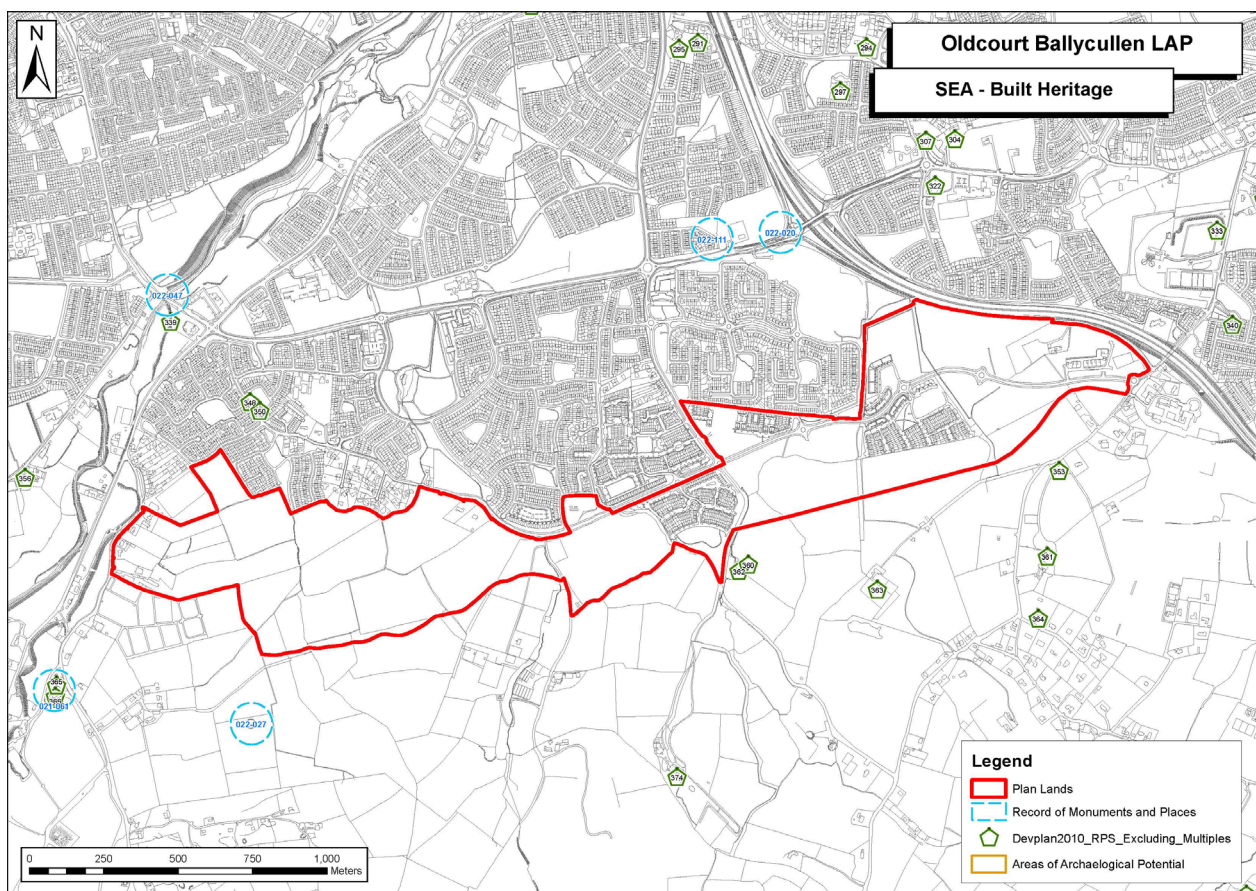


Fig 3.15 Ballycullen Oldcourt LAP Built Heritage

### **3.9.9.2 Architectural Heritage**

None of the 542 Protected Structures located within the County are located within the LAP lands, however, two such structures are located within close proximity to its southern boundary on the eastern side of Gunny Hill:

- CDP Ref. 360 - Cross (Stone Cross Dated 1868)
- CDP Ref. 362 - Holy Well (St. Columbcille's Well)

A scattering of other protected structures are located to the south of the Plan Lands and include:

- CDP Ref. 353 - Woodtown Park Lodge (Three-bay two-storey house)
- CDP Ref. 361 - Woodtown Park House (Three-storey Georgian style house)
- CDP Ref. 363 - Woodtown Manor House
- CDP Ref. 364 - New House (Brick modernist building c.1960)
- CDP Ref. 365 - Saint Anne's Parish Church (Detached Three-Bay Two-Story House)
- CDP Ref. 366 - Saint Anne's R.C. Church (Detached Gable Fronted Cruciform Plan Church)
- CDP Ref. 374 - Orlagh College (Three-storey house and entrance gates)

### **3.9.10 Cultural Assets Issues**

Given the proximity of the site to known archaeological monuments, particularly the Bronze Age-Iron Age settlement at Oldcourt/Ballycullen to the northwest and an Early Medieval well to the southwest there is a high probability that previously unknown archaeological features will be uncovered on this site, therefore the potential for sub-surface archaeological remains being discovered during earthmoving and topsoil stripping must be considered.

### **3.9.11 Evolution of Cultural Heritage in the Absence of a Local Area Plan**

In the absence of a Local Area Plan, protection of buildings and archaeological heritage would still be in place under the National Monuments Acts and the Planning Acts

## **3.10 Climate Change and Sustainability**

### **3.10.1 Introduction**

The Intergovernmental Panel on Climate Change (IPCC) concluded in its 4th assessment report (2007) that warming of the climate system is unequivocal. This report was preceded by Sir Nicholas Stern's 2006 economic review estimating the cost of inaction regarding combating climate change.

Climate change is becoming the greatest challenge facing society today, an issue which affects all citizens at a local, national and international level. It is important that the Council, and its residents, act responsibly at a local level in order to assist in the reduction of greenhouse gas emissions - which are created primarily by the use of non-renewable fossil fuels. Holistically reducing these emissions will require implementing an overarching strategy affecting many aspects of the development of the County.

Rising sea levels will not have as dramatic an effect on South Dublin as in some coastal counties. One predicted effect is the increase in vertical and horizontal extent of estuaries such as the Liffey and Dodder, resulting in penetration of tides further upstream. Outflow from rivers would be impeded by this, which during times of high rainfall and run-off, would increase chances of flooding. A flashy river such as the Dodder would be significantly affected by such an event.

### **3.10.2 Causes of Greenhouse Gases in Ireland**

In terms of emission sources for 2007, agriculture is the single largest contributor to overall emissions, at 26.8% of the total, followed by energy (21.5%), transport (20.8%) and industry and commercial (17.9%). Agriculture and energy emissions decreased in 2007, while transport increased significantly. Between 1990 and 2007, transport has shown the greatest increase at 178%. This is as a result of increased numbers and sizes of cars in addition to a greater reliance on cars, particularly in relation to commuting to work. Increased road transport of goods and construction traffic has also had a significant influence

### **3.10.3 Existing Problems**

One of the main issues facing South Dublin in relation to the development of the LAP lands and climate change relate to increased amounts of greenhouse gas emissions from transport movements. Solutions require reductions in unsustainable transport movements. The manner in which transport movements can be reduced is tied into the provision of high quality public transport between key locations in South Dublin and into the surrounding counties. At the neighbourhood level, the design and incorporation of walkable and cycle friendly urban developments is to be accommodated. The preservation, or creation of walking links within the Ballycullen Oldcourt area, specifically to shops, workplaces, schools and public transport links, along the most direct routes must be given high priority, otherwise trips by car will continue to grow. Reducing car movement at the neighbourhood level through increasing ease of pedestrian movement must be the foundation stone for an overall decrease in emissions.

### **3.10.4 Potential Solutions**

A 'Climate Change Strategy 2009-2012' for South Dublin has been prepared. This strategy indicates sustainable measures relating to planning, energy, transport, waste management and ecosystems, to be undertaken and promoted by the County Council.

Sustainable development within the County requires an integrated approach regarding sustainability and environmental performance. The decisions taken for the design and management of each component of the urban and rural system will give rise to the potential for individual and cumulative environmental effects. Similarly, the performance of components, during the operational stages can not be seen in isolation. Each element of the County is linked, as are the implications for environmental performance.

At the Local Area Plan level, there is the opportunity to ensure development takes place utilising best practice for development which surpasses required Irish standards, and sets ambitious yet ultimately achievable targets including:-

- Optimising accessibility and environmental resources of a strategic location;
- Creating conditions for sustainable communities to develop;
- Promoting design excellence at macro and micro levels;
- Promoting quality public realm design;
- Providing for citizens, businesses and institutions to live and operate sustainably;
- Setting out and defining environmental performance indicators to guide development of the district towards the vision of a sustainable mixed use development.

### **3.10.5 Evolution of Climate Change in the absence of a Local Area Plan**

The Local Area Plan will provide for opportunities to develop greater public transport links and help to facilitate non-car based movements. In the absence of a Local Area Plan, development pressures would increase and be less regulated; resulting in the plan lands to spread out more away from existing transport links and would work against the provision of higher quality public transport.

The lack of a Local Area Plan would facilitate development based around existing estate models, providing for enclosed unconnected developments which would not facilitate pedestrian movement. This would increase short distance car movements to local facilities as well as reducing public transport movement to workplaces. It would also result in increased amounts of greenhouse gas emissions from transport movements.

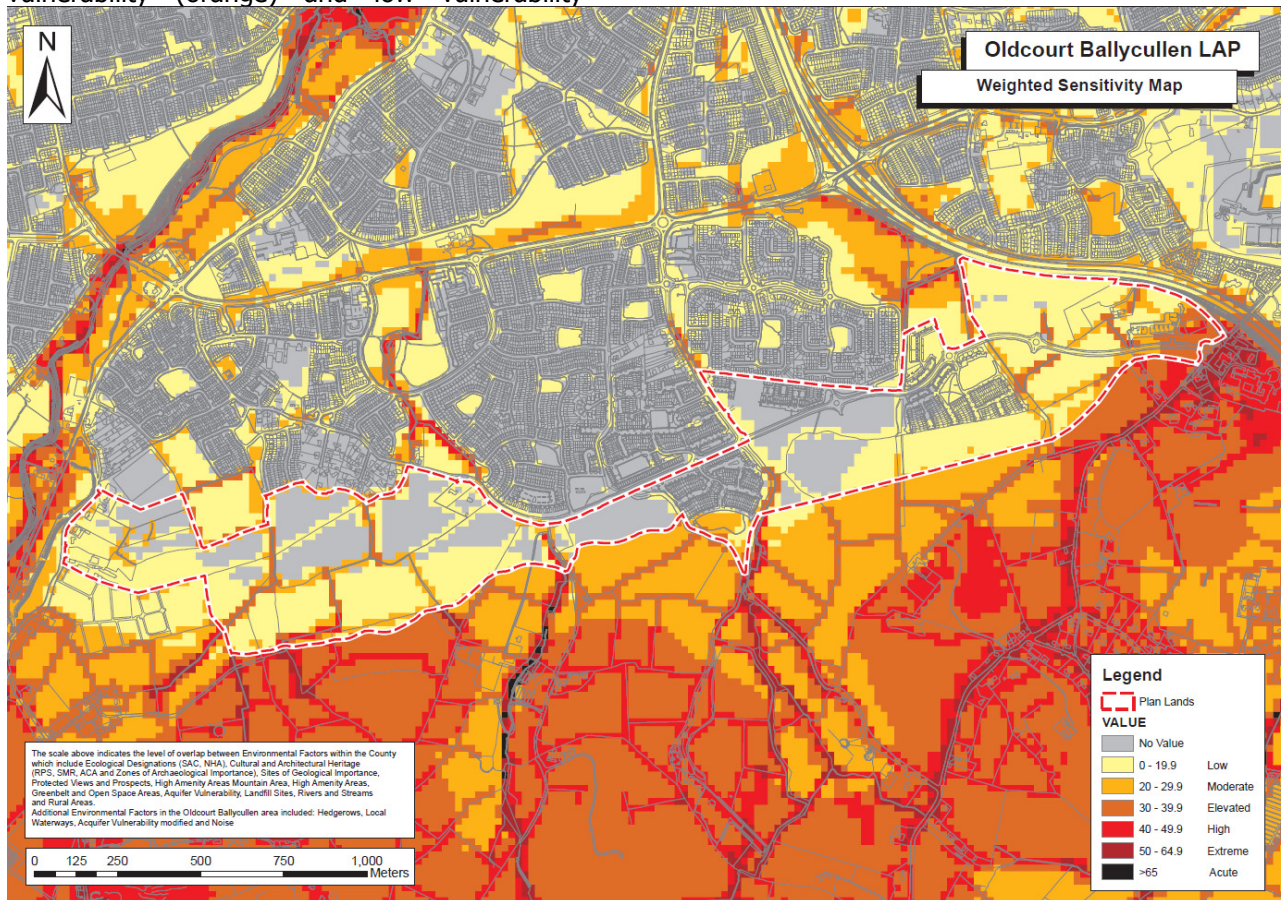
### 3.11 Overlay Mapping of Environmental Sensitivities

#### 3.11.1 Introduction

In order to identify where most sensitivities within the County occur, a number of the environmental sensitivities described above were weighted and mapped overlapping each other.

Environmental sensitivities are indicated by colours which range from extreme vulnerability (brown) to high vulnerability (red) to moderate vulnerability (orange) and low vulnerability (yellow).

Where the mapping shows a concentration of environmental sensitivities, there is an increased likelihood that development will conflict with these sensitivities and cause environmental deterioration. This is particularly the case where the cumulative development of small-scale projects, such as rural housing, gradually causes a slow deterioration of a resource, such as water quality. Figure 3.14 below provides an overlay of environmental sensitivities in the Ballycullen Oldcourt LAP area.



**Figure 3.16 Environmental Sensitivity Map**

## Section 4 Strategic Environmental Objectives

### 4.1 Introduction

Strategic Environmental Objectives (SEOs) are methodological measures against which the environmental effects of the LAP can be tested. If complied with in full, SEOs would result in an environmentally neutral impact from implementation of the plan. The SEOs are set out under a range of topics and are used as standards against which the provisions of the LAP can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, if unmitigated.

SEOs are distinct from the objectives of the LAP - although they will often overlap - and are developed from international, national and regional policies which generally govern environmental protection objectives. Such policies include those of various European Directives which have been transposed into Irish law, all of which are implemented at county level in South Dublin and are intended to be implemented in this LAP and any other plan for the County.

The SEA Directive requires that the evaluation of plans be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected. In compliance with this requirement, SEOs have been developed for the relevant environmental components of this SEA. Focus has been developed throughout the SEA, from the scoping stage to the compilation of the existing environmental baseline. Most attention has been given to environmental components which are likely to be impacted as a result of implementation of a LAP.

A number of SEOs are linked to indicators which can facilitate monitoring the implementation of the Draft LAP when adopted, as well as to targets which the LAP can help work towards.

The primary source used in formulating the SEOs was Table 4B of the SEA Guidelines (DOEHLG, 2004)<sup>20</sup> and the Environmental Report of the South Dublin County Development Plan 2010-2016. This list has been amended to give affect to objectives that are considered relevant to this LAP. The use of SEOs, although

not a statutory requirement, does fulfil obligations set out in Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004).

### 4.2 Biodiversity, Flora and Fauna

#### 4.2.1 International, European and National Strategic Actions

##### 4.2.1.1 UN Convention on Biological Diversity 1992

The United Nations Convention on Biological Diversity 1992 requires the promotion of the conservation and sustainable use of biodiversity.

##### 4.2.1.2 National Biodiversity Plan 2002

The preparation and implementation of Ireland's National Biodiversity Plan 2002<sup>21</sup> complies with an obligation under the UN Convention on Biological Diversity. The overall goal of the Plan is to secure the conservation, including where possible the enhancement and sustainable use of biological diversity in Ireland and to contribute to conservation and sustainable use of biodiversity globally. Objectives following on from this goal are to:

- Conserve habitat diversity, including all sites of special biodiversity importance;
- Conserve species diversity;
- Conserve genetic diversity, both wild and domesticated; and,
- Contribute to the conservation and sustainable use of biodiversity and to advancing other obligations of the CBD in the EU, regionally and internationally.

##### 4.2.1.3 Habitats Directive 1992

The European Council Directive on the Conservation of natural habitats and of wild fauna and flora (92/43/EEC), referred to as the Habitats Directive, aims to ensure the conservation of certain natural habitats and species which are at favourable conservation status. Article 10 of the Habitats Directive recognises the importance of ecological networks as corridors and stepping stones for

<sup>20</sup> DOEHLG (2004) *Implementation of SEA Directive (2001/42/EC): Guidelines for Regional Authorities and Planning Authorities* Dublin: Government of Ireland.

<sup>21</sup> Department of Arts, Heritage, Gaeltacht and the Islands (2002) *National Biodiversity Plan* Dublin: Government of Ireland

wildlife, including for migration, dispersal and genetic exchange of species of flora and fauna. The Directive requires that ecological connectivity and areas of ecological value outside the network of designated ecological sites are maintained and it recognises the need for the management of these areas through land use planning and development policies.

Special Areas of Conservation (SACs) are designated and protected under the under the Habitats Directive 1992 (92/43/EEC) due to their conservation value for habitats and species of importance in the European Union. In Ireland, the habitats and species occurring in SACs are protected from effects of development occurring outside their boundaries under Section 18 "Prohibition of works on lands outside a European site" of the European Communities (Natural Habitats) Regulations 1997. The Regulations require that where a development is proposed to be carried out, on any land that is not within a protected site and is liable to have an adverse impacts on the protected site in question, including direct, cumulative and indirect impacts, an appropriate assessment, which conforms to an environmental impact assessment, of the likely effects of the proposed development on the site is undertaken. Depending on the conclusions of this assessment such development may be refused planning permission.

The Habitats Directive seeks to establish Natura 2000, a network of protected areas throughout the EU. It is the responsibility of each member state to designate SACs to protect habitats and species, which, together with the SPAs designated under the 1979 Birds Directive, form Natura 2000.

#### **4.2.1.4 Birds Directive 1979**

The 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC), referred to as the Birds Directive, - as well as its amending acts - seek to: protect, manage and regulate all bird species naturally living in the wild within the European territory of the Member States, including the eggs of these birds, their nests and their habitats; and regulate the exploitation of these species.

Special Protection Areas (SPAs) are provided protection under the Directive and have been designated by the DOEHLG due to their conservation value for birds of importance in the European Union.

#### **4.2.1.5 Wildlife Act 1976 and Wildlife (Amendment) Act 2000**

The Wildlife Act 1976 is the principle national legislation providing for the protection of wildlife and the control of some activities that may adversely affect wildlife. The Wildlife (Amendment) Act 2000, provides a mechanism to give statutory protection to NHAs, geological and geomorphology sites of importance.

#### **4.2.1.6 Convention on Wetlands of International Importance**

The Convention of Wetlands of International Importance, especially as Water Fowl Habitat, was established at Ramsar in 1971 and ratified by Ireland in 1984. The main aim of the Convention is to secure the designation by each contracting state of wetlands in its territory for inclusion in a list of wetlands of international importance for waterfowl. This entails the commitment of each contracting state to a policy of protection and management of the designated wetlands, and of formulating and implementing planning so as to promote the conservation of designated wetlands and, as far as possible, the wise use of wetlands in its territory.

#### **4.2.1.7 Regional Planning Guidelines for the Greater Dublin Area (RPGGDA) 2010-2022**

In June 2010, the Dublin and Mid-East Regional Authorities published the Regional Planning Guidelines, which covers the Councils of Dun Laoghaire-Rathdown, Dublin City, Fingal and South Dublin in the Dublin Region and Kildare, Meath and Wicklow County Council areas in the Mid-East Region. The Regional Planning Guidelines aim to give regional effect to the National Spatial Strategy and to guide the development plans for each county.

Chapter 7 of the Regional Planning Guidelines sets out the concept of green infrastructure (GI)<sup>22</sup>, including biodiversity and climate change, and how it is developed and provides a framework to promote a new approach to biodiversity protection. It also details a number

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<sup>22</sup> Green Infrastructure (GI) is a generic term encompassing the protection, management and enhancement of urban, peri-urban and rural environmental resources (natural and managed) through the identification and provision of multifunctional and interconnected green spaces and provides an opportunity to reassess the manner in which we manage and use our green spaces. (RPGGDA, 2010)

of actions/objectives for GI development including development of targeted walkway and cycle ways, integrated as part of opportunities for other projects such as river restoration, biodiversity enhancement as part of process of strengthening connectivity between green spaces and strategic linkages between urban settlements and countryside.

**4.2.1.8 Green City Guidelines- Advice for the protection and enhancement of biodiversity in medium to high-density urban developments (2008)**

In 2008, the UCD Urban Institute Ireland, in association with Dun Laoghaire-Rathdown County Council and Fingal County Council, published the ‘Green City Guidelines’ which are aimed at providing practical guidance for planners and property developers on how to integrate biodiversity into new developments, specifically medium to high-density urban schemes.

A number of practical measures for incorporating biodiversity have been outlined in Chapter 5 of the Guidelines, which presents general recommendations to address the main stages of planning and development from early site assessment through to the detailed design and monitoring stages. These include initiating early ecological surveys to assess the suitability of the site for development and identify considerations and opportunities at an early stages; designing the development footprint to avoid habitats of high ecological value and maximising the area of open space and protecting and incorporating semi-natural habitats, especially those of high ecological value and mature features.

**4.2.1.9 South Dublin County Council Development Plan 2010- 2016**

Relevant policies of the South Dublin County Council Development Plan 2010-2016 relating to biodiversity, flora and fauna include: to protect and preserve areas designated or proposed as Special Areas of Conservation and proposed Natural Heritage Areas (Policy LHA8); to protect the natural resources of the County and conserve the existing wide range of flora and fauna in the County through the protection of wildlife habitats and wildlife corridors (Policy LHA19); to protect hedgerows in the County from development which would impact adversely upon them and to enhance the County’s

hedgerows by increasing coverage where possible using locally native species (Policy LHA18).

**4.2.2 SEOs, Indicators and Targets**

The following SEOs, Indicators and Targets have been developed with regard to the environmental baseline and the objectives of the above strategic actions.

<b>SEO B1:</b>	To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites
<b>Indicator B1:</b>	Percentage of relevant habitats and designated ecological sites lost as a result of implementation of the LAP
<b>Target B1:</b>	No losses of relevant habitats, species or their sustaining resources in designated ecological sites as a result of implementation of the LAP

<b>SEO B2:</b>	To avoid significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites
Indicator B2:	Number of significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the LAP
Target B2:	No significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the LAP

<b>SEO B3:</b>	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
Indicator B3:	Percentage of ecological networks or parts thereof which provide significant connectivity within the plan areas, which have been lost without remediation
Target B3:	No ecological connectivity provided by the LAP's primary ecological corridors to be lost without mitigation as a result of implementation of the LAP

Note: the impact of implementing the LAP on aquatic biodiversity and flora and fauna is influenced by impacts upon the quality of water bodies which relate to SEOs W1 and W2.

## 4.3 Population and Human Health

### 4.3.1 Population

In order to promote sustainable development and allow for public transport systems to function more effectively - as promoted by the National Spatial Strategy and other high level land use strategic actions - it is essential to consolidate the physical growth of the County. Within the County this can be achieved through the development of vacant, derelict and underutilised lands, in particular where they are in close proximity to public transport routes.

The DOEHLG's Residential Density Guidelines 1999 and the DOEHLG's Sustainable Residential Development in Urban Areas Guidelines 2009 recommend planning authorities to promote higher residential densities, particularly in redeveloping 'brownfield' sites and in proximity to town centres and public transport corridors.

The impacts of implementing the Local Area Plan on both the spatial distribution of population and the nature of development (with regard to greenfield and brownfield development) within South Dublin and across the wider region relates to SEO S1 which aims to maximise sustainable brownfield development and minimise the loss of highly productive agricultural soils.

In the South Dublin County Council Development Plan 2010-2016, the core strategy sets out to demonstrate that the development plan and its objectives are consistent with the national and regional objectives set out in the National Spatial Strategy and the Regional Planning Guidelines and gives direct, coherent effect to the central strategic spatial policy of the Regional Planning Guidelines which is to promote a more compact and sustainable urban form.

### 4.3.2 Human Health

The impact of implementing the LAP on human health is determined by the impacts which the LAP has upon environmental vectors. Impacts which the LAP has upon these vectors are influenced by:

- The extent to which new development is accompanied by appropriate infrastructure - this relates to SEO M1;

- Impacts upon the quality of water bodies - this relates to SEOs W1, W2, and W3; and;
- The interaction between the County's population and the noise generated by the land-uses provided for by the Plan.

Emission limits for discharges to air, soil and water are set with regards to internationally recognised exposure limit values. These are generally set to be many times the safe exposure limit - in order to provide protection. In the event that a land-use began to have adverse health effects on surrounding populations, it is likely that it would have been identified as being in breach of such emission standards at a very early stage - and long before the manifestation of any adverse health effects in the population. Nonetheless for the sake of consistency with the requirements of the SEA Regulations this section includes objectives, indicators and targets for health.

#### 4.3.3 SEOs, Indicators and Targets

<b>SEO HH1:</b>	To protect human health from hazards or nuisances arising from traffic and incompatible land-uses
Indicator HH1:	No of occasions that PM10 limits have been exceeded in at Air Monitoring stations
Indicator HH2:	Percentage of population that are exposed to unacceptable levels of traffic noise (to be defined) or the number of noise sensitive locations that have a score where priority action is required
Target HH1:	Reduce number of people exposed to traffic noise and air quality levels which endanger health and quality of life

## 4.4 Soil

### 4.4.1 Proposal for a Soil Framework Directive

To date, there is no legislation which is specific to the protection of soil resources. However, there is currently an EU Thematic Strategy on the protection of soil which includes a proposal for a Soil Framework Directive which proposes common principles for protecting soils across the EU.

Article 5 of the proposed Directive states that, for the purposes of preserving the various functions of soil; sealing or the development of artificial surfaces on top of soil resources, should be limited. The proposed Directive suggests that this may be achieved through rehabilitating brownfield sites, thus reducing the depletion of greenfield sites. The proposed Directive also states that soil should be used in a sustainable manner which preserves its capacity to deliver ecological, economic and social services, while maintaining its functions so that future generations can meet their needs.

### 4.4.2 SEOs, Indicators and Targets

The following SEO, Indicators and Targets have been developed with regard to the environmental baseline, the proposed Soil Directive and the land use strategic actions identified under Section 0.

<b>SEO S1:</b>	To maximise the sustainable re-use of brownfield lands, and the existing built environment
Indicator S1i:	Area of brownfield land redeveloped
Indicator S1ii	Area of Greenfield land developed
Indicator S1iii	Number of contaminated sites identified and remediated
Target S1i:	To fully utilise the available brownfield lands
Target S1ii	To ensure sustainable use of brownfield sites
Target S1iii	To meet national and EU targets on the recycling of municipal waste and its diversion from landfill

## **4.5 Water**

### **4.5.1 The Water Framework Directive 2000**

#### **4.5.1.1 Introduction**

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD has been transposed into Irish legislation by the European Communities (Water Policy) Regulations 2003 (SI No. 722 of 2003). 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.

#### **4.5.1.2 Good Status for Surface Waters**

Good status as defined by the WFD equates to approximately Q4 (Refer to Section 3.7.4) in the national scheme of biological classification of rivers, as set out by the EPA.

#### **4.5.1.3 Good Status for Transitional Waters**

It is noted that no transitional waters are located within Ballycullen Oldcourt LAP lands, however, cognisance is made of the location of such waters within Dublin City Council boundaries, downstream of South Dublin. The aim of the proposed plan is to have no deleterious effect on Transitional Waters in Dublin City Council administrative area.

#### **4.5.1.4 Quality Standards and Threshold Values for Ground Water**

Detailed provisions to achieve the aims of the WFD for ground water have been presented in a Groundwater Daughter Directive (Directive 2006/118/EC on the protection of groundwater against pollution and deterioration).

This Directive sets up environmental objectives of good groundwater quantitative and chemical status, as well as ensuring a continuity to the 1980 Groundwater Directive (Directive 80/68/EEC on the protection of groundwater against pollution caused by dangerous substances) which is due to be repealed under the WFD by the end of 2013.

Article 3 of the 2006 Groundwater Daughter Directive required that the assessment of the chemical status of groundwater use both quality standards identified in Annex I of the Directive and threshold values to be set by individual member states.

Groundwater quality standards are environmental quality standards expressed as the concentration of a particular pollutant, group of pollutants or indicator of pollution in groundwater, which should not be exceeded in order to protect human health and the environment. Annex I of the Directive sets standards for two pollutants: Nitrates - 50mg/l - and; Active substances in pesticides<sup>23</sup>, including their relevant metabolites, degradation and reaction products - 0,1 µg/l and 0,5 µg/l (total<sup>24</sup>).

Irish groundwater threshold values<sup>25</sup> are currently in the process of being set by the EPA.

### **4.5.2 Bathing Water**

It is noted that while no bathing waters are located within Ballycullen Oldcourt LAP lands, cognisance is taken of the location of such waters within Dublin City Council boundaries, downstream of South Dublin. The aim of the proposed Plan is to have no deleterious effect on Bathing Waters in Dublin City Council administrative area.

### **4.5.3 Flooding**

#### **4.5.3.1 Introduction**

The replacing of semi-natural land cover types with artificial, more impervious surfaces is likely to lead to cumulative increases in run-off and peak flow conditions in the LAP's stream river

<sup>23</sup> 'Pesticides' means plant protection products and biocidal products as defined in Article 2 of Directive 91/414/EEC and in Article 2 of Directive 98/8/EC, respectively.

<sup>24</sup> 'Total' means the sum of all individual pesticides detected and quantified in the monitoring procedure, including their relevant metabolites, degradation and reaction products.

<sup>25</sup> Threshold values are to be established by Member States for all pollutants and indicators of pollution which characterise groundwater bodies classified as being at risk of failing to achieve good groundwater chemical status under the WFD. Threshold values are required to be established in a way that, should the monitoring results at a representative monitoring point exceed the thresholds, this will indicate a risk that one or more of the conditions for good groundwater chemical status - with regard to the ability of groundwater to support human uses and with regard to waters used for the abstraction of drinking water - are not being met.

bodies. These cumulative increases have the potential to - especially in combination with the occurrence of severe rainfall events - result in flooding.

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

#### 4.5.3.2 EU Floods Directive

European Directive 2007/60/EC on the assessment and management of flood risks aims to reduce and manage the risks that floods pose to human health, the environment, cultural heritage and economic activity. The Directive applies to inland waters as well as all coastal waters across the whole territory of the EU.

The Directive requires Member States to carry out a preliminary assessment by 2011 in order to identify the river basins and associated coastal areas at risk of flooding. For such zones flood risk maps are required to be drawn up by 2013. By 2015 flood risk management plans focused on prevention, protection and preparedness must be established by 2015.

The Directive is to be carried out in coordination with the Water Framework Directive and flood risk management plans and river basin management plans being coordinated.

#### 4.5.3.3 DOEHLG Flood Risk Management Guidelines (2009)

In November 2009, the DOEHLG, in association with the Office of Public Works (OPW), published Planning Guidelines on the Planning System and Flood Risk Management which are aimed at ensuring a more consistent, rigorous and systematic approach to fully incorporate flood risk assessment and management into the planning system.

Local authorities are requested to have regard to the recommended flood risk identification, assessment and management process, when preparing or varying development plans and local area plans, and in regard to applications for planning permission.

#### 4.5.3.4 South Dublin County Council Development Plan 2010- 2016

Relevant policies of the South Dublin County Council Development Plan 2010-2016 relating to

flood risk, surface water and ground water include: to promote the implementation of water quality management plans for ground and surface waters in the County (Policy WD5); to ensure that all development proposals incorporate Sustainable Urban Drainage Systems (SuDS) (Policy WD6) and; to not permit development in identified flood risk areas, particularly flood plains, except where there are no alternative and appropriate sites available in areas at lower risk (Policy WD14).

#### 4.5.4 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been developed with regard to the environmental baseline and the objectives of the above strategic actions.

<b>SEO W1:</b>	To maintain and improve, where possible, the quality of the River Liffey and Griffeen, its tributaries and surface water.
Indicator W1i:	Biotic Quality Rating (Q Value) <sup>26</sup> and Risk Assessment
Target W1ia:	To maintain a biotic quality rating of Q4, in line with the requirement to achieve good water status under the Water Framework Directive, by 2015
Target W1ib:	To improve biotic quality ratings, where possible, to Q5
Target W1iia:	To achieve a minimum trophic status of mesotrophic, in line with the requirement to achieve good water status under the WFD, by 2015

<sup>26</sup> The Biotic Index values, are assigned to rivers in accordance with biological monitoring of surface waters – low Q ratings, such as Q1, are indicative of low biodiversity and polluted waters, and high Q ratings, such as Q5, are indicative of high biodiversity and unpolluted waters, Good status as defined by the Water Framework Directive equates to approximately Q4 in the national scheme of biological classification of rivers as set out by the EPA.

<b>SEO W2:</b>	To prevent pollution and contamination of ground water
Indicator W2:	Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC
Target W2:	Compliance with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC
<b>SEO W3:</b>	To prevent development on lands which pose - or are likely to pose in the future - a significant flood risk <sup>27</sup>
Indicator W3:	Number of developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk
Target W3:	Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk

## 4.5.5 Air and Climatic Factors

### 4.5.5.1 Air Quality, Climatic Factors and Traffic

Monitored air quality in South Dublin meets current standards and is good relative to built up areas located in other European countries. However, the occurrence of traffic congestion and new development means that it is likely that *traffic hotspots* within or adjoining the LAP lands are likely to have elevated levels of air pollution and noise levels due to traffic congestion. Traffic hotspots are located along the main road routes - especially at intersections - and provide for a harsh sensory environment which may impact upon human health.

It is noted that in addition to being addressed as part of this assessment, traffic issues will also be

<sup>27</sup>The flood risk information in relation to the Catchment is limited to provisional data (OPW initial Preliminary Flood Risk Assessment - PFRA), alluvial soils as a surrogate for Flood Risk and OPW recorded Flood Events.

addressed at the level of individual projects by the development management process and, for certain projects, by EIA.

In order to reduce greenhouse gas emissions, the internationally agreed Kyoto Protocol established emissions reduction targets for developing countries. Ireland's emission target for greenhouse gases is to limit the increase in their combined emissions during the five-year period 2008-2012 to 13 per cent above 1990 levels.

The impact of implementing the Draft Plan on air quality and climatic factors will be determined by the impacts which the Plan has upon the traffic levels which relate to SEOs C1 and C2.

### 4.5.6 Noise

Noise is unwanted sound. It can seriously harm human health and interfere with daily activities at school, at work, at home and during leisure time.

Traffic noise harms the health of almost one third of Europeans<sup>28</sup>. The main health risks of noise identified by the WHO include: pain and hearing fatigue; hearing impairment; annoyance; interferences with social behaviour; interference with speech communication; sleep disturbance and all its consequences; and performance at work and school.

Due to the location of the plan lands just to the south of the M50 motorway, the emissions and noise.

The Noise Directive - Directive 2002/49/EC relating to the assessment and management of environmental noise - is part of an EU strategy setting out to reduce the number of people affected by noise in the longer term and to provide a framework for developing existing Community policy on noise reduction from source.

The Directive requires competent authorities in Member States to:

<sup>28</sup> World Health Organization Regional Office for Europe (2003) *Technical meeting on exposure-response relationships of noise on health 19-21 September 2002* Bonn, Germany Bonn: WHO

- draw up *strategic noise maps* for major roads, railways, airports and agglomerations, using harmonised noise indicators<sup>29</sup> and use these maps to assess the number of people which may be impacted upon as a result of excessive noise levels;
- draw up action plans to reduce noise where necessary and maintain environmental noise quality where it is good; and,
- inform and consult the public about noise exposure, its effects, and the measures considered to address noise.

The Directive 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.

#### 4.5.6.1 South Dublin County Council Development Plan 2010- 2016

Relevant policies of the South Dublin County Council Development Plan 2010-2016 relating to air quality and noise include: to implement the provisions of the EU Directives and national policy and air pollution legislation (Policy ES22) and; to seek to achieve a healthy and comfortable environment that minimises unwanted noise and to implement the EU Directive on Assessment and Management of Environmental Noise (2009) (Policy ES23).

#### 4.5.7 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been developed with regard to the environmental baseline description and the objectives of the above strategic actions( the SEO, Targets and Indicators in relation to Noise are outlined in Section 4.3.3 on Health).

Note that with regard to air quality, climatic factors and traffic, both SEO C1 and C2 enable the evaluation of the Plan provisions. The indicators accompanying SEO C1 enable the medium and long term monitoring of the effects arising from Plan implementation while the indicator accompanying SEO C2 enables the identification and evaluation of the effects of Plan provisions.

<b>SEO C1:</b>	To minimise increases in travel related greenhouse emissions to air
Indicator C1i <sup>30</sup> :	Percentage of population within the plan area travelling to work or school by public transport or non-mechanical means
Target C1i:	An increase in the percentage of the population within the plan area travelling to work or school by public transport or non-mechanical means
Indicator C1ii <sup>31</sup> :	Average distance travelled to work or school by the population of the plan area
Target C1ii:	A decrease in the average distance travelled to work or school by the population of the plan area
<b>SEO C2:</b>	To reduce car dependency within the County by way of, inter alia, encouraging modal change from car to more sustainable forms of public transport and encouraging development which will not be dependent on private transport.
The use of SEO C2 provides a qualitative directional measure which is used to evaluate the effects of implementing the Local Area Plan	

<sup>29</sup> [ $L_{den}$  (day-evening-night equivalent level) and  $L_{night}$  (night equivalent level)]

<sup>30</sup> As measured by the Central Statistics Office

<sup>31</sup> As measured by the Central Statistics Office

## 4.6 Material Assets

### 4.6.1 Waste Water

The treatment of wastewater is governed by the Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC) transposed into Irish law by the Urban Waste Water Treatment Regulations 2001 (SI 254 of 2001). The Directive aims to protect the environment from the adverse effects of the wastewater discharges by ensuring that wastewater is appropriately treated before it is discharged to the environment. The Regulations stipulate that sewage treatment facilities are in place in all towns by 2005.

Appropriate treatment is essential in order to meet the requirements of the Water Framework Directive (see Section 0).

### 4.6.2 Drinking Water

The environmental effects of abstracting, transporting and treating water from a major new source in order to meet the long term drinking water needs of the Greater Dublin Area - including those of future populations to be provided for in South County Dublin - is currently being considered by a Strategic Environmental Assessment. Having regard to the EU principle of subsidiary, the environmental effects which are being identified and evaluated by that SEA are not identified or evaluated by this SEA.

The environmental baseline with regard to drinking water demand and supply, however, is identified in Section 3.9.2 and measures have been integrated into the Plan in order to help ensure a clean and wholesome water supply. The Boherboy Water Supply Scheme (currently under construction) involves a major upgrading and expansion of the water supply network and storage infrastructure in the areas of Saggart, Rathcoole, Brownsbarn, Citywest, the Southern parts of Tallaght and Ballycullen Oldcourt. This scheme provides for the construction of 41km of watermain, new reservoirs at Saggart and Kiltalown and a pumping station in Saggart. The plan lands are being served by the reservoir in Saggart through a 450mm watermain laid along the R120 and provides existing and future residents with a reliable, modern water storage and supply infrastructure.

### 4.6.2.2 South Dublin County Council Development Plan 2010- 2016

Policies of the South Dublin County Council Development Plan relating to water and wastewater include: to co-operate with adjoining authorities to continue the sustainable development and improvement of the water supply and drainage systems through the County (Policy WD1) and; to ensure that development shall be preceded by sufficient capacity in the public wastewater treatment plants and appropriate extensions in the existing public wastewater collection systems (Policy WD2).

### 4.6.3 SEOs, Indicators and Targets

The following SEO's, Indicator's and Target's have been developed with regard to the environmental baseline and the objectives of the above strategic actions.

<b>SEO M1:</b>	To serve new development under the LAP with appropriate waste water treatment
<b>Indicator M1:</b>	Number of new non-rural developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the LAP
<b>Target M1:</b>	No new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the LAP

<b>SEO M2:</b>	To maintain and improve the quality of drinking water supplies.
Indicator M2:	Drinking water quality standards, (Microbiological, Chemical and Indicator parameters)
Target M2:	To maintain and improve drinking water quality in South Dublin County to comply with requirements of the European Communities (Drinking Water) Regulations 2000.

Any works at or in relation to a recorded monument requires two months notice to the Department of the Environment, Heritage and Local Government under section 12 of the National Monuments (Amendment) Act, 1994.

Direct impacts on national monuments in State or Local Authority care or subject to a preservation order require the consent of the Minister for the Environment, Heritage and Local Government under Section 14 of the National Monuments Act 1930 as amended by Section 5 of the National Monuments (Amendment) Act 2004.

## 4.7 Cultural Heritage

### 4.7.1 Archaeological Heritage

#### 4.7.1.1 Valletta Convention 1992

The European Convention on Protection of the Archaeological Heritage known as the Valletta Convention of 1992. This was ratified by Ireland in 1997 and requires that appropriate consideration be given to archaeological issues at all stages of the planning and development process.

#### 4.7.1.2 National Heritage Plan for Ireland 2002

The core objective of the National Heritage Plan for Ireland 2002<sup>32</sup> is to protect Ireland's heritage. In this regard, the 'polluter pays' principle and the precautionary principle are operable.

#### 4.7.1.3 National Monuments Acts

Archaeology in Ireland is protected under the National Monuments Acts 1930 to 2004.

Recorded monuments are protected by inclusion on the list and marked on the map which comprises the Record of Monuments and Places set out County by County under Section 12 of the National Monuments (Amendment) Act, 1994 by the Archaeological Survey of Ireland. The definition includes Zones of Archaeological Potential in towns and all other monuments of archaeological interest which have so far been identified.

<sup>32</sup> Department of Arts, Heritage, Gaeltacht and the Islands (2002) *National Heritage Plan for Ireland* Dublin: Government of Ireland

### 4.7.2 Architectural Heritage

#### 4.7.2.1 Planning and Development Act 2000 (as amended)

The Record of Protected Structures (RPS) included in the current Development Plan is legislated for under Section 51 of the Planning and Development Act 2000 (as amended) and includes structures which form part of the architectural heritage and which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.

#### 4.7.2.2 Architectural Heritage and Historic Monuments Act 1999

The National Inventory of Architectural Heritage (NIAH) is a state initiative under the administration of the DOEHLG<sup>33</sup> which was established on a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. Its purpose is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly and consistently as an aid in the protection and conservation of the built heritage. It is intended that the NIAH provides the basis for the inclusion of particular structures in the RPS. All RPS entries are entries to the NIAH. Ballycullen Oldcourt contains a wide number of protected structures within the Plan lands and there is a need to ensure that no development detracts from the setting of a number of protected structures in the area.

<sup>33</sup> Department of Environment, Heritage and Local Government has been reorganised to be called the Department of Environment, Community and Local Government, effective from May 1, 2011. The Heritage functions have been transferred to the Department of Arts, Heritage and the Gaeltacht from May 1, 2011

#### 4.7.2.2 South Dublin County Council Development Plan 2010- 2016

Relevant policies of the South Dublin County Development Plan relating to architectural and archaeological heritage include: to protect and conserve the archaeological heritage of the County (Policy AA1); to ensure that development within the vicinity of a recorded monument or zone of archaeological potential does not seriously detract from the setting of the feature (Policy AA4); to conserve and protect areas designated as Areas of Archaeological Potential (Policy AA6); to conserve and protect buildings, structures and sites contained in the Record of Protected Structures that are of special architectural, historic, archaeological, historic, cultural, scientific, social, or technical interest (Policy AA7) and; to encourage appropriate use and re-use of Protected Structures (PS), ensure that proposals to extend, alter or refurbish a PS are sympathetic to its essential character and in accordance with good conservation principles and practice (Policy AA11).

#### 4.7.3 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been developed with regard to the environmental baseline and the above strategic actions.

<b>SEO CH1:</b>	To protect the archaeological heritage of the South Dublin with regard to entries to the Record of Monuments and Places
<b>Indicator CH1:</b>	Number of unauthorised developments occurring which result in full or partial loss to 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
<b>Target CH1:</b>	No unauthorised developments occurring which result in full or partial loss to entries to the Record of Monuments and Places - including Ballycullen Oldcourt Zone of Archaeological Potential - and the context of the above within the surrounding landscape where relevant

<b>SEO CH2:</b>	To preserve and protect the special interest and character of South Dublin's architectural heritage with regard to entries to the Record of Protected Structures, Architectural Conservation Areas, and their context within the surrounding landscape where relevant
<b>Indicator CH2i:</b>	Number of unauthorised developments occurring which result in physical loss or loss entries to the Record of Protected Structures and/or their context within the surrounding landscape where relevant
<b>Target CH2i:</b>	No unauthorised developments occurring which result in physical loss or loss entries to the Record of Protected Structures and/or their context within the surrounding landscape where relevant

## 4.8 Landscape

### 4.8.1 European Landscape Convention 2000

Ireland signed and ratified the European Landscape Convention (2000) in 2002 with the Convention entering into force in Ireland in 2004. The aims of the Convention include: to conserve and maintain the significant or characteristic features of a landscape, justified by its heritage value derived from its natural configuration and/or from human activity; to harmonise changes in the landscape which are brought about by social, economic and environmental processes, and to enhance landscapes.

### 4.8.2 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been developed with regard to the environmental baseline and the above strategic action.

<b>SEO L1:</b>	To protect and avoid significant adverse impacts on the and designated scenic routes; especially with regard to areas of high amenity of the Dublin Mountains Area
<b>Indicator L1:</b>	Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the LAP
<b>Target L1:</b>	No developments permitted which result in avoidable impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the LAP landscape, landscape features

**Table 4.1 SEO Summary Table**

<b>SEO Code</b>	<b>SEO</b>
<b>B1</b>	To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites
<b>B2</b>	To avoid significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites
<b>B3</b>	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
<b>HH1</b>	To protect human health from hazards or nuisances arising from traffic and incompatible landuses
<b>S1</b>	To maximise the sustainable re-use of brownfield lands and the existing built environment
<b>W1</b>	To maintain and improve, where possible, the quality of the River Dodder, its tributaries and surface water
<b>W2</b>	To prevent pollution and contamination of ground water
<b>W3</b>	To prevent development on lands which pose - or are likely to pose in the future - a significant flood risk
<b>C1</b>	To minimise increases in travel related greenhouse emissions to air
<b>C2</b>	To reduce car dependency within the County by way of, inter alia, encouraging modal change from car to more sustainable forms of public transport and encouraging development which will not be dependent on private transport
<b>M1</b>	To serve new development under the LAP with appropriate waste water treatment
<b>M2</b>	To maintain and improve the quality of drinking water supplies
<b>CH1</b>	To protect the archaeological heritage of South Dublin with regard to entries to the Record of Monuments and Places - including the Ballycullen Oldcourt Zone of Archaeological Potential - and the context of the above within the surrounding landscape where relevant
<b>CH2</b>	To preserve and protect the special interest and character of South Dublin's architectural heritage with regard to entries to the Record of Protected Structures, Architectural Conservation Areas, and their context within the surrounding landscape where relevant
<b>L1</b>	To protect and avoid significant adverse impacts on the landscape, landscape features and designated scenic routes; especially with regard to areas of high amenity of the Dublin Mountain Area

**Strategic Environmental Objectives (SEOs) <sup>34</sup>**

<sup>34</sup> Strategic Environmental Objectives (SEOs) are methodological measures which are developed from international, national and regional policies which generally govern environmental protection objectives and against which the environmental effects of the Draft Plan can be tested. The SEOs are used as standards against which the development strategies, policies and objectives of the Draft Plan can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, if unmitigated against.

# Section 5 Context for Ballycullen Oldcourt Local Area Plan for South Dublin County Council

## 5.1 Introduction

Section 18 to 20 of the Planning and Development Act 2000 (as amended) allows for the preparation of a Local Area Plan in respect of any area which the Planning Authority considers suitable and in particular for areas which require economic, physical and social renewal, and are likely to be the subject of large-scale development within the lifetime of the Plan.

The Ballycullen Oldcourt Local Area Plan has been prepared in response to the development pressures facing Ballycullen Oldcourt and the need to provide a positive framework for the future development of the area that is consistent with the policies and objectives contained in the County Development Plan 2010-2016 and other higher forward planning strategic actions.

The Ballycullen Oldcourt LAP has been prepared in accordance with the requirements of the Planning and Development Act, 2000, as amended. The LAP shall be valid for a period of six years, unless amended or revoked within that period. It is intended that the long term vision articulated by the Plan will give a degree of continuity and certainty to the future development of the Plan area.

## 5.2 Ballycullen Oldcourt Local Area Plan

### 5.2.1 Structure and Content

The draft Ballycullen Oldcourt LAP consists of a written statement and maps in a single document and includes strategy and goals for the proper planning and sustainable development of the area, land use proposals, specific policies and objectives and development management guidelines and standards.

The draft LAP is divided into eight (8) sections as follows:

#### Section 1: Introduction

This section introduces the LAP, the statutory context within which the LAP is being prepared and details of public consultation which informed the making of the LAP.

#### Section 2: Development & Population Analysis

This section provides a brief description of recent developments carried out within the Plan Lands and the Ballycullen – Oldcourt Action Area Plan (2000) followed by an analysis of development and demographic figures, access and movement, noise and finally providing a summary Strengths, Challenges, Opportunities and Threats (SCOT) analysis of the Plan Lands.

#### Section 3: Green Infrastructure Appraisal

This section presents a brief appraisal of the natural and built heritage of the Ballycullen-Oldcourt area including details of topography, flora and fauna, water and human activity and settlement.

#### Section 4: Plan Rationale

This section of the Local Area Plan sets out the broad plan objectives for the Plan Lands followed by a vision and a rationale behind the formulation of the Local Area Plan. The plan rationale is based on a sequence of principles on Development Areas; Green Space; Sustainable Urban Drainage; Tracks and Trails; Street Network; and Land Use and Density.

The broad plan objectives, vision and rationale have been informed by the local issues analysed in Section 2 and 3 of this plan together with the issues raised during pre-draft public consultation. The national, regional and local planning policy documents and EU Directives that also helped to inform

the preparation of this Local Area Plan are outlined in Appendix 1 of the accompanying appendix document.

#### Section 5: LAP Strategy

This section of the Local Area Plan progresses Plan Rationale into a series of detailed design led strategies to help inform the process for creating a comprehensive framework for the Plan Lands. The strategies are sets under the relevant heading throughout this section of the Local Area Plan relate to Accessibility and Movement; Green Infrastructure; Land Use and Density; and Built Form.

#### Section 6: Phasing

This section of the plan is concerned with the implementation of the Local Area Plan and the timescale over which development will occur.

#### Appendix 1: Site Specific Objectives

This section sets out specific policies tailored for important sites.

#### Appendix 2: Standards and Design Criteria

This section sets out the objectives of the LAP and details building design standards and urban design criteria for development of the plan lands

### 5.2.2 Vision and Goals of LAP

*The Vision: A place with a strong sense of identity, character and a good quality of life that builds upon and responds to its setting at the foothills of the Dublin Mountains and location adjacent to the countryside; a permeable place that links existing and new development areas through a network of pedestrian and cyclist paths that connect important destinations to each other and towards the mountains; an attractive residential area with local shopping facilities, quality streets and useful spaces that realises, protects and enhances the full potential of existing built and natural amenities through the sensitive and considered incorporation of mountain views, vistas of local historic structures, the sloping topography, hedgerows, streams, townland*

*and parish boundaries and archaeology; a developing area that retains a clear delineation between the suburbs and the countryside by sensitively transitioning away from rural lands and the mountains.*

The broad plan objectives are as follows:

- Take cognisance of the area's unique amenity and location adjacent to rural lands at the foothills of the Dublin Mountains and protect the amenities of existing dwellings;
- Sensitively integrate new development and existing development with each other and the surrounding rural and mountain context through green infrastructure, urban and street design, sustainable urban drainage features and pedestrian and cyclist routes;
- Provide a Green Infrastructure Framework that will integrate natural and built heritage features, water management, access and open space and recreation;
- Provide for a network and hierarchy of linked public open spaces with varying roles and facilities that provide for passive and active recreation and the sustainable drainage of water;
- Create a series of neighbourhoods/districts that are linked by local and link streets and reinforce Stocking Avenue and Oldcourt Road as arterial routes for activity, local shopping and public transport;
- Sensitively transition densities and building heights in a manner that limits the impact of any new development on the setting of the Dublin Mountains and countryside;
- Provide a network of walking and cycling routes that further link neighbourhoods/districts with each other, public transport stops and local shopping while providing routes towards the Dublin Mountains;
- Promote high quality and universal design for streets, spaces and buildings that responds to the different character areas and settings within and along the Ballycullen – Oldcourt Fringe;
- Incorporate appropriate green infrastructure features that limits the

impact of noise from the M50 on any future development;

- Provide for life time housing and a choice of dwelling types and sizes that cater for varying age groups.
- Ensure that development is phased in a manner that provides for the required community, school and parkland facilities either prior to or in tandem with development.

## 5.3 Alternatives

Sections 6 and 7 of this report identify, describe and evaluate different alternative scenarios for the future development of the Plan area, taking into account the SEOs identified in Section 4.

The evaluation of the alternatives results in the identification of potential impacts and leads to the emergence of a preferred alternative for the Draft Plan.

## 5.4 Interactions with Relevant Planning Policy

### 5.4.1 Introduction

The Draft Ballycullen Oldcourt Local Area Plan forms part of a hierarchy of plans and strategies that extends from the EU to national, regional, county and local level. The Draft Plan is informed by a number of higher order plans and strategies such as the National Spatial Strategy 2002-2020, the Regional Planning Guidelines for the Greater Dublin Area 2010-2022 etc.

### 5.4.2 National Development Plan 2007-2013

The National Development Plan 2007-2013 (NDP) is designed to underpin the development of a dynamic competitive economy over the period 2007 - 2013. It envisages a total investment of €184 billion over 7 years to 'secure the further transformation of our country socially and economically within an environmentally sustainable framework'.

The NDP includes a number of strategic objectives for the Southern and Eastern Regions within which South Dublin is located.

The need for a National Spatial Strategy was formally recognised by the Government with the publication of the 2000-2006 NDP.

### 5.4.3 National Spatial Strategy 2002-2020

The National Spatial Strategy 2002-2020 (NSS) is a 20-year planning framework for the entire Country to guide policies, programmes and investment. It seeks to promote a better balance of social, economic and physical development between the Regions.

The focus of the NSS 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.

In order to promote sustainable development and allow for the public transport system to function more effectively - as promoted by the NSS - it is essential to consolidate the physical growth of South Dublin. Within the County this can be achieved through the development of greenfield lands and vacant, derelict and underutilised lands, in particular where they are in close proximity to public transport routes.

### 5.4.4 Smarter Travel- A Sustainable Transport Future 2009-2020

*Smarter Travel* is a national policy document which sets out a broad vision for the future and establishes objectives and targets for

transport. The document examines past trends in population and economic growth and transport and concludes that these trends are unsustainable into the future. The aim is that by 2020 future population and economic growth will have to predominantly take place in sustainable compact urban and rural areas which discourage dispersed development and long commuting.

The main objectives are to reduce dependency on car travel and long distance commuting, increase public transport modal share and encourage walking and cycling, improve quality of life and accessibility for all, improve economic competitiveness through maximising the efficiency of the transport system, alleviating congestion and infrastructural bottlenecks, minimising the environmental impact by reducing localised air pollutants and greenhouse gasses and improving security of energy supply by reducing dependency on imported fossil fuels.

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

Ireland is divided into eight regional forward planning regions, Dublin, Midlands, Mid East, Mid West, South East, South West, West and Border, each with its own regional planning authority composed of Elected Members selected by the constituent local government councils. Regional planning authorities are required, under the Planning and Development (Regional Planning Guidelines) Regulations 2003 (SI No. 175 of 2003), to draw up regional planning guidelines (RPGs), long term strategic planning frameworks, for their relevant region. RPGs must have regard to the National Spatial Strategy.

South Dublin is located within the Dublin Regional Planning Authority area for which the Regional Planning Guidelines for the Greater Dublin Area (RPGs) have been prepared.

The RPGs provide for the implementation of

the National Spatial Strategy at a Regional level in the Greater Dublin Area (GDA).

The principle objective of the RPPGDA is to put in place a broad planning framework for the region and to provide an overall long term strategy for the making of Development and Local Area Plans for each local authority in the region. A key element of the RPGs is an increased emphasis on the concentration of future development into the Metropolitan Area and into designated development centres. The key objectives for the Metropolitan Area are:

- Consolidation of the urban centres;
- Development of brownfield sites especially along transport corridors;
- Delivery of well designed urban environments enhancing the quality of life, and;
- Provision and facilitation of an integrated public transport system.

The RPGs state specifically that South Dublin incorporates areas with significant potential for brownfield redevelopment which support the consolidation of the metropolitan area, particularly along the Luas and Kildare Route corridor. The Development Plan also needs to continue to focus housing growth into the existing built envelope to support falling population in existing services suburbs and to achieve success for the SDZs which are in the county.

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

The Greater Dublin Area Retail Strategy sets out a co-ordinated and sustainable approach to the assessment and provision of retailing within the Greater Dublin Area so that:

- Adequate and suitable provision is made to meet the needs of changing population patterns, and provide for healthy competition and consumer choice.
- Retail in suitable locations is provided and integrated within

existing growth areas and public transport investment.

- Significant overprovision, which would place more marginal locations under severe pressure and undermine sustainability driven policies aimed at revitalising town centres, is avoided.

By setting out a strategic framework for retailing, the strategy seeks to give guidance on where future retail should be provided and what issues need to be addressed. To this end, the strategy proposes a retail hierarchy as a core spatial policy around which future growth, rejuvenation and expansion in the retail sector needs to be focused. The Retail Strategy for South Dublin County is set within the context of the Retail Strategy for the Greater Dublin Area.

#### **5.4.7 Dublin Transport Office: A Platform for Change 2000-2016**

The Dublin Transportation Office (DTO) Strategy 'A Platform for Change', outlines an integrated transportation strategy for the Greater Dublin Area for the period 2000-2016. It was prepared to support and complement the strategic land planning framework outlined in the Regional Planning Guidelines.

The Strategy envisages a wide range of benefits being achieved by 2016. These include:

- improved accessibility to work, leisure and retail opportunities,
- an improved transport system,
- people living within 10 minutes walking distance of public transport,
- reduced road congestion levels,
- reduced average journey times,
- improved
- environmental benefits,
- safer and more pleasant urban residential areas, reduced accident levels and more convenient cycling facilities.

'A Platform for Change' is currently under

review by the National Transport Authority (formerly known as the DTO) i.e. 2030 Vision as detailed below.

#### **5.4.7.1 Draft Transport Strategy for the Greater Dublin Area 2011-2030: 2030 Vision**

The National Transport Authority (NTA) prepared a Strategic Transport Plan for the Greater Dublin Area (GDA) which comprises the city and county of Dublin, and counties Kildare, Meath and Wicklow. The Strategy's role is to establish appropriate policies and transport measures that will support the Greater Dublin Area in meeting its potential, as a competitive, sustainable city-region with a good quality of life for all.

The Strategy is not a standalone document – it is the top level in a hierarchy of transport plans for the GDA that will include an Implementation Plan and Strategic Traffic Management Plan, both of which will be published by the Authority after the adoption of the Strategy. The Strategy has five overarching objectives to support the vision of ensuring that the GDA is a competitive, sustainable city-region with a good quality of life for all by 2030; these objectives can be grouped into economic, social and environmental categories. The Strategy aims to meet:

- Economic objectives by reducing delays and improving journey time reliability, particularly for business travel and the movement of goods, and by improving access to and within town centres;
- Social objectives by improving safety, reducing travel related stress and reducing the adverse impacts of traffic on neighbourhoods and centres whilst enabling all sectors of society to travel to the destinations they need to reach; and
- Environmental objectives, by giving priority to those means of travel that are less damaging to our natural and built environment.

The Draft Strategy underwent public

consultation between February and April 2011 and is anticipated to have effect in 2012.

#### **5.4.7.2 Planning and Development Of Large-Scale, Rail Focussed Residential Areas In Dublin – Final Report May 2013**

The National Transport Authority (NTA) has prepared this study whose purpose is to assess the future delivery of rail-based large and medium scale residential development areas in Dublin, given the current economic and funding conditions prevailing in Ireland, and the current lack of new residential development delivery of any scale.

The objectives for this study were:

To examine current issues arising in relation to large and medium scale residential development areas due to the noted pressure to deliver development at densities lower than those set out in the planning frameworks, largely driven by perceived market trends and funding issues; and To identify potential approaches that provide viable solutions to addressing these issues.

Government policy in urban areas has been to increase sustainability and efficiency through greater alignment of land use and transport. In relation to residential development, this policy seeks to increase residential densities in areas proximate to public transport corridors. In the Dublin area, a number of large and medium scale residential development areas on rail-based public transport corridors were identified for delivery of sustainable neighbourhoods. These areas are planned to achieve (net) densities in excess of 50 units per hectare, as identified as being appropriate for development along public transport corridors in

Lands not classified in this study as 'Strategic Residential Development Areas' fall into the category of 'other residentially zoned lands' **(and include the Ballycullen/Oldcourt lands subject to this LAP)**. For the most part (with some

exceptions), these lands are not located on high frequency public transportation routes and their areas have not been subject to significant levels of investment in public transportation infrastructure. It is recognised that this grouping covers a wide range of residentially zoned lands, with a range of density and other infrastructure requirements and planning frameworks.

However, some of these lands could potentially be seen as a more attractive prospect to developers and funders for several reasons:

- Some of these lands allow lower density own-door development that is perceived as being fundable, deliverable, and acceptable to today's market;
- Some are potentially easier to achieve a phased development on, due to infrastructure provision and outstanding requirements;
- Some do not incur Section 49 development contributions; and
- Some of the lands offer more flexibility regarding development proposals in comparison to lands within SDZ / LAP designations.

#### **5.4.8 South Dublin County Council Development Plan 2010-2016**

The Planning and Development Act 2000 (as amended) requires the draft LAP to be consistent with the South Dublin County Development Plan 2010-2016 which outlines the planning and development framework for South Dublin County. In the case of any conflict between the two Plans, the County Plan takes precedence.

Any LAP which is adopted for the Ballycullen Oldcourt area must be consistent with the zoning objectives of the County Development Plan. The draft LAP lands comprise a mix of established land uses and accordingly a mix of land use zonings -

- The majority of the plan lands are zoned Objective A1; To provide for new residential communities in

accordance with approved area plans

- Centrally located within the plan lands, is an area zoned Objective LC; To protect, provide for and/or improve Local Centre facilities.
- Part of the western lands at Oldcourt, the eastern land at Ballycullen and mid-way between the two has an area zoned Objective F; To preserve and provide for Open Space and Recreational Amenities.
- There is specific objective on the Ballycullen lands provide for a Primary School.
- There are also a Specific Local Objectives pertaining to the plan lands: SLO 87 'Plan Lands off Oldcourt Road'

In addition to the objectives of the County Development Plan relating to zoning, the draft LAP must be consistent with, inter alia, the policies and objectives of the County Development Plan together with other forward planning guidelines and objectives which are identified in Section 4 Strategic Environmental Objectives.

Part of the undeveloped lands on the western side of the Plan Lands off Oldcourt Road are subject to Specific Local Objective no. 87, which sets out the following 'conditions' on development:

- "a) Access through the existing residential developments of Oldcourt Cottages and Ely Manor House will not be permitted.*
- b) The proposed access road to serve the development to be located contiguous to the existing development of Oldcourt Cottages.*
- c) The public open space to serve the scheme to be located to the east of the proposed access road. The public open space must be easily accessible to and must serve as public open space for Oldcourt Cottages.*

*d) In any such development, single storey dwellings only will be permitted in the area of the site(s) facing existing residential development.*

*e) Protection and preservation of the biodiversity value and significant landscape character of lands within the Dodder Valley and on the lands at Oldcourt/Kiltipper which are subject to a Local Area Plan by means of requiring a landscape assessment to be submitted for development proposals, including the design and improvement of roads and bridge infrastructure to serve said lands. The assessments shall take into account existing treelines, significant hedgerows, landscape features, remediation of negative biodiversity impacts, improved amenity and accessibility to the river.*

*f) That all appropriate road upgrading and improvements in relation to capacity and safety be completed prior to any further development of the area."*

The Development Plan also includes for a long term road proposal for a Local Road to run from between the Oldcourt Road and Bohernabreena Road.

## **5.5 Environmental Protection Objectives**

The draft LAP is subject to a number of high level national and international environmental protection policies and objectives, including those which have been identified as Strategic Environmental Objectives in Section 4. The draft LAP must be consistent with these objectives and implement them at the local level in Ballycullen Oldcourt.

## Section 6 Description of Alternative Plan Scenarios

### 6.1 Introduction

The evaluation of the likely environmental consequences of a range of alternative strategies for accommodating future development in the Ballycullen Oldcourt area is part of the SEA process.

Article 5 of the SEA Directive requires the Environmental Report to consider "reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme" and the significant environmental effects of the alternatives selected.

These alternative strategies must be realistic, capable of implementation, and should represent a range of different approaches within the statutory and operational requirements of the particular plan. In some cases the preferred strategy will combine elements from the various alternatives considered.

This section identifies and describes different plan scenarios, taking into account higher level strategic actions as well as the geographical scope of the Ballycullen Oldcourt Local Area Plan boundary.

The alternative scenarios are evaluated in Section 7 resulting in the identification of potential environmental impacts and informing the selection of a preferred alternative for the Draft Local Area Plan.

Mitigation measures which attempt to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the preferred alternative are recommended for inclusion Section 9

### 6.2 Excluding the do-nothing scenario

A 'do-nothing' alternative is not considered in this section, nor is it required by the SEA Directive.

However, Annex I of the SEA Directive specifies that information should be provided in the

environmental report on *inter alia* 'the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme'. Section 3 of the Environmental Report identifies the evolution of each component of the environment in the absence of implementing the proposed Local Area Plan.

### 6.3 Identification and Description of Alternative Scenarios

#### 6.3.1 Introduction

The following summarises a series of 'Scenarios' which provide alternative visions of how the future development of Ballycullen and Oldcourt might occur. These are neither predictions nor preferences - instead they offer a range of plausible and internally consistent narratives of the outcome of different planning and development strategies.

The scenarios provide the basis for the comparative evaluation of the likely environmental effects of each plan, which in turn serves the purpose of identifying which features of plans and policies are likely to be sensitive or robust over the widest range of circumstances.

As outlined in DOEHLG SEA Guidelines, certain strategic issues in the Local Area Plan may have already been determined at national, regional or county level. The preparation of the Local Area Plan must have regard to the South Dublin County Development Plan 2010 – 2016 and demonstrate consistency with same. The strategic alternatives available in the preparation of the proposed Ballycullen Oldcourt Local Area Plan are therefore limited. Having regard to the foregoing, a number of options have been formulated and these will be examined as part of Environmental Report.

#### 6.3.2 South Dublin Development Alternatives

The scenarios are derived taking into account higher level strategic plans as well as the geographical scope of the area.

### **6.3.2.1 The Regional Planning Guidelines**

The Regional Planning Guidelines for the Greater Dublin Area 2010-2022 (RPG-GDA) provide an overall strategic settlement context for the Development Plans of each local authority in the GDA. The key objectives for the future development of the Metropolitan Area are to ensure the following:

- Consolidation of the urban centres located within the Metropolitan Area.
- Development of brownfield sites, in urban centres throughout the Metropolitan Area, especially those along public transport corridors.
- Delivery of well designed urban environments enhancing the quality of life for residents and workers alike.
- Provision and facilitation of an integrated public transport system and the achievement of a greater use of sustainable transport modes through the integration of land use and transport planning.
- Clear definition of the boundaries of urban centres to ensure a clear division between rural and urban areas.

The Guidelines propose a strategy for the Metropolitan Area of South Dublin that will lead to a more compact urban form, and facilitate the provision and use of an enhanced public transport system.

### **6.3.2.2 South Dublin County Development Plan 2010 - 2016**

The fundamental role of the County Development Plan is to set out a coherent spatial policy framework for the future development of the County. The core strategic aim of the Development Plan is to promote a more consolidated and compact urban form for the County. This entails the following:

- The consolidation/strengthening of our designated town centres particularly the County Town of Tallaght;

- Supporting our county villages, including supporting and encouraging the participation of local communities, in the preservation and maintenance of our traditional villages consistent with their continued function and the existing zoning of the lands concerned;

- Supporting our existing urban areas including the redevelopment of brownfield lands;

- The promotion of significant new economic development along defined economic corridors based on fixed and developing public transport corridors;

- Supporting continued agricultural activity in the west of the County and facilitating new activities including market gardening;

- Identifying and maintaining our green infrastructure

- Promoting and supporting more sustainable forms of transport particularly public transport;

- Supporting, promoting and actively developing sources of renewable energy and

- Promoting equality, diversity and social inclusion through the delivery of quality services for all.

The Core Strategy of the South Dublin County Council Development Plan 2010 to 2016 identified 159 Hectares of available development land, including the Oldcourt area, with no existing permissions and a potential housing allocation of 10,600 units in the Tallaght Rathfarnham area (this forecasted figure includes for the Tallaght Town Centre Local Area Plan 2006 and the Naas Road Development Framework 2006).

## 6.4 Alternative Scenarios

### 6.4.1

#### **Scenario 1- Extend the lifespan of the Ballycullen – Oldcourt Action Area Plan 2000**

This scenario involves continuing to implement the Ballycullen – Oldcourt Action Area Plan 2000 and the extension of those policies and objectives into the adjoining areas subsequently zoned for development.

Under this scenario higher residential densities would be prevalent throughout the plan lands. The intensity of residential development throughout the plan lands would lead to the removal of existing hedgerows in the Oldcourt area which would also impact on the biodiversity network in the area. Higher density development would also have an impact on the landscape.

Under this scenario, surface water drainage would be guided by policies within the County Development Plan and the Greater Dublin Drainage Strategy rather than within the LAP itself; the opportunity to implement a of Sustainable Urban Drainage Systems (SuDS) would be lessened .

The impact of higher residential density on climate change would be uncertain: it could result in a significant increase in the number of car journeys if the low level of public transport remained the same or alternatively the increased population numbers might be sufficient to facilitate the improvement of the level of service and thereby help reduce climatic change impacts.

The continuation of development at higher densities would provide the possibility to achieve the required infrastructure through planned phasing. However there is also the possibility of the lands remaining undeveloped due to the lack of demand for higher density housing types.

#### **Alternative Scenario 2: Market-Led Growth**

This scenario involves allowing growth to follow the demands of the market, facilitating flexibility with planning guidelines, infrastructure capacity or environmental constraints. The location and nature of development would be completely dependent upon market demand and

applications would be evaluated on a case by-case basis by the Council.

The relaxation of planning controls throughout the plan lands would lead to the continued expansion and demand for the provision of housing permeating throughout the residentially zoned land in this scenario, with little or no provision of community infrastructure to accommodate the existing and future population. There would be little attempt made to integrating adjoining existing development both within and outside the LAP area with new development into a coherent urban fabric.

Overall, many of the impacts that might result from development would be uncertain depending on the nature of the development, very low or high densities. The development of all of the land at very low densities would increase the likelihood of displacement of housing into other, possibly unzoned land, outside the LAP area.

#### **Alternative Scenario 3 Preservation /Limited Development Approach**

This scenario prioritises the amenity and character of existing residential areas together with the protection of the land adjoining the foothills of the Dublin Mountains (although this land has already been zoned for residential development). This option would result in either the lands being de-zoned (through a variation of the current Development Plan) or the incorporation of polices into the plan providing for the preservation and protection of the existing built and the rural environment by limiting development to very low densities apart from the land where permissions have already been granted.

However, while the Plan Lands would remain substantially undeveloped, this would hinder the chances for the provision of greatly needed open space/parkland, community (including the primary school) and retail facilities to meet the existing population in the area. This would also hinder opportunities to create a softer edge between the urban and rural environment.

The Council are also required to meet the housing figures as outlined in the Regional Planning Guidelines. A portion of the Council's required housing numbers is accounted for on

the subject lands (100ha). If the lands were to be de-zoned, it would remove the possibility of developing the land at medium to low densities currently favoured by developers and would create pressure to provide such housing on land more suitable of support densities required to make public transport efficient at locations where major infrastructural investment has been made (Planning and Development of Large-Scale, Rail Focussed Residential Areas In Dublin – Final Report May 2013).

#### **Scenario 4 - Sustainable Development with strong Green Infrastructure Framework**

This scenario would involve the development of the Ballycullen Oldcourt LAP lands using the concept of Green Infrastructure as a guiding theme for development and also as a means of integrating adjoining existing development both within and outside the LAP area with new development into a coherent urban fabric. The components of Green Infrastructure are green spaces, greenways, parks, the Ballycullen and Oldcourt streams and tributaries, hedgerows and trees, areas around community and institutional land, such as schools. Allowance is made in this scenario for limited trade off between development and environmental protection with mitigation measures ameliorating any negative environmental impacts.

This scenario seeks to focus on the multi-functionality of Green Infrastructure, which when planned in a coherent manner provides social and economic benefits for the surrounding communities. It provides a holistic approach to developing the landscape inclusive of other influences such as ecological development, improving air, water and soil quality, flood protection access provision and linkages, climate change/amelioration, pollution control and quality of life issues. It can be recognised as a

significant element within sustainable communities, contributing directly or indirectly to economic development and delivering real benefits to people's quality of life.

This scenario would safeguard the distinctive character and openness of the area and would conserve the natural and cultural heritage. The existing streams and hedgerows which traverse the plan lands would be safeguarded, enhanced and maintained with cycle/pedestrian routes provided in strategic locations throughout the plan lands, enabling recreation whilst providing a pleasant environment for the existing and future populations and maintaining opportunity to access the Dublin Mountain foothills. The SuDS approach sets out to ensure that developments do not generate any additional surface water discharge over the baseloads of existing greenfield sites.

The scenario provides for the development of land already with planning permissions to be developed as lower densities but in a manner that still provides for a significant number of new dwellings and allows for the provision of phased infrastructure for new and existing housing.

# Section 7 Evaluation of Alternative Plan Scenarios

## 7.1 Introduction

The objective of this section is to determine the relative merits of a range of the four alternative scenarios for the future development of the Ballycullen Oldcourt LAP area. This determination seeks to understand whether each alternative is likely to improve, conflict with or have a neutral interaction with the South Dublin’s environment.

The interactions between the SEOs and the policies and objectives of the Plan determine the effects of implementing the Plan. These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

Table 7.2 brings together all the SEOs which have been developed from international, national and regional policies which generally govern environmental protection objectives.

## 7.2 Methodology

### 7.2.1 Existing Environment

In order to identify the extent to which environmental sensitivities are likely to be impacted upon by implementation of the proposed Plan, use has been made of the description of the environmental baseline as outlined in Section 3.

The SEOs and the alternative scenarios are arrayed against each other to identify which interactions - if any - would cause impacts on specific components of the environment.

Where the appraisal identifies a likely conflict with the status of an SEO, the relevant SEO code is entered into the conflict column - e.g. B1 which stands for the SEO likely to be affected - in this instance ‘to avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites’.

### 7.2.2 Strategic Environmental Objectives (SEO’s)

Based on an understanding of the existing and emerging environmental conditions in the South Dublin, a series of SEOs were developed in order to assess the likely environmental effects which would be caused by implementation of each of the four alternative scenarios described in Section 6. The alternatives are evaluated using compatibility criteria (see Table 7.1) in order to determine how they are likely to affect the status of these SEOs.

### 7.2.3

A conclusion is then arrived at after reviewing the alternative evaluations.

Likely to <b>Improve</b> status of SEOs	Probable <b>Conflict</b> with status of SEOs- unlikely to be mitigated	Potential <b>Conflict</b> with status of SEOs- likely to be mitigated	<b>Uncertain</b> interaction with status of SEOs	<b>Neutral</b> Interaction with status of SEOs	<b>No Likely</b> interaction with status of SEOs
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**Table 7.1 Criteria for appraising the effect of Plan provisions on Strategic Environmental Objectives**

<b>SEO Code</b>	<b>SEO<sup>35</sup></b>
<b>B1</b>	To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites
<b>B2</b>	To avoid significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites
<b>B3</b>	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
<b>HH1</b>	To protect human health from hazards or nuisances arising from traffic and incompatible landuses
<b>S1</b>	To maximise the sustainable re-use of brownfield lands and the existing built environment
<b>W1</b>	To maintain and improve, where possible, the quality of the River Dodder, its tributaries and surface water
<b>W2</b>	To prevent pollution and contamination of ground water
<b>W3</b>	To prevent development on lands which pose - or are likely to pose in the future - a significant flood risk
<b>C1</b>	To minimise increases in travel related greenhouse emissions to air
<b>C2</b>	To reduce car dependency within the County by way of, inter alia, encouraging modal change from car to more sustainable forms of public transport and encouraging development which will not be dependent on private transport
<b>M1</b>	To serve new development under the CDP with appropriate waste water treatment
<b>M2</b>	To maintain and improve the quality of drinking water supplies
<b>CH1</b>	To protect the archaeological heritage of South Dublin with regard to entries to the Record of Monuments and Places - including the Ballycullen Oldcourt Zone of Archaeological Potential - and the context of the above within the surrounding landscape where relevant
<b>CH2</b>	To preserve and protect the special interest and character of South Dublin's architectural heritage with regard to entries to the Record of Protected Structures, Architectural Conservation Areas, and their context within the surrounding landscape where relevant
<b>L1</b>	To protect and avoid significant adverse impacts on the landscape, landscape features and designated scenic routes; especially with regard to areas of high amenity of the Dublin Mountain Area

**Table 7.2 Strategic Environmental Objectives (SEOs)**

<sup>35</sup> Strategic Environmental Objectives (SEOs) are methodological measures which are developed from international, national and regional policies which generally govern environmental protection objectives and against which the environmental effects of the Draft Plan can be tested. The SEOs are used as standards against which the development strategies, policies and objectives of the Draft Plan can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, if unmitigated against.

## 7.3 Evaluation of Alternatives against SEOs

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	Uncertain interaction with status of SEOs	Neutral Interaction with status of SEOs	No Likely interaction with status of SEOs
<b>Alternative Scenario 1</b>  <b>Extend the lifespan of the Ballycullen Oldcourt Local Area Plan 2003 and include adjoining zoned land</b>		<b>B3</b> <b>L1</b> <b>W3</b>	<b>M1 M2</b> <b>W1-W2</b> <b>CH1</b> <b>B2</b>	<b>HH1 C1</b> <b>C2</b> <b>CH2</b>		<b>B1</b>

This scenario would lead to an increase in demand for water and wastewater services due to quantum of development (**SEO M1 M2**). The use of Sustainable Urban Drainage Systems (SuDS) would not be prevalent within the plan lands where permissions already exist; the use of underground attenuation tanks, if continued, could impact on water quality and flood risk (**SEO W1-W3**).

The impact of higher residential density on climate change would be uncertain: it could result in a significant increase in car journeys if the low level of public transport remained the same or alternatively the increased population numbers might be sufficient to improve the level of Public Transport service (**SEO HH1 C1 C2**). Existing habitats and hedgerows would likely be disturbed/removed to facilitate development (**SEO B3**). There are no designated ecological sites within close proximity to the plan lands or direct networks connecting the plan lands to these sites; while there would be no likely impact on the SEO's as a result of the proximity of the Glenasmole SAC or the Wicklow Mountains SAC/SPA (**SEO B1**), there is potential conflict with the adjoining pNHA on the Dodder (**B2**). There is potential conflict on the archaeological heritage of the area; while there would be increased development pressures in certain areas, significant impacts would be likely to be mitigated (**SEO CH1**); there would be no likely impact on the architectural heritage. There is likely to be significant negative impact on the landscape within this scenario (**SEO L1**).

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	Uncertain interaction with status of SEOs	Neutral Interaction with status of SEOs	No Likely interaction with status of SEOs
<b>Alternative Scenario 2</b>  Market Led Growth		<b>L1</b> <b>W1 W2</b> <b>W3</b> <b>B3</b> <b>C1 C2</b> <b>HH1</b>	<b>B2</b> <b>CH1</b>			<b>B1 CH2</b>

The appearance and character of the landscape would be significantly and adversely affected due to quantum of development/urban sprawl (**SEO L1**). The quantum of development and the absence of SuDS measures would compromise the quality of groundwater, surface water and the likelihood of pollution/contamination and also increase the likelihood of flood risk (**SEO W1-W3**). Existing habitats and ecological systems would be disturbed/ removed to facilitate development (**SEO B3**). There would be an increase in unsustainable car based transport, thus impacting on/increasing air quality/emissions (**SEO C1 C2 HH1**). The archaeological heritage would be compromised due to development pressure in parts of the area (**SEO CH1**).

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	Uncertain interaction with status of SEOs	Neutral Interaction with status of SEOs	No Likely interaction with status of SEOs
<b>Alternative Scenario 3</b>  Preservation / Limited Development Approach	<b>B2 B3 W1-W3 CH1 M1 M2 L1 HH1</b>	<b>S1 C1C2HH1</b>	<b>B1 B2 B3L1 CH1 CH2 W1-W3 M1M2</b>  (Blue indicates indirect impact)			<b>B1 CH2</b>

This scenario could result in some improvement to existing ecological corridors and the landscape due to strict controls of development (**SEO B2-B3, L1**). The prevention of development, however, on the plan lands area could result in development occurring in other sensitive areas outside the LAP lands (**SEO B1-B3, L1W1-W3M1M2**). Decrease in use of public transport gradually due to aging population; increase in inter county car based travel due to lack of availability in housing stock/employment in the LAP area, thus increasing car dependency/emissions (**SEO C1 C2 HH1**). Stricter controls would be applied to water/wastewater provision and quality of same and protection of flood risk areas (**SEO M1-M2 W1-W3**). There would be preservation of the archaeological heritage of the area due to strict development controls and the absence of development would ensure that the surrounding landscape for the architectural features just outside the LAP area remained the same (**SEO CH2**); however, it could also lead to pressure on architectural heritage in other areas outside the LAP lands (**SEO CH1 CH2**).

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	Uncertain interaction with status of SEOs	Neutral Interaction with status of SEOs	No Likely interaction with status of SEOs
<b>Alternative Scenario 4</b>  Sustainable Development with strong Green Infrastructure Framework	<b>B3 L1 S1 C1C2HH1</b>		<b>W1 W2 W3 CH1</b>			<b>B1 B2</b>

This scenario allows for the preservation and enhancement of existing ecological networks and the creation of new habitats within the plan lands though these habitats will be under pressure (**SEO B3**). The use of Sustainable Urban Drainage Systems for the disposal of surface water would insure that potential impact on the quality of groundwater (**SEO W2**) and surface water (**SEO W1**) will be mitigated, and this would also decrease the risk of contamination or flooding (**SEO W3**). Potential conflict with the archaeological heritage of the area is likely to be mitigated (**SEO CH1**). Landscape features (**SEO L1**) would also be protected from development. Provision for public transport would decrease the dependency on car based transport (**SEO C2**), thus decreasing car based emissions and improving air quality (**SEO HH1 C1**). This scenario will promote the sustainable use of brownfield lands or lands already zoned by consolidating the settlement edges (**SEO S1**).

## **7.4 Summary of Evaluation: the Alternative Scenario for the Draft Plan**

Each of the Alternative Scenarios were examined under the Strategic Environmental Objectives.

Scenario 1, (the implementation of the 2003 plan), results in significant uncertain interactions with the SEO's in the long-term, many of which can be mitigated, but some such as the impact on landscape character and on the burgage plots which are unlikely to be mitigated.

Scenario 2 would result in a range of environmental conflicts including biodiversity, water quality, landscape character and climate change (an increase in the number of unsustainable traffic patterns with a decrease in public transport journeys giving rise to the production of greenhouse gases).

Scenario 3 is more likely to bring about better environmental outcomes because of its ability to protect the historical heritage of the area and integrate it into the biodiversity networks and SUDs provision in the plan lands, as well as providing for increased connectivity and permeability thereby improving the surrounding environment.

The Proposed Local Area Plan option that has emerged from the Plan preparation process has a close correlation to Scenario 3.

# Section 8- Detailed Assessment of Draft Plan Policies

## 8.1 Methodology

This section evaluates Ballycullen Oldcourt Draft Local Area Plan aims, policies and objectives. Strategic Environmental Objectives (SEOs) are used as outlined under Section 4 in order to evaluate the relevant measures of the Draft Plan. Use has been made of the environmental baseline descriptions and the maps of the individual components for this purpose.

The interactions between the SEOs and the policies and objectives of the Plan determine the effects of implementing the Plan. These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects. The assessment response is given in terms of the impact on the Strategic Environmental Objectives, where appropriate, as used in the Environmental Report and is colour coded, as below, to signify the type of impact (**Blue** indicates indirect or cumulative impacts).

The table below brings together all the SEOs which have been developed from international, national and regional policies which generally govern environmental protection objectives.

### Note on uncertainty:

With regard to policies and objectives evaluated as having an uncertain interaction with the status of SEOs, the interaction, and environmental impacts, if any, which the implementation of these Plan measures would have would be determined by the nature and extent of development arising from these Plan measures, and site specific environmental factors. These impacts may be further assessed, as part of an EIA of a particular project and/or by the development management process.

Avoidance of conflict is dependent upon the development management process only granting permission for individual projects arising from these measures which do not conflict with the status of SEOs. Providing other Plan measures, including the measures recommended by this report, and measures arising out of lower tier assessments are complied with, conflicts with SEOs would be likely to be avoided.

Likely to Improve status of SEOs	<b>Probable Conflict</b> with status of SEOs- Unlikely to be mitigated	<b>Potential Conflict</b> with status of SEOs- likely to be mitigated	<b>Uncertain</b> interaction with status of SEOs
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<b>SEO Code</b>	<b>Strategic Environmental Objective</b>
<b>B1</b>	To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites
<b>B2</b>	To avoid significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites
<b>B3</b>	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
<b>HH1</b>	To protect human health from hazards or nuisances arising from traffic and incompatible landuses
<b>S1</b>	To maximise the sustainable re-use of brownfield lands and the existing built environment
<b>W1</b>	To maintain and improve, where possible, the quality of the River <u>Dodder</u> , its tributaries and surface water
<b>W2</b>	To prevent pollution and contamination of ground water
<b>W3</b>	To prevent development on lands which pose - or are likely to pose in the future – a significant flood risk
<b>C1</b>	To minimise increases in travel related greenhouse emissions to air
<b>C2</b>	To reduce car dependency within the County by way of, inter alia, encouraging modal change from car to more sustainable forms of public transport and encouraging development which will not be dependent on private transport
<b>M1</b>	To serve new development under the LAP with appropriate waste water treatment
<b>M2</b>	To maintain and improve the quality of drinking water supplies
<b>CH1</b>	To protect the archaeological heritage of South Dublin with regard to entries to the Record of Monuments and Places - including the Ballycullen Oldcourt Zone of Archaeological Potential - and the context of the above within the surrounding landscape where relevant
<b>CH2</b>	To preserve and protect the special interest and character of South Dublin's architectural heritage with regard to entries to the Record of Protected Structures, Architectural Conservation Areas, and their context within the surrounding landscape where relevant
<b>L1</b>	To protect and avoid significant adverse impacts on the landscape, landscape features and designated scenic routes; especially with regard to areas of high amenity of the Dublin Mountain Area

## 8.2 Assessment of Plan Objectives and Policies

### 8.2.1 Assessment of Plan Objectives (SEOs)<sup>36</sup>

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs- Unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	Uncertain interaction with status of SEOs	Neutral Interaction with status of SEOs	No Likely interaction with status of SEOs
<p><b><u>Plan Objectives of the Proposed Ballycullen Oldcourt Local Area Plan</u></b></p> <p>The broad plan objectives are as follows:</p> <ul style="list-style-type: none"> <li>• Take cognisance of the area's unique amenity and location adjacent to rural lands at the foothills of the Dublin Mountains and protect the amenities of existing dwellings;</li> <li>• Sensitively integrate new development and existing development with each other and the surrounding rural and mountain context through green infrastructure, urban and street design, sustainable urban drainage features and pedestrian and cyclist routes;</li> <li>• Provide a Green Infrastructure Framework that will integrate natural and built heritage features, water management, access and open space and recreation;</li> <li>• Provide for a network and hierarchy of linked public open spaces with varying roles and facilities that provide for passive and active recreation and the sustainable drainage of water;</li> <li>• Create a series of neighbourhoods/districts that are linked by local and link streets and reinforce Stocking Avenue and</li> </ul>	<p><b>L1, B3</b></p> <p><b>L1,W3 C1C2HH1</b></p> <p><b>B3 CH1 CH2 W3 C1C1HH1</b></p> <p><b>C1C2HH1 W3</b></p> <p><b>C1C2HH1</b></p>		<p><b>B3W1W2</b></p>			

<sup>36</sup> Strategic Environmental Objectives (SEOs) are methodological measures which are developed from international, national and regional policies which generally govern environmental protection objectives and against which the environmental effects of the Draft Plan can be tested. The SEOs are used as standards against which the provisions of the Draft Plan can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, if unmitigated against.

<p>Oldcourt Road as arterial routes for activity, local shopping and public transport;</p> <ul style="list-style-type: none"> <li>• Sensitively transition densities and building heights in a manner that limits the impact of any new development on the setting of the Dublin Mountains and countryside;</li> <li>• Provide a network of walking and cycling routes that further link neighbourhoods/districts with each other, public transport stops and local shopping while providing routes towards the Dublin Mountains;</li> <li>• Promote high quality and universal design for streets, spaces and buildings that responds to the different character areas and settings within and along the Ballycullen – Oldcourt Fringe;</li> <li>• Incorporate appropriate green infrastructure features that limits the impact of noise from the M50 on any future development;</li> <li>• Provide for life time housing and a choice of dwelling types and sizes that cater for varying age groups.</li> <li>• Ensure that development is phased in a manner that provides for the required community, school and parkland facilities either prior to or in tandem with development.</li> </ul>	<p><b>C1C2HH1</b></p> <p><b>B3,HH1</b></p> <p><b>C1C2HH1</b></p>		<p><b>L1</b></p> <p><b>L1</b></p>			

### 8.2.2 Assessment of Accessibility and Movement Policies

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs- Unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	Uncertain interaction with status of SEOs	Neutral Interaction with status of SEOs	No Likely interaction with status of SEOs
<p><b>Objective AM1</b> All development proposals that include routes for vehicular movement or sections of such routes for movement, regardless of extent, shall largely comply with the street network strategy illustrated in Figure 5.1. Link (Primary and Secondary) and Local (Tertiary) streets shall follow the contours of the land in a concentric fashion in order to minimise the impact on the landscape and on natural drainage. <b>(Objective AM1)</b></p>			<b>L1W3</b>			
<p><b>Objective AM2</b> Development shall help create and link with a curvilinear layout of streets All development shall avail of every possibility to link and provide routes into the planned street network and provide a choice of multi-directional connections to existing and planned local facilities and services. <b>(Objective AM2)</b></p>	<b>C1C2HH1</b>					
<p><b>Objective AM3</b> All development proposals that include routes for vehicular movement or sections of such routes for movement, regardless of extent, shall implement and adhere to the street hierarchy and functions detailed in Table 5.1 and the requirements of the <i>Design Manual for Urban Roads and Streets (DMURS)</i>. <b>(Objective AM3)</b></p>	<b>C1C2HH1</b>					

<p><b>Objective AM4</b> Development proposals shall offer choices of connected routes for pedestrian, cyclist and motor vehicles and help to dissipate traffic throughout the Plan Lands especially vehicular traffic. <b>(Objective AM4)</b></p>	<p><b>C1C2HH1</b></p>					
<p><b>Objective AM5</b> All neighbourhoods shall be afforded direct and convenient vehicular, pedestrian and cyclist access to Primary or Secondary Link Streets. Local Streets shall be safe, barrier free, overlooked by development and shall have a design speed of 30kph. <b>(Objective AM5)</b></p>	<p><b>C1C2HH1</b></p>					
<p><b>Objective AM6</b> An open network of streets that provides full permeability for all users shall be implemented in the more compact areas of the Plan Lands (Lower and Mid Slope Lands) while a filtered permeability network of streets that provides good permeability for vehicles and full permeability for pedestrians and cyclists shall be implemented in the less compact areas (Upper Slope Lands). <b>(Objective AM6)</b></p>	<p><b>C1C2HH1</b></p>					
<p><b>Objective AM7</b> Streets shall be designed using a more integrated approach to pedestrian, cycle, vehicular movement in accordance with the requirements of the <i>DMURS</i> and the principles of universal design to include for people of all ages and abilities. Sufficient provision shall be provided for pedestrian and cyclist movement on both sides of each street (with the exception of</p>	<p><b>C1C2HH1</b></p>					

shared surface streets) with reduced carriageway widths for vehicles. <b>(Objective AM7)</b>						
<b>Objective AM8</b> Local (tertiary) Streets shall be designed for speeds conducive to shared pedestrian, cycle and vehicular movement. <b>(Objective AM8)</b>	<b>HH1</b>					
<b>Objective AM9</b> Cycling and walking shall be encouraged within and through the Plan Lands by creating a connected network of safe and accessible pedestrian and cycle routes that serve all streets and spaces including existing streets. All neighbourhood blocks shall be afforded direct pedestrian and cyclist access to Primary or Secondary Link Streets Link Streets and direct or indirect routes to community facilities especially parks, open spaces, local shopping facilities and public transport. There shall be no barriers to pedestrian or cyclist movement between housing developments including between new and existing developments and no barriers shall be erected along streets with limited exception for garden boundaries. <b>(Objective AM9)</b>	<b>C1C2HH1</b>					
<b>Objective AM10</b> Junctions shall be designed to provide for safe and convenient pedestrian and cyclist movement in accordance with the <i>DMURS</i> . Roundabout junctions are actively discouraged. Existing roundabout junctions along Stocking Avenue shall also be upgraded to four arm junctions in line with those illustrated for upgrade on the Indicative Layout for the Plan Lands (see Section 6). The upgraded junctions should be carried out as	<b>HH1</b>					

part of adjoining development and shall include for pedestrian and cyclist crossings. <b>(Objective AM10)</b>						
<b>Objective AM11</b> All commercial, community and school development shall include for bicycle parking facilities designed in accordance with the recommendations set out in the <i>National Cycle Manual</i> (2011) and Standards and Design Criteria section of this LAP. <b>(Objective AM11)</b>	<b>C1C2HH1</b>					
<b>Objective AM12</b> Planning applications for residential, commercial and employment development shall provide for or integrate with direct, safe and attractive pedestrian and cycle routes to existing and planned public transport stops and termini. <b>(Objective AM12)</b>	<b>C1C2HH1</b>					
<b>Objective AM13</b> No barriers shall be erected along Link Streets and existing barriers adjacent to new development especially railings along Oldcourt Road and Stocking Avenue shall be removed for improved street frontage and access. This should be carried out as part of any development that bounds or is located adjacent to the aforementioned streets. <b>(Objective AM13)</b>	<b>C1C2HH1</b>					
<b>Objective AM14</b> To offer choices of routes and help to dissipate vehicular traffic throughout the Plan Lands by providing for multiple vehicular routes and connections in the form of Secondary Link Streets and Local Streets between neighbourhood blocks and local	<b>C1C2HH1</b>					

<p>facilities including shopping, public transport and parks. <b>(Objective AM14)</b></p>						
<p><b>Objective AM15</b> To design streets for slow vehicular speeds from the outset with street designs that accord with the <i>DMURS</i> and incorporate a combination of measures including, closer proximity of buildings, narrow carriageways, frequent crossing points, reduced visibility splays, on-street parking, tighter corner radii, shared surfaces and horizontal and vertical elements such as low traffic tables at junctions and pinch points. This will include a design speed of 30 – 40 kilometres per hour for Link Streets and 10 - 30 kilometres per hour for Local Streets. <b>(Objective AM15)</b></p>	<p><b>C1C2HH1</b></p>					
<p><b>Objective AM16</b> Assess all interfaces between proposed developments, existing housing and undeveloped lands at planning application stage and ensure that all proposed development connects and integrates with the existing and planned network of streets and spaces. All developments shall seek to create permeable layouts and encourage surveillance of streets and spaces. <b>(Objective AM16)</b></p>	<p><b>C1C2HH1</b></p>					
<p><b>Objective AM17</b> Create open ended routes through existing and new development in a manner that ensures greater permeability and convenient pedestrian and cycle access to community facilities, schools, open spaces, local shopping, or public transport stops for future and existing residents. <b>(Objective AM17)</b></p>	<p><b>C1C2HH1</b></p>					

<p><b>Objective AM18</b>  Upgrade existing cul-de-sacs to provide for, at a minimum, pedestrian and cyclist access. Temporary cul-de-sacs shall only be permissible between occupied housing and adjacent construction works and shall exclude turning circles, hammerhead junctions and masonry walls. The temporary nature of any such cul-de-sacs should be clearly annotated and illustrated on planning application drawings. <b>(Objective AM18)</b></p>	<p><b>C1C2HH1</b></p>					

### 8.2.3 Assessment of Green Infrastructure Strategy and Policies

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs- Unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	Uncertain interaction with status of SEOs	Neutral Interaction with status of SEOs	No Likely interaction with status of SEOs
<p>The main features of the Green Infrastructure Strategy include:</p> <ol style="list-style-type: none"> <li>1. Protecting and augmenting existing streams and field boundaries including hedgerows as natural swales for incorporation into of a Sustainable Urban Drainage Systems (SUDS) that will collect and direct run-off from the Dublin Mountains and deposit such into surface water attenuation areas prior to slow release from the Plan Lands.</li> <li>2. Implementing a hierarchy of green spaces that will permeate the Plan Lands with spaces that will serve a variety of roles and functions.</li> <li>3. Route Sustainable Urban Drainage Systems (SUDS) through green corridors and parks that will also accommodate networks of biodiversity corridors, hedgerows, streams, and surface water attenuation areas.</li> <li>4. Creating landscaped buffers between the Dublin Mountains and the M50 to create a clear separation between the suburbs and countryside and to mitigate against noise..</li> <li>5. Incorporating old and established paths into a comprehensive network of tracks and trails that will permeate and knit together the Plan Lands.</li> <li>6. Requiring the design and arrangement of development to respond and flow with the contours of the Land rather than against them.</li> </ol>	<p><b>W3B3</b></p> <p><b>W3B3</b></p> <p><b>L1B3W3</b></p> <p><b>B3HH1</b></p> <p><b>C1C2HH1</b></p> <p><b>L1</b></p>					

<p><b>Objective GI1</b> To promote the sustainable collection and on-site retention of surface water for delayed discharge to the local water system and for use as an on-site resource and as a means of creating a biodiversity network that will retain and develop existing flora and fauna. <b>(Objective GI1)</b></p>	<b>W1-W3,B3</b>					
<p><b>Objective GI2</b> That a linked SUDS network shall be implemented fully across the Plan Lands in accordance with national and regional SUDS requirements including the Greater Dublin Strategic Drainage Study Initiative. All proposed developments shall contribute to the achievement of this integrated network in order to reduce surface water run-off and to minimise the risk of flooding of the Plan Lands and surrounding lands. This shall include for a series of attenuation and wetland areas (ponds, basis and reedbeds) in parklands that will collect surface water from the developed SUDS network. <b>(Objective GI2)</b></p>	<b>W3,</b>			<b>B3</b>		
<p><b>Objective GI3</b> That existing natural streams and drainage ditches shall be retained and augmented with grassed swales to form an integral conveyance system as part of the overall SUDS network. <b>(Objective GI3)</b></p>	<b>W3</b>					
<p><b>Objective GI4</b> That SUDS elements such as swales, ponds, basins and reedbeds and other major SUDS features are planted with suitable riparian vegetation and water tolerant tree planting</p>	<b>B3</b>					

that will clean and attenuate surface water flow. <b>(Objective GI4)</b>						
<b>Objective GI5</b> That all newly created swales utilised within the SUDS network shall be of an appropriate (shallow and wide) dimension to allow for ease of maintenance, including mowing, and shall be designed in the interest of health and safety where practical. <b>(Objective GI5)</b>	<b>HH1</b>					
<b>Objective GI6</b> All individual developments and associated infrastructure including streets and spaces shall incorporate on-site SUDS technologies detailed in the Standards Section (Section 7) of this Local Area Plan. Features such as porous paviers, green roofs, rainwater recycling systems and soakaways should be linked into the overall SUDS network. <b>(Objective GI6)</b>	<b>W3</b>		<b>B3</b>			
<b>Objective GI7</b> All planning applications for development in areas at risk of flooding shall be accompanied by a Flood Risk Assessment carried out at the site-specific level in accordance with <i>The Planning System and Flood Risk Management – Guidelines for Planning Authorities</i> (2009). The scope of flood risk assessment shall depend on the type and scale of development and the sensitivity of the area. <b>(Objective GI7)</b>	<b>W3</b>					
<b>Objective GI8</b> Development proposals in the vicinity high and extreme groundwater vulnerability areas shall be accompanied by	<b>W2</b>					

sufficient details to protect groundwater sources from pollution during construction and development phases. These details shall be in accordance with the requirements of the <i>South Dublin Groundwater Protective Scheme</i> (Geological Survey of Ireland, 2011). ( <b>Objective GI8</b> )						
<b>Objective GI9</b> Ensure that all extensive development proposals maximise the opportunities for enhancement of existing biodiversity and are accompanied by a full ecological assessment, carried out by a suitably qualified professional, that includes measures to enhance biodiversity and avoid or minimise loss of biodiversity. ( <b>Objective GI9</b> )	<b>B2,B3</b>					
<b>Objective GI10</b> Ensure that developments incorporate biodiversity corridors and heritage features within their designs and layouts. ( <b>Objective GI10</b> )	<b>B2,B3</b>					
<b>Objective GI11</b> Create an integrated network of green corridors and wetland areas (a minimum of 15 metres wide) by way of linking, preserving and incorporating hedgerows (especially townland and parish boundaries), wildlife corridors, SUDS features and existing streams. ( <b>Objective GI11</b> )	<b>B2,B3,CH1,W1-W3</b>					
<b>Objective GI12</b> Protect and enhance historic field, townland and parish delineations including their associated hedgerows and ditches and require all relevant planning applications to detail how	<b>CH1,B3</b>					

such delineations will be enhanced, reinstated or incorporated. <b>(Objective GI12)</b>						
<b>Objective GI13</b> Require green routes and biodiversity strips to be carefully designed to balance the protection of biodiversity together with the conveyance of water and accommodation of walking and cycling routes. <b>(Objective GI13)</b>				<b>W3B3</b>		
<b>Objective GI14</b> Allow for limited sections of field boundaries to be carefully altered where a need has been clearly demonstrated on the basis of a requirement for accessibility in terms of pedestrian and cyclist movement and the creation of successful streets and spaces. <b>(Objective GI14)</b>	<b>C1C2HH1</b>		<b>B3</b>			
<b>Objective GI15</b> Prohibit the culverting of watercourses and require structures adjacent to watercourses to be set back a minimum distance of 10 metres from the top of the bank. These corridors shall be landscaped to aid in the absorption of storm water flows and should also accommodate tracks and trails where possible. <b>(Objective GI15)</b>	<b>B2,B3,W1,W3</b>					
<b>Objective GI16</b> Buildings, streets and spaces should be designed and arranged to respond and flow with the area's contours and natural drainage features. <b>(Objective GI16)</b>			<b>L1W3</b>			

<p><b>Objective GI17</b> All development including streets, buildings and spaces shall be laid out to comply with South Dublin County Council Development Plan policy on Steep Sites and shall be designed to circumvent the need for intrusive engineered solutions such as cut and filled platforms, embankments or retaining walls. <b>(Objective GI17)</b></p>			<b>L1</b>			
<p><b>Objective GI18</b> Proposals for development on steep sites shall gently ascend the contours of the Plan Lands with unique design solutions such as split-level housing where multiple storey housing is permissible. <b>(Objective GI18)</b></p>			<b>L1</b>			
<p><b>Objective GI19</b> Require the submission of habitat assessments to include flora and fauna studies (to include large mammal and bat surveys) as part of every relevant planning application for development and require the implementation of appropriate measures that ensure for the protection of protected species and their habitats. <b>(Objective GI19)</b></p>	<b>B3</b>					
<p><b>Objective GI20</b> Habitats and species identified as having a high or moderate local value shall be protected, retained, incorporated and provided for within developments. <b>(Objective GI20)</b></p>	<b>B3</b>					

<p><b>Objective GI21</b> Applications for development shall identify historic paths and seek to upgrade and integrate such into a permeable network of tracks and trails for pedestrians and cyclists. <b>(Objective GI21)</b></p>	<p><b>CH1,C1C2HH1</b></p>					
<p><b>Objective G22</b> Upgraded and new tracks and trails should correspond with ditches, streams, surface water attenuation areas and aid in the creation of a permeable network of linked open spaces including green corridors, green buffers, neighbourhood parks, wetland areas and playing pitches. <b>(Objective GI22)</b></p>	<p><b>W3 C1C2HH1 B3</b></p>					
<p><b>Objective GI23</b> The tracks and trails network shall be developed to link with the Dublin Mountains and existing routes towards local historic landmarks and structures including the Hell Fire Club, Saint Colmcille's Well and Carthy's Castle. <b>(Objective GI23)</b></p>	<p><b>CH2,C1C2HH1</b></p>					
<p><b>Objective GI24</b> Applications for development should clearly annotate and mark proposed tracks and trails and links to adjacent and surrounding lands. Conditions shall be attached to planning applications to clearly state that links to surrounding and adjoining lands shall be kept open and free from development (including barriers) and shall form part of a strategic network of pedestrian and cycle routes. <b>(Objective GI24)</b></p>	<p><b>C1C2HH1</b></p>					

<p><b>Objective GI25</b> Upstanding archeologically remains and local historic features such as double ditch paths, gate pillars, stone walls and stone culverts shall be protected, preserved, or enhanced by development and incorporated into streets or open spaces. <b>(Objective GI25)</b></p>	<p><b>CH1</b></p>					
<p><b>Objective GI26</b> Where significant archeologically features/deposits are discovered during archaeological investigations, it shall be a priority to provide for in-situ preservation especially features/deposits discovered during construction or investigation on lands to be occupied by planned open space(s). <b>(Objective GI26)</b></p>			<p><b>CH1</b></p>			
<p><b>Objective GI27</b> Development on lands that benefit from existing and potential views of local upstanding monuments and protected structures including the Hellfire Club, Cathy’s Castle, Orlagh College and Woodtown Manor shall incorporate and enhance the views of such structures in the form of street vistas and panoramic views across open spaces. <b>(Objective GI27)</b></p>			<p><b>L1,CH2</b></p>			
<p><b>Objective GI28</b> Development along and near the southern boundary of the Plan Lands shall include for a continuous and linked green buffer to the Dublin Mountains. This buffer shall include for the planting of woodlands where the buffer widens and the preservation and integration of existing hedgerows and streams. Narrowed areas of this buffer shall be no less than 15</p>			<p><b>B3W1</b></p>			

metres in width. ( <b>Objective GI28</b> )						
<p><b>Objective GI29</b>  Development along and near the boundary with the M50 motorway shall include a green corridor and wetland area that will mitigate against noise through the planting of semi-mature trees and incorporation of soft landscaped mounding/berms. Narrowed areas of this buffer shall be no less than 20 metres in width. All planning applications for development in close proximity to the M50 should be accompanied by a report, prepared by a qualified person, detailing mitigating measures for noise. (<b>Objective GI29</b>)</p>			<b>B3,HH1</b>			
<p><b>Objective GI30</b>  All residential development shall contribute to the creation of the planned network and hierarchy of open spaces. (<b>Objective GI30</b>)</p>						
No impact on SEOs						
<p><b>Objective GI31</b>  Public open space shall be provided at a <u>minimum</u> rate of 14% of development sites. Only open spaces that fall within the hierarchy of spaces and functions detailed in Table 5.2 below shall be included in the calculation of public open space. This may include for green buffers, green corridors and wetland areas but excludes those located below overhead electrical transmission lines. (<b>Objective GI31</b>)</p>	<b>B3W1W3</b>					

<p><b>(Objective GI32)</b> Neighbourhood Parks shall be designed to operate as passive and active amenity spaces with extensive SUDS attenuating and storage features (ponds, basins, reed beds etc) linked to an overall SUDS network that will also act as landscape features. <b>(Objective GI32)</b></p>	<p><b>B3W1W3</b></p>					
<p><b>Objective GI33</b> Residual, narrow and incidental areas of open space with no role or function shall not be included in the calculation of open space provision. <b>(Objective GI33)</b></p>						
<p>No impact on SEOs</p>						
<p><b>Objective GI34</b> Play facilities shall be provided at a rate of 3 sq.m per dwelling and in accordance with <i>Planning Guidance on Provision of Children's Play Facilities in New Developments</i> (2007) and the Standards section of this LAP (Section 7). <b>(Objective GI34)</b></p>	<p><b>C1C2HH1</b></p>					

**8.2.4 Assessment of Land Use and Density Policies**

	Likely to <b>Improve</b> status of SEOs	Probable <b>Conflict</b> with status of SEOs- Unlikely to be mitigated	Potential <b>Conflict</b> with status of SEOs- likely to be mitigated	<b>Uncertain</b> interaction with status of SEOs	<b>Neutral</b> Interaction with status of SEOs	<b>No Likely</b> interaction with status of SEOs
<p><b>Objective LUD1</b> The density of development shall generally accord with that indicated under Table 5.2 and Figure 5.3 of this Local Area Plan. The extent and density of development indicated for Options A and B on Figure 5.3 shall only be permissible where development is generally carried out in accordance with this LAP and, in the case of Option A, existing 220kV overhead electrical transmission lines are rerouted to coincide with the wayleaves of existing watermains. <b>(Objective LUD1)</b></p>				<b>B3,L1 W1- W3</b>		
<p><b>Objective LUD2</b> The density of development on sites that are subject to extant permissions should be amended in accordance with this Local Area Plan. Extensions of duration of permission should only be granted where development granted prior to the adoption of this Plan accords with this Local Area Plan’s Density Strategy. <b>(Objective LUD2)</b></p>				<b>B3,L1 W1- W3</b>		
<p><b>Objective LUD3</b> Actively discourage the construction of further apartment and duplex units across the Plan Lands. The mix of dwelling types on sites that are subject to extant permissions should be amended accordingly where possible. Extensions of duration of permission should only be granted where development granted</p>				<b>B3,L1 W1- W3</b>		

prior to the adoption of this Plan accords with the restriction on apartments and duplexes. <b>(Objective LUD3)</b>						
<b>Objective LUD4</b> Ensure that at least 90% of dwellings in any residential scheme have two or more bedrooms. <b>(Objective LUD4)</b>						
No impact on SEOs						
<b>Objective LUD5</b> Encourage a mix of house types and quality designs that will help aid legibility and way-finding. <b>(Objective LUD5)</b>						
No impact on SEOs						
<b>Objective LUD6</b> Residential development within the Lower Slope Lands shall consist of medium density (32 - 38 dwellings per Ha.) terraced and semi-detached housing. New development adjacent to existing housing shall be designed sensitively to protect existing residential amenity. <b>(Objective LUD6)</b>						
No impact on SEOs						
<b>Objective LUD7</b> Residential development within the Mid Slope Lands shall consist of lower density (22 - 28 dwellings per Ha.) development comprising semi-detached and terraced housing of no more than 2 storeys. Additional split level floors may be acceptable where they are justified on the basis of topography, are sensitively incorporated into the slope of the lands and do not increase the height of dwellings to more than 2 storeys from street level and by no more than 3 storeys from the side and rear. <b>(Objective LUD7)</b>						
			<b>L1</b>			

<p><b>Objective LUD8</b> Residential development within the Upper Slope Lands shall consist of low density (12 - 18 dwellings per Ha.) units comprising single storey detached and semi-detached housing. Additional split level floors may be acceptable where they are justified on the basis of topography, are sensitively incorporated into the slope of the lands and do not increase the height of dwellings to more than 1 storey from street level and by no more than 2 storeys from the side and rear. Dormer window structures shall only be permissible for single storey dwellings and must be within the structure of the main roof, below its ridge level and above its eaves line (at least approx. 3 tile courses). Densities adjacent to the green buffer along the southern fringe should be provided at the lower end of the scale (approx. 15 dwellings per hectares). <b>(Objective LUD8)</b></p>			<p><b>L1</b></p>			
<p><b>Objective LUD9</b> All residential development shall provide community floorspace at a rate of 3 sq.m per 10 dwellings (excluding childcare floorspace). Such floorspace shall be grouped in community facilities and shall be located close to or within local shopping facilities/centres within the Plan Lands. <b>(Objective LUD9)</b></p>	<p><b>C1C2HH1</b></p>					
<p>No impact on SEOs</p>						
<p><b>Objective LUD10</b> The primary locations for community floorspace shall include the Discount Foodstore site zoned Objective 'LC' on the western side of the Plan Lands and the site of the previously permitted Neighbourhood/Community Centre (Reg. Ref. SD05A/1014) on the eastern side (see Section 6 of this Local Area Plan). <b>(Objective LUD10)</b></p>						

No impact on SEOs						
<p><b>Objective LUD11</b>  All service and retail developments shall comply with the <i>Retail Planning Guidelines for Planning Authorities</i> (2012) and the accompanying <i>Retail Design Manual</i> (2012) particularly in terms of scale, location and design. Such development shall comply with the Design Manual's Key Principles on Urban Design and the standards set out in set in Section 7 of this LAP. <b>(Objective LUD11)</b></p>						
No impact on SEOs						
<p><b>Objective LUD12</b>  Planning applications for 100 or more dwellings shall be accompanied by a report identifying the demand for school places likely to be generated by the proposal and the capacity of schools in the vicinity to cater for such demand. <b>(Objective LUD12)</b></p>						
No impact on SEOs						
<p><b>Objective LUD13</b>  Each of the two designated primary school sites shall measure at least 1.2 hectares and shall be set aside for the development of a primary school. <b>(Objective LUD13)</b></p>						
No impact on SEOs						
<p><b>Objective LUD14</b>  All school and childcare development on the Plan Lands shall include for safe queuing and drop-off facilities for vehicles, which should be located to the side of buildings to allow for good street frontage. <b>(Objective LUD14)</b></p>						
No impact on SEOs						

**8.2.5 Assessment of Built Form & Design Policies**

	Likely to <b>Improve</b> status of SEOs	Probable <b>Conflict</b> with status of SEOs- Unlikely to be mitigated	Potential <b>Conflict</b> with status of SEOs- likely to be mitigated	<b>Uncertain</b> interaction with status of SEOs	<b>Neutral</b> Interaction with status of SEOs	<b>No Likely</b> interaction with status of SEOs
<p><b>Objective BF1</b> Development shall be arranged into a series of perimeter blocks that presents building frontages to surrounding streets especially at street corners with rear gardens enclosed within each residential block to the rear and parking/service areas enclosed to the side and/or rear of commercial, community and school developments. Rear gardens, blank facades and service areas shall not interface with any streets or spaces. <b>(Objective BF1)</b></p>						
No impact on SEOs						
<p><b>Objective BF2</b> Block lengths within the Lower Slope Lands should be no more than 80 metres. Plot widths for dwellings in this area should vary between 5 metres and 9 metres and dwellings depths should be no more than 10 metres. <b>(Objective BF2)</b></p>						
No impact on SEOs						
<p><b>Objective BF3</b> Block lengths within the Mid Slope Lands should be no more than 100 metres and no more than 120 metres within the Upper Slope Lands. <b>(Objective BF3)</b></p>						
No impact on SEOs						

<p><b>Objective BF4</b> For commercial/local shopping developments, building depths should be no more than 20 metres and plots that are wider than 9 metres shall be vertically articulated with multiple entrances, good shopfront design and division. Perimeter shop units should be arranged to avoid long monotonous street frontages. <b>(Objective BF4)</b></p>					
No impact on SEOs					
<p><b>Objective BF5</b> All development including streets, buildings and spaces shall be laid out to comply with South Dublin County Council Development Plan policy on Steep Sites and shall be designed to circumvent the need for retaining walls and significant alterations to topography such as the cutting and filling of platforms in the landscape. <b>(Objective BF5)</b></p>			<p><b>L1</b> <b>C1C2HH1</b></p>		
<p>In the past, the use of cut and fill methods resulted in major barriers being created for the movement of pedestrians and cyclists. The reduction of these barriers and their replacement with well designed open ended streets and pathways will encourage walking and cycling throughout the area, thereby reducing car usage and encouraging modal shift away from the motor vehicle.</p>					
<p><b>Objective BF6</b> Residential development within the Lower Slope Lands and all community, retail and school development shall present strong building frontages located close to street edges with a fine urban grain and on-street parking. Dwellings within the Mid Slope lands shall have a mixture of strong and set-back built frontages with on-street and in-curtilage parking. Dwellings on the Upper Slopes shall have softer frontages set back from the street edge behind planted front gardens that incorporate in-curtilage parking. <b>(Objective BF6)</b></p>				<p><b>L1</b></p>	
<p><b>Objective BF7</b> Views of the Dublin Mountains (including Montpelier Hill and the Bohernabreena Valley) and historic buildings and</p>			<p><b>L1CH2</b></p>		

<p>monuments (including the Hell Fire Club, Carthy's Castle, Orlagh College and Woodtown Manor) shall be enhanced and preserved by development as much as possible. This should be achieved through the carefully considered and sensitive arrangement of streets, spaces and buildings in a manner that preserves and creates vistas and views of these landmark and landscape elements. <b>(Objective BF7)</b></p>						
<p><b>Objective BF8</b> Development shall be no more than one storey in height at street level on the Upper Slope Lands, no more than two storeys in height at street level on the Mid Slope Lands and no more than three storeys in height on the Lower Slope Lands. New dwellings backing onto or adjacent to existing single storey dwellings should be no more than two storeys in height. <b>(Objective BF8)</b></p>			<p><b>L1</b></p>			
<p><b>Objective BF9</b> A variety of dwelling designs shall be incorporated throughout the Plan Lands and particularly within individual developments of more than 5 dwellings subject to the use of a limited palette of materials. Dwellings on corners shall be designed to overlook and address streets and spaces. <b>(Objective BF9)</b></p>						
<p>No impact on SEOs</p>						
<p><b>Objective BF10</b> All streets are designed in accordance with the street hierarchy and design speeds set out in the Accessibility and Movement Strategy of this Plan together with the street design requirements set out in the <i>DMURS</i> including those that relate to movement, place and speed; streetscape; pedestrian and cyclist environment; and carriageway conditions. <b>(Objective</b></p>	<p><b>C1C2HH1</b></p>					

<b>BF10)</b>						
<b>Objective BF11</b> The width of vehicular carriageways and footpaths shall comply with Table 5.3 above and shall relate to the appropriate design speed, user needs, context and function of each street. ( <b>Objective BF11</b> )	<b>C1C2HH1</b>					
<b>Objective BF12</b> Wide pedestrian paths and crossings together with carefully considered cycle lanes/tracks shall be integrated into the design of all streets with the exception of fully integrated shared surface streets. Vehicular crossovers shall be designed to clearly indicate that pedestrians and cyclists have priority over vehicles. ( <b>Objective BF12</b> )	<b>C1C2HH1</b>					
<b>Objective BF13</b> Transition zones and gateways shall also be utilised to slow vehicles entering the Plan Lands from rural roads including at the western end of the planned Primary Link Road with the Bohernabreena Road. These transition zones and gateways should include for narrowed carriageways, enclosure with street trees and changes to carriageway surface materials. ( <b>Objective BF13</b> )	<b>C1C2HH1</b>					
<b>Objective BF14</b> All development should comply with <i>Quality Housing for Sustainable Communities</i> (2007) and <i>Sustainable Residential Development in Urban Areas</i> (2009) with regards to			<b>C1</b>			

sustainability, energy efficiency and orientation of development. ( <b>Objective BF14</b> )						
<p><b>Objective BF15</b>  New housing schemes should be designed in accordance with passive solar design principles as set out under the <i>Urban Design Manual</i> (2009) and the Standards Section of this LAP (Section 7). The orientation of dwellings and internal layouts should therefore be arranged to maximise solar gain but in a balanced manner that does not significantly impact on the topography of the Plan Lands, conflict with Sustainable Urban Drainage Systems or significantly impinge on the successful creation of streetscapes in terms of good street frontage and passive surveillance. (<b>Objective BF15</b>)</p>			<p><b>C1</b>  <b>B3</b>  <b>W3</b></p>			

### 8.2.6 Assessment of Site Specific Policy

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs- Unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	Uncertain interaction with status of SEOs	Neutral Interaction with status of SEOs	No Likely interaction with status of SEOs
<p><b>Objective SSP1</b> A primary school site of at least 1.2 hectares shall be reserved on the western side of the Stocking Wood development in accordance with that designated under the <i>South Dublin County Council Development Plan, 2010 - 2016</i>. (<b>Objective SSP1</b>)</p>	C1C2HH1					
<p><b>Objective SSP2</b> Green spaces and playing pitches development as part of the primary school shall link with and integrate with the open space and sustainable urban drainage network planned under the Green Infrastructure Strategy (Section 5.3). (<b>Objective SSP2</b>)</p>	B3, W3					
<p><b>Objective SSP3</b> The double ditch and associated open stream on the eastern side of the primary school site shall be protected and enhanced as part of any development. (<b>Objective SSP3</b>)</p>	B3W1W3					
<p><b>Objective SSP4</b> Surface water on the primary school site shall be intercepted by on-site SUDS features (i.e. green roofs, rainwater</p>	W3					

harvesters, soakaways and porous grass paviers for parking) and any run-off shall be discharged to the overall planned SUDS network. ( <b>Objective SSP4</b> )						
<b>Objective SSP5</b>						
Development of the primary school site shall address Stocking Avenue to the north with relatively strong and continuous built frontage. Staff parking and drop-off facilities shall be located to the side (west) and/or rear (south) of the main primary school building. ( <b>Objective SSP5</b> )						
No impact on SEO's						
<b>Objective SSP6</b>	<b>C1C2HH1</b>					
Pedestrian and cyclist access to any primary school development shall link with the pedestrian and cycle network planned under the Accessibility & Movement Strategy (Section 5.2) with access provided from Stocking Avenue and at least one more entrance along the western and/or southern sides of the primary school site. ( <b>Objective SSP6</b> )						
<b>Objective SSP7</b>						
In the interest of pedestrian and cyclist safety and movement, development of the school site shall include for the upgrade of the existing adjacent roundabout junction on Stocking Avenue to a four arm junction with pedestrian and cyclist crossing facilities. ( <b>Objective SSP7</b> )	<b>C1C2HH1</b>					
<b>Objective SSP8</b>						
Development of the Stocking Wood Lands (subject to planning permission SD05A/1014) shall include for a neighbourhood and community centre similar to that previously permitted. This	<b>C1C2HH1</b>					

shall provide for at least 310 sq.m of community floorspace (as part of the community floorspace requirement for the Plan Lands - see Section 5.4) and 800 sq.m of childcare floorspace. Convenience shopping floorspace shall not exceed 1,500 sq.m (gross). <b>(Objective SSP8)</b>						
<b>Objective SSP9</b> The Stocking Wood Neighbourhood and Community Centre shall include an element of street frontage and on-street parking including any necessary traffic calming features, which shall correspond with the requirements of the <i>DMURS</i> . <b>(Objective SSP9)</b>			<b>C1C2HH1</b>			
<b>Objective SSP10</b> Ditches and associated open streams that abut or traverse the site of the Neighbourhood and Community Centre shall be protected and enhanced. <b>(Objective SSP10)</b>	<b>B3W1W3</b>					
<b>Objective SSP11</b> Surface water on the Neighbourhood and Community Centre site shall be intercepted by on-site SUDS features (i.e. green roofs, rainwater harvesters, soakaways and porous grass paviers for parking) and any run-off shall be discharged to the planned overall SUDS network. <b>(Objective SSP11)</b>	<b>W1W3</b>					
<b>Objective SSP12</b> The Stocking Wood Neighbourhood Centre shall include for a bus lay-by or bay (designed in consultation with Dublin Bus) that will allow for the temporary parking of more than one bus at a time. <b>(Objective SSP12)</b>	<b>C1C2HH1</b>					

<p><b>Objective SSP13</b>  In the interest of pedestrian and cyclist safety and movement, development of the neighbourhood/community centre site shall include for the upgrade of the existing adjacent roundabout junction on Stocking Avenue to a four arm junction with pedestrian and cyclist crossing facilities. <b>(Objective SSP13)</b></p>	<p><b>C1C2HH1</b></p>					
<p><b>Objective SSP14</b>  No residential development shall be occupied on the lands that currently accommodate the existing GAA playing pitches, off Oldcourt Road, until such time as a site for replacement playing pitches have been set aside on the Plan Lands for taking in charge by South Dublin County Council or until such time as the replacement facilities have been provided. The 'Objective B' zoned lands to the south-east (between Gunny Hill and Oldcourt Lane) are designated under this LAP for such a facility, which should be shared with the adjacent designated school site. Playing facilities on these lands shall exclude floodlighting and include for the protection and augmentation of hedgerows. <b>(Objective SSP14)</b></p>	<p><b>C1C2HH1</b></p>					
<p><b>Objective SSP15</b>  A primary school site of at least 1.2 hectares shall also be reserved on the 'Objective B' zoned lands located within the Plan Lands between Gunny Hill and Oldcourt Lane. <b>(Objective SSP15)</b></p>	<p><b>C1C2HH1</b></p>					

<p><b>Objective SSP16</b>  Playing pitches and any open green spaces developed as part of the primary school site shall link with and integrate with the open space and sustainable urban drainage network detailed under the Green Infrastructure Strategy (Section 5.3).  <b>(Objective SSP16)</b></p>	<p><b>B3, W3</b></p>					
<p><b>Objective SSP17</b>  Surface water on the primary school site shall be intercepted by on-site SUDS features (i.e. green roofs, rainwater harvesters, soakaways and porous grass paviers for parking) and any run-off shall be discharged to the SUDS network envisaged for the Plan Lands. <b>(Objective SSP17)</b></p>	<p><b>W3</b></p>					
<p><b>Objective SSP18</b>  Pedestrian and cyclist access to any primary school development shall link with the pedestrian and cycle network detailed under the Accessibility &amp; Movement Strategy (Section 5.2) <b>(Objective SSP18)</b></p>	<p><b>C1C2HH1</b></p>					
<p><b>Objective SSP19</b>  The triangular field and its hedgerow boundaries located at the south-west corner of the planned Gunny Hill Park shall be retained as a buffer between the Oldcourt Lane and the planned sports pitches and school as a biodiversity feature. <b>(Objective SSP19)</b></p>	<p><b>B3, L1</b></p>					
<p><b>Objective SSP20</b>The Discount Foodstore Site shall provide the primary location for community floorspace that will serve housing on the western side of the Plan Lands in accordance</p>						

with the requirements of Section 5.4 of this Local Area Plan. <b>(Objective SSP20)</b>						
<b>Objective SSP21</b> Any further applications for development on the Discount Foodstore/Local Centre Site, including the area reserved for 4 retail units, shall address and front surrounding streets in accordance with the Key Principles on Urban Design set out under the <i>Retail Design Manual</i> (2012). <b>(Objective SSP21)</b>						
No impact on SEO's						
<b>Objective SSP22</b> Any revised development proposals on the Discount Foodstore Site shall be sensitively designed to respond to and incorporate the site's steep topography and elements of heritage value such as the existing hedgerow and any remnants of the former Oldcourt House. Such development shall also incorporate extensive SUDS components. <b>(Objective SSP22)</b>			<b>L1, B3, CH2</b>			
No impact on SEOs						
<b>Objective SSP23</b> Extensions of duration of permission on the Discount Foodstore Site shall only be granted for development that complies with the <i>Retail Design Manual</i> (2012) and all relevant policies and standards contained in this LAP. <b>(Objective SSP17)</b>						
No impact on SEOs						
<b>Objective SSP24</b> The planned Wetland Area on the western side of the Plan Lands shall: • Correspond with and follow the diverted (Option A) or existing (Option B) route of the overhead electrical 220kV	<b>B3, W3</b>					

<p>transmission lines. This wetland area shall be designed to intercept and attenuate surface water emanating from the three drainage ditch systems to the south in addition to any surface water generated from new development for slow release to the surface water sewerage system downstream of the Plan Lands. <b>(Objective SSP24)</b></p>						
<p><b>Objective SSP25</b> The planned Wetland Area on the western side of the Plan Lands shall:</p> <ul style="list-style-type: none"> <li>Retain the existing historic granite gate piers and granite culvert at its western end (eastern side of existing small triangular field) as local features for incorporation into the network of spaces and tracks and trails for the Plan Lands. <b>(Objective SSP25)</b></li> </ul>	<p><b>CH2</b></p>					
<p><b>Objective SSP26</b> The planned Wetland Area on the western side of the Plan Lands shall: Incorporate tracks and trails that will link the Wetland Area to other open spaces including the planned Oldcourt Park to the east, the Green Corridor and Dublin Mountains to the south and the Oldcourt Stream and tributary to the north. <b>(Objective SSP26)</b></p>	<p><b>C1C2HH1</b></p>					
<p><b>Objective SSP27</b> The planned Green Buffer located along the boundary of the M50 shall:</p> <ul style="list-style-type: none"> <li>Incorporate a wetland area designed to intercept and attenuate water from the Woodstown Stream tributaries and associated ditch systems to the south in addition to</li> </ul>	<p><b>W1W3</b></p>					

any surface water generated by new development prior to its slow release to the downstream surface water sewerage system. ( <b>Objective SSP27</b> )						
<b>Objective SSP28</b> The planned Green Buffer located along the boundary of the M50 shall: Include for the enlargement of the existing ditch along the northern boundary with Knocklyon Park to increase its capacity and create a water basin on the western side of the culverted point of confluence between both arms of the Woodtown Stream. ( <b>Objective SSP28</b> )	<b>W1W3</b>					
<b>Objective SSP29</b> The planned Green Buffer located along the boundary of the M50 shall: • Incorporate tracks and trails that will link the green buffer/wetland area with Knocklyon Park to the north-west and the Walled Garden to the east. ( <b>Objective SSP29</b> )	<b>C1C2HH1 B3</b>					
<b>Objective SSP30</b> The planned Green Buffer located along the boundary of the M50 shall: • Incorporate soft landscaped mounding/berms that are suitably designed to absorb and mitigate against excessive noise from the M50 motorway. ( <b>Objective SSP30</b> )	<b>HH1</b>					
<b>Objective SSP31</b> The development of the Knocklyon Park extension shall include for the upgrade of the existing adjacent roundabout junction	<b>C1C2HH1</b>					

<p>on Stocking Avenue to a four arm junction with pedestrian and cyclist crossing facilities. <b>(Objective SSP31)</b></p>						
<p><b>Objective SSP32</b>  Development of the lands surrounding the Traveller Accommodation site at the eastern end of the Plan Lands shall include for the incorporation and development of the existing walled garden (formerly of Airpark House) as a local landscape feature set amongst open space. This garden should act as a focal point for tracks and trails and include for the retention of old stone walls and mature trees with the incorporation of footpaths, cycle paths, open space(s), seating and lighting. <b>(Objective SSP32)</b></p>	<p><b>C1C2HH1 B3</b></p>					
<p><b>Objective SSP33</b>  Development of the walled garden shall include for well lit through routes and spaces that provide for passive surveillance into and out of the walled garden. A hedgerow and tree survey should be included with any application for development together with a structural survey, which shall identify mature trees and sections of wall for retention. <b>(Objective SSP33)</b></p>	<p><b>B3</b></p>					
<p><b>Objective SSP34</b>  Applications for development of the walled garden shall be accompanied by a habitat assessment to include a flora and fauna study. Proposals shall avoid the loss of habitats and/or species of high or moderate local value. <b>(Objective SSP34)</b></p>	<p><b>B3</b></p>					

<p><b>Objective SSP35</b> Require a through street to be created between Stocking Wood Drive and lands zoned for residential development to the south (in accordance with extant permissions) as part of the development of said lands. This local access street should be carefully designed with emphasis on pedestrian movement, activity and good place making. <b>(Objective SSP35)</b></p>						
<p><b>Objective SSP36</b> Both of the historic double hedgerow ditches on either side of the first phase of the Stocking Wood Development and correspond with the Woodstown Stream Tributaries shall be sensitively developed for pedestrian permeability. This should comprise a well lit and narrow central pedestrian route(s) of porous light weight material that minimises damage to trees and hedgerows. <b>(Objective SSP36)</b></p>			<b>B3</b>			
<p><b>Objective SSP37</b> Applications for development of the double ditches or adjacent to the double ditches shall be accompanied by a habitat assessment to include a flora and fauna study and hedgerow and tree survey. Proposals shall avoid the loss of habitats and/or species of high or moderate local value. <b>(Objective SSP37)</b></p>	<b>B3</b>					
<p><b>Objective SSP38</b> Development of the Plan Lands shall include for a pedestrian link between the planned landscape buffer to the east and the planned Gunny Hill Park. This should be provided via Hunters Meadow in the form of a permeability project or alternatively via Ballycullen and Gunny Hill Road in the form of a footpath.</p>	<b>C1C2HH1</b>					

<p>In order to protect roadside hedgerows, the latter option would require reduced carriageway widths and a possible revised one way traffic arrangement that would allow for contra flow cyclist movement. <b>(Objective SSP38)</b></p>						
<p><b>Objective SSP39</b>  Any revised applications for development on the lands zoned for residential development along the northern boundary of the zoned Objective 'F' 'To Preserve and Provide for Open Space and Recreational Amenities', located in proximity to St Colmcille's Well (i.e. lands subject to SD06A/0238 and SD07A/1035) shall include for residential frontage onto the designated zoned open space and/or include for open ended and well lit pedestrian links into this space. All such development shall be sensitive to the conservation and integration of the old townland/parish hedgerow boundaries in the area. <b>(Objective SSP39)</b></p>	<p><b>B3, L1, CH2</b></p>					

# Section 9 Mitigation Measures

## 9.1 Introduction

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Ballycullen Oldcourt Local Area Plan.

Mitigation involves ameliorating significant negative effects. Where there are significant negative effects, consideration is given in the first instance to preventing such effects or, where this is not possible for stated reasons, to lessening or offsetting those effects. Mitigation measures can be roughly divided into those that: *avoid* effects; *reduce* the magnitude or extent, probability and/or severity of effects; *repair* effects after they have occurred, and; *compensate* for effects, balancing out negative impacts with other positive ones.

The mitigation measures may be incorporated into the briefing of design teams as well as the subsequent design, specification and development management of the land uses to be accommodated within the County.

Additional detailed mitigation measures to those listed below and those integrated into the Draft LAP would be likely to be required by the development management and EIA processes of individual projects.

## 9.2 SEA Recommendation

It is recommended that the mitigation measures detailed under Section 9.3 be integrated into and adopted as part of the proposed Ballycullen Oldcourt Local Area Plan.

**Note:** The wordings of measures contained hereafter constitute an undertaking.

Accordingly mitigation measures contained hereafter are recommended to be incorporated in their entirety - or omitted. The degree of undertaking should remain as that the measure 'shall' or 'will' be implemented. The substitution of these words with the words 'should', 'ought' or 'may' is not in accordance with best practice and should be avoided.

## 9.3 Mitigation Measures

The overall objective of the LAP is to provide a development framework with residential densities appropriate to the unique location of the lands on the suburban edge of the Dublin Mountain foothills

The Strategy is laid out under four headings:

### 1. Land Use and Density

The Local Area Plan's Density Strategy responds to the peripheral location of the Plan Lands, the need to create a soft transition between the suburbs and countryside and the need to protect the setting of the Dublin Mountains including the sloping topography, its visual prominence and natural heritage features such as hedgerows and streams.

The strategy directs land uses and densities within three distinct areas (lower slope lands, mid slope lands and upper slope lands) where densities will vary according to context.

### 2. Green Infrastructure

The Green Infrastructure Strategy comprises three main strands that includes for the sustainable management of water incorporating SUDS features; the provision of pedestrian and cycle routes in the form of tracks and trails and the provision of a network of green spaces in the form of open spaces, linear spaces and landscaped buffers.

Mitigation measures proposed to be included in the LAP are as follows;

- Promote the sustainable collection and on-site retention of surface water for delayed discharge to the local surface water sewerage system and for use as an on-site resource and means of creating a biodiversity network that will retain and develop existing flora and fauna. **(Objective GI1)**
- Ensure that a linked SUDS network shall be implemented fully across the Plan Lands in accordance with the requirements of the Greater Dublin Strategic Drainage Study (2005). All proposed developments shall contribute to the achievement of this integrated network in order to reduce surface water run-off and to minimise the risk of flooding. This shall include for a series of attenuation areas (ponds, basins and reedbeds) set within parklands and wetland areas within linear green spaces. **(Objective GI2)**
- Ensure that existing natural streams and drainage ditches shall be retained and augmented with grassed swales within a series of green corridors, wetland areas and parks to form an integral conveyance and attenuation system as part of the overall SUDS network. **(Objective GI3)**
- Ensure that all individual developments and associated infrastructure, including streets and spaces, shall incorporate on-site SUDS components such as those identified in the Standards Section (Appendix 2) of this Local Area Plan. Features such as porous paviers, green roofs, rainwater recycling systems and soakaways should be utilised to intercept surface water before reaching the overall SUDS network. **(Objective GI6)**

#### **Flood Risk Management**

- All planning applications for development in areas at risk of flooding shall be accompanied by a Flood Risk Assessment carried out at the site-specific level in accordance with *The Planning System and Flood Risk Management – Guidelines for Planning Authorities* (2009). The scope of flood

risk assessment should depend on the type and scale of development and the sensitivity of the area. **(Objective GI7)**

#### **Protection and Incorporation of Natural Heritage**

- It is an objective of this LAP to ensure that all extensive development proposals maximise the opportunities for enhancement of existing biodiversity and are accompanied by a full ecological assessment, carried out by a suitably qualified professional, that includes measures to enhance biodiversity and avoid or minimise loss of biodiversity. **(Objective GI9)**

#### **Biodiversity Networks – Hedgerows and Streams**

- Create an integrated network of green corridors and wetland areas (a minimum of 15 metres wide) by way of linking, preserving and incorporating hedgerows (especially townland and parish boundaries), wildlife corridors, SUDS features and existing streams. **(Objective GI11)**
- Prohibit the culverting of watercourses and require structures adjacent to watercourses to be set back a minimum distance of 10 metres from the top of the bank. These corridors shall be landscaped to aid in the absorption of storm water flows and should also accommodate tracks and trails where possible. **(Objective GI15)**

#### **Topography and Contours**

- Buildings, streets and spaces should be designed and arranged to respond and flow with the area's contours and natural drainage features. **(Objective GI16)**
- All development including streets, buildings and spaces shall be laid out to comply with South Dublin County Council Development Plan policy on Steep Sites and shall be designed to circumvent the need for intrusive engineered solutions such as cut and filled platforms, embankments or retaining walls. **(Objective GI17)**

#### **Protected Species**

- Habitats and species identified as having a high or moderate local value

shall be protected, retained, incorporated and provided for within developments. **(Objective GI20)**

#### **Historic Features and Archaeology**

- Upstanding archeologically remains and local historic features such as double ditch paths, gate pillars, stone walls and stone culverts shall be protected, preserved, or enhanced by development and incorporated into streets or open spaces. **(Objective GI25)**
- Where significant archeologically features/deposits are discovered during archaeological investigations, it shall be a priority to provide for in-situ preservation especially features or deposits discovered during construction or investigation on lands to be occupied by planned open space(s). **(Objective GI26)**

#### **Green Buffers to Mountains and M50**

- Development along and near the southern boundary of the Plan Lands shall include for a continuous and linked green buffer to the Dublin Mountains. This buffer shall include for the planting of woodlands where the buffer widens and the preservation and integration of existing hedgerows and streams. Narrowed areas of this buffer shall be no less than 15 metres in width. **(Objective GI28)**
- Development along and near the boundary with the M50 motorway shall include a green corridor and wetland area that will mitigate against noise through the planting of semi-mature trees and incorporation of soft landscaped mounding/berms. Narrowed areas of this buffer shall be no less than 20 metres in width. All planning applications for development in close proximity to the M50 should be accompanied by a report, prepared by a qualified person, detailing mitigating measures for noise. **(Objective GI29)**

#### **Open Space Hierarchy & Functions**

- All residential development shall contribute to the creation of the planned network and hierarchy of open spaces. **(Objective GI30)**

- Public open space shall be provided at a minimum rate of 20% of development sites on the Lower Slope and Mid Slope Lands and 30% on the Upper Slope Lands. With the exception of lands located within the wayleave of 110kV and 220 kV overhead transmission lines, only public open spaces that fall within the hierarchy of spaces and functions detailed in Table 5.3 (Section 5.2) shall be included in the calculation of public open space. **(Objective GI31)**

### **3. Accessibility and Movement**

The Accessibility and Movement Strategy seeks to open up the Plan Lands with a clear hierarchy of integrated streets for universal movement including pedestrian, vehicular and cyclist activity and sets out a framework for such.

Mitigation measures proposed to be included in the LAP are as follows;

#### **Integrated Street Network**

- All development proposals that include routes for vehicular movement or sections of such routes for movement, regardless of extent, shall largely comply with the street network strategy illustrated in Figure 5.1. (Section 5.2) Link (Primary and Secondary) and Local (Tertiary) streets shall follow the contours of the land in a concentric fashion in order to minimise the impact on the landscape and on natural drainage. **(Objective AM1)**
- Create open ended routes through existing and new development in a manner that ensures greater permeability and convenient pedestrian and cycle access to community facilities, schools, open spaces, local shopping, or public transport stops for future and existing residents. **(Objective AM17)**

### **4. Built Form**

The Built Form Strategy sets out to ensure that development, at a wider level, is carried out in an integrated, coherent and universal design led manner that responds to local contexts and accords with the core design

principles on urban design, place making and street design as set out under the relevant government guidelines including the recent *Design Manual for Urban Roads and Streets*. The strategy is accompanied by a comprehensive layout for the entire Plan Lands, which illustrates how they could be developed down to individual site and plot level.

Mitigation measures proposed to be included in the LAP are as follows;

#### **Building Design and Heights**

- Views of the Dublin Mountains (including Montpelier Hill and the Bohernabreena Valley) and historic buildings and monuments (including the Hell Fire Club, Carthy's Castle, Orlagh College and Woodtown Manor) shall be enhanced and preserved by development as much as possible. This should be achieved through the carefully considered and sensitive arrangement of streets, spaces and buildings in a manner that preserves and creates vistas and views of these landmark and landscape elements. **(Objective BF7)**
- Development shall be no more than one storey in height at street level on the Upper Slope Lands, no more than two storeys in height at street level on the Mid Slope Lands and no more than three storeys in height on the Lower Slope Lands. New dwellings backing onto or adjacent to existing single storey dwellings should be no more than two storeys in height. **(Objective BF8)**

#### **Energy Efficient Building Design and Layout**

- All development should comply with *Quality Housing for Sustainable Communities (2007)* and *Sustainable Residential Development in Urban Areas (2009)* with regards to sustainability, energy efficiency and orientation of development. **(Objective BF14)**
- New housing schemes should be designed in accordance with passive solar design principles as set out under the *Urban Design Manual (2009)* and the Standards Section of this LAP (Appendix 2). The orientation of dwellings and internal layouts should

therefore be arranged to maximise solar gain but in a balanced manner that does not significantly impact on the topography of the Plan Lands, conflict with Sustainable Urban Drainage Systems or significantly impinge on the successful creation of streetscapes in terms of good street frontage and passive surveillance. **(Objective BF15)**

# Section 10 Monitoring Measures

## 10.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This environmental report puts forward proposals for monitoring the Local Area Plan.

Monitoring enables, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action. In addition to this, monitoring can also play an important role in assessing whether the LAP is achieving its environmental objectives and targets - measures which the LAP can help work towards - whether these need to be reexamined and whether the proposed mitigation measures are being implemented.

## 10.2 Indicators and Targets

Monitoring is based around the indicators which were chosen earlier in the process. These indicators allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives used in the evaluation. Focus will be given to indicators which are relevant to the likely significant environmental effects of implementing the LAP and primarily to existing monitoring arrangements in order to monitor the selected indicators. Each indicator to be monitored will be accompanied by the relevant target(s) - measures which the LAP can help work towards - which were identified with regard to the relevant legislation (Section 4). Table 10.1 below shows the indicator and targets which have been selected with regard to the monitoring of the plan.

## 10.3 Sources

Existing monitoring sources exist for many of the indicators and include those maintained by South Dublin County Council and the relevant authorities e.g. the Environmental Protection Agency and the Central Statistics Office.

The *Development Management Process* in South Dublin County Council will provide additional monitoring of certain indicators and targets on an application by application basis. These will be recorded on an on-going basis by the Council's SEA Monitoring System. Where significant adverse effects - including positive, negative, cumulative and indirect - are likely to occur upon, for example, ecological networks as a result of the undertaking of individual projects or multiple individual projects, such instances will be identified and recorded and will feed into the monitoring evaluation for the LAP.

## 10.4 Excluded Indicators and Targets

As noted on Table 10.1 below, monitoring data on Indicator W2 (Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC) may not be available for the preliminary monitoring evaluation as the groundwater threshold values to which this indicator relates have not yet been identified by the EPA.

In addition, future monitoring data for Indicators C1i (Percentage of population within the County travelling to work or school by public transport or non-mechanical means) and C1ii (Average distance travelled to work or school by the population of the County) will not be

available until the results of the next CSO Census are made available. It is recommended that data for these indicators be sourced for the SEA for the next review of the Plan.

## **10.5 Reporting**

A preliminary monitoring evaluation report on the effects of implementing the LAP will be prepared half way through the implementation of the Plan.

## **10.6 Responsibility**

South Dublin County Council are responsible for collating existing relevant monitored data, the preparation of a monitoring report, the publication of this report and, if necessary, the carrying out of corrective action.

## **10.7 Thresholds**

Thresholds at which corrective action will be considered are as follows:

- boil notices on drinking water;
- fish kills;
- court cases taken by the DOAHG regarding impacts upon archaeological heritage including entries to the Record of Monuments and Places; and,
- complaints received from statutory consultees regarding avoidable impacts resulting from development which is granted permission under the LAP.

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
<b>Biodiversity, Flora and Fauna</b>	<p>B1: Percentage of relevant habitats and designated ecological sites lost as a result of implementation of the LAP</p> <p>B2: Number of significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the LAP</p> <p>B3: Percentage of connectivity provided by the County's primary ecological corridors<sup>37</sup> which has been lost without mitigation</p>	<p>B1: No losses of relevant habitats, species or their sustaining resources in designated ecological sites as a result of implementation of the LAP</p> <p>B2: No significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the LAP</p> <p>B3: No ecological connectivity provided by the County's primary ecological corridors to be lost without mitigation as a result of implementation of the LAP</p>	<p>Designated ecological sites mapping, CORINE Mapping, National Parks and Wildlife Service Records &amp; Development Management Process in SDCC</p> <p>Designated ecological sites mapping, Development Management Process in SDCC Council &amp; Consultation with the National Parks and Wildlife Service</p> <p>Primary ecological corridors mapping, CORINE mapping and Development Management Process in SDCC</p>
<b>Population and Human Health</b>	<p>Indicator HH1i: No of occasions that PM10 limits have been exceeded in at Air Monitoring stations</p> <p>Indicator HH1ii: Percentage of population that are exposed to unacceptable levels of traffic noise (to be defined) or the number of noise sensitive locations that have a score where priority action is required</p>	<p>HH1: Reduce number of people exposed to traffic noise and air quality levels which endanger health and quality of life</p>	<p>South Dublin County Council, EPA</p>

<sup>37</sup> These 'primary ecological corridors' have yet to be fully identified. The Baseline section includes a surrogate based on rivers, streams, lakes, the canal and the railway corridor. This will be replaced following the completion of the proposed Biodiversity Plan.

<b>Environmental Component</b>	<b>Selected Indicator(s)</b>	<b>Selected Target(s)</b>	<b>Sources</b>
<b>Soil</b>	S1i: Area of brownfield land redeveloped  S1ii: Area of greenfield land developed	S1i: To fully utilise the available brownfield lands  S1ii: To reduce the amount of Greenfield lands developed	Development Management Process in SDCC  As above
<b>Water</b>	Indicator W1i: Biotic Quality Rating (Q Value) and risk assessment  W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	W1ia: To maintain a biotic quality rating of Q4, in line with the requirement to achieve good water status under the Water Framework Directive, by 2015  W1ib: To improve biotic quality ratings, where possible, to Q5  W2: Compliance with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	Environmental Protection Agency  As noted under Section 2.3.1 data may not be available for this indicator when the monitoring evaluation is being prepared.

<b>Environmental Component</b>	<b>Selected Indicator(s)</b>	<b>Selected Target(s)</b>	<b>Sources</b>
<b>Water (cont.)</b>	W3: Number of developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk	W3: Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk	Development Management Process in South Dublin County Council
<b>Air and Climatic Factors</b>	C1i: Percentage of population within the County travelling to work or school by public transport or non-mechanical means  C1ii: Average distance travelled to work or school by the population of the County	C1i: An increase in the percentage of the population within the County travelling to work or school by public transport or non-mechanical means  C1ii: A decrease in the average distance traveled to work or school by the population of the County	Central Statistics Office: Dublin Transportation Office  Future monitoring data may not be available for these indicators until results from the next Census are made available.

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
<b>Material Assets</b>	<p>M1: Number of new non-rural developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the LAP</p> <p>M2: Drinking water quality standards, (Microbiological, Chemical and Indicator parameters)</p>	<p>M1: No new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the LAP</p> <p>M2: To maintain and improve drinking water quality in South Dublin County to comply with requirements of the European Communities (Drinking Water) Regulations 2000</p>	<p>Development Management Process in SDCC</p> <p>Environmental Protection Agency, Development Management Process in SDCC</p>
<b>Cultural Heritage</b>	<p>CH1: Number of unauthorised developments occurring which result in full or partial loss to 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</p> <p>CH2i: Number of unauthorised developments occurring which result in physical loss or loss entries to the Record of Protected Structures and/or their context within the surrounding landscape where relevant</p> <p>CH2ii: Number of additions to the Record of Protected Structures and the number of additional ACAs</p>	<p>CH1: No unauthorised developments occurring which result in full or partial loss to 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</p> <p>CH2i: No unauthorised developments occurring which result in physical loss or loss entries to the Record of Protected Structures and/or their context within the surrounding landscape where relevant</p> <p>CH2ii: Make Additions to the Record of Protected Structures and make additional ACAs, where appropriate</p>	<p>Development Management Process in South Dublin County Council; Complaints from statutory consultees</p> <p>Development Management Process in South Dublin County Council; Complaints from statutory consultees</p>

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
<b>Landscape</b>	<p>L1: Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the LAP</p> <p>Indicator L2i: Number of dwellings permitted above the 145 metre contour</p>	<p>L1: No developments permitted which result in avoidable impacts on the landscape - especially with regard to the County's landscapes which are most valuable and most sensitive to change and protected focal points and views - resulting from development which is granted permission under the LAP</p>	<p>Development Management Process in South Dublin County Council; Complaints from statutory consultees</p>

**Table 10.1 Selected Indicators, Targets and Monitoring Sources**

# **Appendix I**

## **NON TECHNICAL SUMMARY**

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### **ENVIRONMENTAL REPORT**

**OF THE**

### **DRAFT BALLYCULLEN OLDCOURT LOCAL AREA PLAN 2013-2019**

### **STRATEGIC ENVIRONMENTAL ASSESSMENT**

**South Dublin County Council**

County Hall

Tallaght

Dublin 24



**OCTOBER 2013**

**Non Technical Summary**

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- 1.8 Evaluation of Alternative Plan Scenarios**
- 1.9 Mitigation**
- 1.10 Monitoring Measures**
- 1.11 Conclusion**

# 1.0 Non Technical Summary

## 1.1 Introduction

This is the Non Technical Summary of the Environmental Report of the Draft Ballycullen Oldcourt Local Area Plan 2013-2019.

Strategic Environmental Assessment is a process which was adopted into Irish Law in 2004. While the requirement for a mandatory Strategic Environmental Assessment for Local Area Plans applies to areas in which the population is in excess of 5,000 persons<sup>38</sup>, South Dublin County Council is also of the opinion that development in the Ballycullen Oldcourt LAP area is likely to potentially have significant effects on the environment, in particular having regard to surface water drainage, potential sub-surface archaeology and the landscape character in the area (which is in the foothills of the Dublin Mountains).

A large proportion of the Plan Lands remain undeveloped (approx 110 ha. /80%). These undeveloped lands are primarily zoned for residential development (Objective A1 - approx. 90 ha.) with a small element zoned for local centre development (Objective LC – approx. 1 hectare). Remaining undeveloped lands are zoned for agriculture and open space. Approximately 40 hectares of undeveloped lands that are zoned 'Objective A1' are also the subject of extant permissions that are yet to commence or recommence development. All of the lands that are subject to extant permissions are located on the eastern side of the Plan Lands.

The SEA has been carried out in order to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of

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<sup>38</sup> If all of the LAP lands are developed at the higher levels within the density bands proposed, the population would be likely to just exceed 5,000 persons.

growth in South Dublin County Council. This report should be read in conjunction with the Ballycullen Oldcourt Local Area Plan.

This 'assessment' process is a key mechanism in promoting sustainable development; in raising awareness of significant environmental issues in the Local Area Plans area and in ensuring that such issues are properly addressed within the capacity of the planning system. It has the potential to bring considerable added value to the implementation of the Local Area Plans over the next six years.

The Environmental Report which follows has guided the preparation of objectives, policies and development scenarios for the Local Area Plans with an ultimate goal of achieving sustainable development in Ballycullen Oldcourt that can be absorbed into the landscape without causing adverse harm to the environment.

## 1.2 Strategic Environmental Assessment Methodology

The pre-draft public consultation programme for the Ballycullen-Oldcourt Local Area Plan took place over a four week period between Monday the 15th of April 2013 and Friday the 10th of May 2013.

The Planning Department issued formal written notification to the Environmental Authorities on the 26<sup>th</sup> March 2013 that a new Local Area Plan was being prepared. A Scoping Issues Paper was sent to the Environmental Authorities in order to facilitate their involvement in the scoping exercise.

Submissions from the Environmental Authorities were received from the Environmental Protection Agency and the Department of Agriculture, Food and the Marine. The Department suggested that the assessment should include potential impact

on the LAP streams which are tributaries of the Dodder River. The EPA suggested that the following should be taken into account in the SEA: - Eastern River Basin Management Plan (and associated Programme of Measures), Greater Dublin Regional Planning Guidelines, Greater Dublin Area Transport Strategy and the Draft Dodder CFRAMS. - The Flood Risk Management Guidelines. Ensure that land use / development are appropriate to the level of flooding identified- Protected views in the South Dublin County Development Plan 2004-2010 and the need to comply with the Habitats Directive.

These submissions were taken into consideration during the preparation of the Ballycullen Oldcourt Local Area Plan and the Environmental Report.

## **1.2 Vision and Goals of the Ballycullen Oldcourt Local Area Plan**

### **Plan Objectives**

The broad plan objectives are as follows:

- Take cognisance of the area's unique amenities and semi-rural location within the foothills of the Dublin Mountains and protect the amenities of existing dwellings;
- Sensitively integrate new development and existing development with each other and the surrounding rural and mountain context;
- Provide a Green Infrastructure Framework that will integrate natural and built heritage features, water management systems, improved accessibility, open spaces and recreational facilities;
- Provide for a network and hierarchy of linked public open spaces with varying roles and facilities;
- Create a series of small walkable residential blocks that are linked by secondary and tertiary streets and reinforce Stocking Avenue and Oldcourt Road as primary routes for activity, movement, local shopping and public transport;

- Sensitively transition densities and building heights in a manner that limits the impact of any new development on the setting of the Dublin Mountains and countryside;
- Provide a network of walking and cycling routes that further link residential blocks with each other, public transport stops and local shopping while providing routes towards the Dublin Mountains;
- Promote high quality and universal designs for streets, spaces and buildings that respond to the varying character areas and settings;
- Incorporate appropriate green infrastructure features that limits the impact of noise from the M50 on any future development;
- Ensure that development is phased in a manner that provides for the required community, school and parkland facilities either prior to or in tandem with development.

## **1.4 Relationship of the Plan with other Relevant Plans and Programmes**

The Draft Ballycullen Oldcourt Local Area Plan and accompanying Environmental Report fit into a hierarchy of strategic legislation, plans and policy documents. A number of higher-level strategic plans such as the National Spatial Plan and the Regional Planning Guidelines for the Greater Dublin Area and the County Development Plan set the context for the Ballycullen Oldcourt Local Area Plan.

## **1.5 Summary of Baseline Environment/ Existing Environmental Problems**

The Environmental Report contains a range of baseline information on key environmental headings such as Population and Human Health, Biodiversity (Flora and Fauna), Landscape/Geology/Soil, Agriculture and Forestry, Water Quality, Air Quality, Waste Management, Material Assets, Cultural Heritage and Climate Change and Sustainability.

### **1.5.1 Population and Human Health**

The main population issues in South Dublin are the depopulation in older established areas and of population growth in Greenfield areas at the periphery of the urban fringe. The Ballycullen Oldcourt LAP lands are located on the periphery of the consolidated urban expansion area.

The Plan Lands straddle three different District Electoral Divisions namely Firhouse Village, Firhouse Ballycullen and Bohernabreena. The population in these three DED's grew from 21,633 in 2006 to 24,013, an increase of 2,380 persons (11%). The Census 2011 Small Areas recording system allows an accurate estimate of the population in the LAP area of 1324 persons.

The main threats in terms of human health and population include increased amounts of traffic and the effect of emissions and traffic noise on human quality of life, and in particular, the effect of emissions and traffic noise from the M50. Associated with the quality of life issue is the need to provide areas of open space and recreation value.

### **1.5.2 Biodiversity**

The enhancement of biodiversity, preservation of natural amenities, integrity of wildlife corridors and protection of the natural environment are all important issues to be addressed in the preparation of the Ballycullen Oldcourt Local Area Plan and in the accompanying Environmental Report.

While there are no designated biodiversity areas within the boundaries of the proposed Local Area Plan which have a recognised National, European Union or International protection status, the receiving waters from the LAP lands flow into the River Dodder, a proposed Natural Heritage area. The three Natura 2000 sites within South Dublin County (Glenasmole valley SAC, Wicklow Mountains SAC, and Wicklow Mountains SPA) are just located a few kilometers to the south west. The impacts of the plan lands

on these Natura sites, as well as other Natura 2000 sites in adjoining counties, has been addressed in the Appropriate Assessment screening report.

These lands consist largely of small to medium grassland plots which form part of the overall field system. The main threats to biodiversity include the loss of habitat due to hedgerow removal thus impacting on the protected species in the area. The issue of using Sustainable Urban drainage systems as a means of retaining existing biodiversity and developing biodiversity needs to be addressed. There is a bat population (protected species under the Wildlife Acts) in and around the Ballycullen Oldcourt area.

A lack of a Biodiversity Plan for the County constrains detailed assessment of valuable habitats at local level.

### **1.5.3 Landscape**

The plan lands are located within the Firhouse and the Bohernabreena Character Areas as identified in the Landscape Character Area Assessment in the County Development Plan 2010-2016.

The plan lands are located within the Ballycullen Oldcourt Character Area as identified in the Landscape Character Area Assessment in the County Development Plan 2010-2016. The plan lands boundary, however, while centrally located within the character area, have been identified within the urban agglomeration.

The Firhouse Character Area is defined by its close proximity to the suburban housing estates of Firhouse, Ballyboden and Edmondstown, and the M50. While a significant amount of development has taken place in Ballycullen and Woodtown area, the landscape still retains a highly rural quality due to the large amount of urban parkland and the close proximity of the Dublin Mountains.

The landscape type around Oldcourt in the Bohernabreena Character Area is

predominantly farmland with some of the lands utilised for active recreation. Much of the original field pattern and hedgerows are intact.

The lack of a recent, thorough landscape assessment of the County is a significant data gap, leading to a lack of substantive knowledge about the current status of many of the elements noted in the 2003 assessment. The key aspects and issues that need to be given consideration include

- Removal of hedgerows
- Landscape under considerable urban related development pressure
- The need to maintain the Landscape and particular protected views to the countryside thereby maintaining the relationship between the area and its surrounding setting

#### **1.5.4 Geology and Soil**

The underlying bedrock of the LAP lands is predominantly Lower to Middle Ordovician slates, greywacke and conglomerates.

No sites of geological interest are listed for protection under the proposed Ballycullen Oldcourt Local Area Plan area. There are two Contaminated Sites just to the south of the Ballycullen Oldcourt LAP area.

The LAP lands comprise of two soil types – Sandstone and Shale Till apart from two small sections of Limestone Till.

#### **1.5.5 Agriculture and Forestry**

Farmland in the Ballycullen Oldcourt LAP area can be categorised as “Urban fringe farmland” subject to urban development pressures due to proximity to Dublin Metropolitan area.

The LAP lands in the Ballycullen portion consist of partially developed residential lands, some unmanaged or abandoned agricultural (recolonised bare ground) land

and a small amount of grassland. The western portion of the lands at Oldcourt is in active agricultural used as stocked grassland.

#### **1.5.6 Water**

The Ballycullen Oldcourt LAP lands are predominantly located within the Dodder 2 Catchment area with the eastern and western edges of the LAP land within the Owenadower Lower and Firhouse Catchments respectively.

##### **1.5.6.1 The Water Framework Directive**

Water Management in the European Union is governed by Directive 2000/60/EC (the Water Framework Directive, (WFD)). The WFD sets out that a Member State shall implement the necessary measures to prevent deterioration of the status of all bodies of surface, ground, estuarine and coastal water, and shall protect, enhance and restore all bodies of surface and ground water with the aim of achieving good status by 2015.

##### **1.5.6.2 River Basin Management Plan**

The WFD work has culminated in the adoption of a River Basin Management Plan for the Eastern River Basin District (ERBD) in 2009. The management plan proposes a programme of protection and improvement of waters in the County with the aim of achieving the required status of the WFD within the county. It is noted within the Programmes of Measures contained within the River Basin Management Plan that the Eastern River Basin District River Basin Management Plan 2009-2015 indicates that the overall status of the Dodder 2 Catchment is moderate and that of the Firhouse Catchment is poor: it is an overall objective to restore the status of these sections of the Dodder river to ‘good’ by 2027 and 2021 respectively.

##### **1.5.6.3 Groundwater**

The Geological Survey of Ireland (GSI) has undertaken a Groundwater Protection Scheme for South Dublin County. The overall aim of the Groundwater Protection Scheme, which has been undertaken jointly between the GSI and the Local Authority, is to preserve the quality of groundwater, particularly for drinking water purposes, for the benefit of present and future generations.

The aquifer on the main portion of the plan lands are located is rated as "Locally Important Aquifer – Bedrock which is Moderately Productive only in Local Zones". On the western portion of the plan lands, the aquifer is described as "Poor Aquifer – Bedrock which is Generally Unproductive".

The groundwater vulnerability within the LAP lands varies from low to high to extreme vulnerability with a small portion of the plan lands have been identified as extreme.

None of the water bodies within the Ballycullen Oldcourt LAP area have been listed on the WFD Register of Protected Areas (RPAs).

#### 1.5.6.4 Surface Water

The Ballycullen Oldcourt LAP area is predominantly within the Dodder 2 catchment with the eastern edge of the LAP area being within the Owenadower Lower catchment: both water-bodies are tributaries of the River Dodder.

The LAP lands are crossed by two main streams which are tributaries of the River Dodder, the Ballycullen Stream and the Oldcourt Stream and tributary. There has been partial culverting of the Ballycullen Stream as part of the Dalriada residential development and partial culverting of the Oldstream following the upgrading of the Oldcourt Road (an additional stream, the Whitestown Stream, has already been culverted as part of residential development).

The opportunity exists to provide a surface water drainage system based on the principal of SuDS on the undeveloped zoned land within the LAP. A series of hedgerows, some with accompanying ditches or swales, can be utilised in this approach.

#### 1.5.6.5 Flooding

The Office of Public Works (OPW) Draft Preliminary Flood Risk Assessment (PFRA), using fluvial and pluvial data modelling, has identified a number of areas in and around the plan lands which would be areas of potential flood risk. On the eastern side of the Oldcourt lands, fluvial modelling identifies a 1% Annual Exceedance Probability (AEP) 100year event occurring along the Oldcourt Stream ( a section of alluvial soils is also present along side the Oldcourt Stream before it enters the LAP lands. On the Ballycullen Stream, the PFRA information indicates be areas of potential flood risk within the plan lands.

#### Flooding Downstream

Two surface water flooding incidents in August and September 2008 in Glenvara and Castlefield Estates in Firhouse,

A significant flooding event occurred in the Castlefield and Glenvara estates in Firhouse in October 2011 with water escaped from 3 manholes from a section of the culverted Ballycullen Stream.

The Greater Dublin Strategic Drainage Study (GSDSDS) identified the Ballycullen Stream as having a number of hydraulic deficiencies at Glenvara Park and recommended that" The existing 1050mm trunk sewer from the Ballycullen View Link Road, Glenvara Park to Ballycullen Road, Firhouse via Castlefield Manor will require approximately 750m of duplicating and the sewer along the Ballycullen View Link Road, Glenvara Park to the trunk sewer well required approximately 375m of existing 300/450mm pipe to be upgraded to 525/600mmpipe".

### 1.5.7 Air Quality and Noise Pollution

Prevailing meteorological conditions for South Dublin are affected by the landmass of the Dublin Mountains. The prevailing wind sweeps down from the mountains and the south-west. Located at the base of Montpelier Hill (the Hell Fire Club), which adjoins the foothills of the Dublin Mountains, the Ballycullen Oldcourt LAP area is directly affected by the prevailing wind which is of great importance for dispersing air-borne pollutants, especially ground level sources such as traffic emissions.

The focus of air pollution monitoring is on benzene, nitrogen oxide (NO<sub>x</sub>) and particle matter (PM<sub>10</sub>), which are derived from traffic based sources. The latest available document '*Air Quality in Ireland Report (2010)*' by the EPA indicated that none of the monitoring stations in South Dublin exceeded allowable limits during that year<sup>39</sup>. The PM<sub>10</sub> limit, however, has been breached three times to date in 2011. The daily limit for PM<sub>10</sub> is 50 ug/m<sup>3</sup>. The limit is deemed breached if more than 35 exceedances occur during the year.

Dublin City Council, Fingal, Dún Laoghaire-Rathdown and South Dublin County Councils have prepared a Noise Action Plan, including noise maps for the Dublin Agglomeration 2008-2013. The noise mapping indicated that traffic congestion and movement were the issues of concern regarding noise pollution and that the majority of noise occurs along the national, regional and distributor road network.

High noise levels in excess of 55dB(A) were mapped across the majority of the eastern area of the Plan Lands with the highest levels mapped along and adjacent to the M50 in two parallel continuous bands ranging from 70 to 74 dB(a) and above 74dB(A), which is the highest measurement available. According to the Draft Noise

Action Plan, exposure of people to such noise levels can cause severe health problems with night time levels of 55dB(A) recommended as an interim target.

The Noise levels in the LAP area is likely to increase short-term during the construction periods of any development but also in the longer term due to increased vehicular movement.

### 1.5.8 Waste Water

The treatment of wastewater is governed by the Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC). The Directive aims to protect the environment from the adverse effects of the wastewater discharges by ensuring that wastewater is appropriately treated before it is discharged to the environment.

Wastewater from the plan lands, and from almost all of South Dublin is currently treated in Ringsend. The waters are treated to a Tertiary standard, which is in compliance with the Urban Wastewater Treatment Directive. These waters are discharged to Dublin Bay, which is a Natura 2000 site. The quality of the discharged waters is within the requirements of the Urban Waste Water Treatment Directive.

Development of Wastewater Treatment Works (WwTw) within the Greater Dublin Area has not kept pace with construction or the amount of zoned lands. The WwTw in Ringsend currently operates at a Population Equivalent (PE) of 1.9 million. The GSDSDS SEA (2008) indicates expansion at Ringsend to 2.16 million PE. Surveying and assessment is currently underway to ascertain expansion of the Ringsend WwTw to 2.4 million PE. The Dublin City water treatment facilities (including Ringsend) are subject to separate operational consent and licensing procedures which are themselves required to be compliant with all applicable environmental Regulations and Directives, including the Water Framework and Habitats Directives.

<sup>39</sup>Source: EPA Website.  
[www.epa.ie/whatwedo/monitoring/air/data](http://www.epa.ie/whatwedo/monitoring/air/data)

It is considered that the loading to WwTw as a result of implementing the proposed Ballycullen Oldcourt Local Area Plan would be partially offset as a result of dropping loading in older parts of the county (from a household size of 3.31 in 2002 to 2.18 in 2031) as well as reduced construction and occupation figures for new housing.

The Grand Canal Trunk Sewer (GCTS) services the plan lands; this sewer flow into the wastewater treatment works in Ringsend. The Council is cognisant of the need to ensure the requisite wastewater treatment provision to allow for development growth without which the development would conflict with the requirements of the Urban Wastewater Treatment Directive which 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 recent EPA operating license reinforce this aspect).

### **1.5.9 Drinking Water**

Most of the treated water supply in South Dublin County is currently supplied from Dublin City Council via the Belgard Reservoir which is part of the overall Dublin Metropolitan Area network. Consideration is being given at regional level to developing further capacity to meet the projected longer term demands.

The Ballycullen Oldcourt LAP area in the past suffered from inadequate water pressure; the deliverance of the Boherboy Water Supply Scheme, however, has improved this situation in recent years. The Boherboy Water Supply Scheme (currently under construction) involves a major upgrading and expansion of the water supply network and storage infrastructure in the areas of Saggart, Rathcoole, Brownsbarn, Citywest, the southern parts of Tallaght and Ballycullen Oldcourt. This scheme will benefit not only the existing population, but will also facilitate new development in the LAP lands.

### **1.5.9.1 Monitoring Water Quality**

The Environmental Protection Agency (EPA) is now the supervisory authority over public water supplies and has new powers of enforcement over local authorities in this regard. The overall rate of compliance with water standards in South Dublin, 99.2%, was above the national average and the quality of water in South Dublin was in general good. Compliance with the microbiological, chemical and indicator parametric values was excellent. The County Council continually monitor of all known waste depository sites in the County in order to preserve sources of drinking water from contamination.

### **1.5.10 Energy and Transport Infrastructure**

#### **1.5.10.1 Public Transport**

Historically, South Dublin County has had the lowest percentage of people in the Dublin area travelling to work or school by train, Dart or Luas.

The Census 2011 information records that of the existing population of 968 within the proposed LAP area, aged five years and over, categorised by means of travel to work, school or college, that 17% of this population use public transport or non-vehicular means compared to a County figure of 35%.

The nearest Luas stop to Ballycullen Oldcourt is located at Tallaght Town Centre, approximately 3 to 4 kilometres to the north-west of the plan lands. The plan lands are served by bus route operated by Dublin Bus running from Ballycullen Road / Knocklyon/Tempoogue to Dublin city centre (no. 15) and from Stocking Ave/Ballyboden to Dublin city centre (no. 15b); the frequency of this service is considered to be predominantly low to medium, but there are significant areas within the LAP land that are not served by public transport. There are no Quality Bus Corridors (QBC's) located at present within the plan lands.

### **1.5.10.2 Roads**

The plan lands are primarily situated to the south of the Stocking Avenue/ Hunter's Road / Oldcourt Road with the land being bookended on the eastern and western sides by the M50 and the Bohernabreena Roads respectively (neither which have direct access to the LAP lands). The Stocking Lane fly-over the M50 provides access to the Scholarstown and Ballyboden areas.

Access to the M50 is via the Firhouse Junction from the Killinney Road (R113). Access to Tallaght and the N81 is via the Old Bawn Road (R113) by means of the Old Mill junction which is at capacity. With the development of the Ballycullen Oldcourt lands, the traffic volumes are likely to increase in the area and this junction will become further congested with reduced capacity and increased volumes of traffic with likely increasing queuing and subsequent delays.

There is an identified lack of cycle ways and connecting footpaths located throughout the plan lands. The lack of connectivity permeability in the area reduces accessibility in terms of walking and cycling, increasing the amount of internalised car journeys which have to be taken for trips to school, shops, etc, and increasing potential for conflict with regional traffic.

### **1.5.11 Cultural Heritage**

The proposed LAP land is positioned overlooking a landscape which exhibits a diverse prehistoric and early medieval archaeological content. Within the environs of the proposed LAP area both ritual and secular activity are evident with the Bronze Age cemetery of Edmondstown (DU022:029) located 1km to the east in the Owendoher Valley while habitation sites such as fulachta fiadh and hut sites were excavated in the townlands of Oldcourt and Ballycullen. The settlement site of Oldcourt/Ballycullen is indicative of Bronze

Age- Iron Age human utilisation of this landscape. A notable curvature in the northwestern townland boundary of Ballycullen shows a possible indication of a degraded enclosure site or as an area of archaeological potential.

A archaeological report assessing the Oldcourt area has identified thirteen features of archaeological potential which were recorded during aerial photographic analysis of the proposed development area in January 2007.

There are no Recorded monuments located within the Plan Lands. Two such monuments are located to the south—west of the lands within and near Bohernabreena, which are as follows:

- RM Ref. DU021-061 – Bohernabreena Church Site
- RM Ref. DU022-027 – Bohernabreena Ringfort (Rath/Cashel)

### **1.5.12 Climatic Factors**

The main issue facing South Dublin in relation to the development of the Ballycullen Oldcourt LAP lands and climate change relate to increased amounts of greenhouse gas emissions from transport movements. Reducing car movement at the neighbourhood level through increasing ease of pedestrian movement must be the foundation stone for an overall decrease in emissions.

South Dublin County Council has prepared the 'Climate Change Strategy 2009-2012' indicating sustainable measures relating to planning, energy, transport, waste management and ecosystems, to be undertaken and promoted by the County Council. Sustainable development within the County requires an integrated approach regarding sustainability and environmental performance. At the Local Area Plan level, there is the opportunity to ensure development takes place utilising best practice for development which surpasses required Irish standards, and sets ambitious yet ultimately achievable targets.

### **1.5.13 Identified Data Gaps within the Baseline Information**

There are still a number of data gaps in the Baseline information. These are;

- The lack of a Biodiversity Plan for South Dublin.
- An incomplete Landscape Character Assessment for South Dublin.
- Lack of information on air quality

Some, though not all, of the information gaps caused by the absence of a Biodiversity Plan and a detailed Landscape Character Assessment have been addressed under the auspices of the Heritage Plan 2010 – 2015 and the Historic Area Assessment.

### **1.5.14 The likely evolution of the environment without the implementation of the Plan**

In the absence of a Local Area Plan development would continue to expand into the already zoned greenfield lands and the opportunity to create a robust Green Infrastructure network within the LAP lands would be lost.

Ecological connectivity would not be provided, resulting in further habitat fragmentation through the removal of hedgerows.

The use of Sustainable Urban Drainage Systems (SuDS) in Ballycullen Oldcourt would not be prevalent; the use of underground attenuation tanks, if continued, would negatively impact on water quality and flood risk.

If new development was not accompanied by appropriate waste water infrastructure /capacity then the likelihood of water bodies in South Dublin achieving WFD commitments would be reduced. Significant adverse impacts upon the biodiversity and flora and fauna of the County and wider impacts upon the transitional waters of the Liffey, and Dublin Bay might be expected.

In addition, the opportunities to provide enhanced walking and cycling routes would be less likely without the provision of a Plan.

It is not considered that the Water Supply aspects would be significantly affected in the absence of a Local Area Plan.

## **1.6 Strategic Environmental Protection Objectives**

The Draft Plan is subject to a number of high level national, international and regional environmental protection policies and objectives. A series of Strategic Environmental Objectives (SEO's), see table below, have been derived from these sources which cover the range of environmental aspects and reflect a local dimension.

Examples of Strategic Environmental Objectives include the aim of the EU Habitats Directive - which is to contribute towards ensuring bio-diversity through the conservation of natural habitats and of wild fauna and flora in the European territory of Member States – and the purpose of the Water Framework Directive - which is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater. The strategy and policies in the Ballycullen Oldcourt Local Area Plan must be consistent with these objectives and the Plan must be capable of implementing these objectives at the local level.

<b>SEO Code</b>	<b>SEO<sup>1</sup></b>
<b>B1</b>	To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites
<b>B2</b>	To avoid significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites
<b>B3</b>	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
<b>HH1</b>	To protect human health from hazards or nuisances arising from traffic and incompatible landuses
<b>S1</b>	To maximise the sustainable re-use of brownfield lands and the existing built environment
<b>W1</b>	To maintain and improve, where possible, the quality of the River Dodder, its tributaries and surface water
<b>W2</b>	To prevent pollution and contamination of ground water
<b>W3</b>	To prevent development on lands which pose - or are likely to pose in the future - a significant flood risk
<b>C1</b>	To minimise increases in travel related greenhouse emissions to air
<b>C2</b>	To reduce car dependency within the County by way of, inter alia, encouraging modal change from car to more sustainable forms of public transport and encouraging development which will not be dependent on private transport
<b>M1</b>	To serve new development under the LAP with appropriate waste water treatment
<b>M2</b>	To maintain and improve the quality of drinking water supplies
<b>CH1</b>	To protect the archaeological heritage of South Dublin with regard to entries to the Record of Monuments and Places - including the Ballycullen Oldcourt Area of Archaeological Potential - and the context of the above within the surrounding landscape where relevant
<b>CH2</b>	To preserve and protect the special interest and character of South Dublin's architectural heritage with regard to entries to the Record of Protected Structures, Architectural Conservation Areas, and their context within the surrounding landscape where relevant
<b>L1</b>	To protect and avoid significant adverse impacts on the landscape, landscape features and designated scenic routes; especially with regard to areas of high amenity of the Dublin Mountain Area

<sup>1</sup> Strategic Environmental Objectives (SEOs) are methodological measures which are developed from international, national and regional policies which generally govern environmental protection objectives and against which the environmental effects of the Draft Plan can be tested. The SEOs are used as standards against which the development strategies, policies and objectives of the Draft Plan can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, if unmitigated against.

## **1.7 Description of Alternatives**

The evaluation of the likely environmental consequences of a range of alternative strategies for accommodating future development in the Ballycullen Oldcourt area is part of the SEA process.

The scenarios provide alternative visions of how the future development of Ballycullen Oldcourt might occur. They reflect a range of development pressures and responses that reflect current practice. The scenarios chosen were;

Alternative Scenario 1: Extend the lifespan of the Ballycullen – Oldcourt Action Area Plan 2000

Alternative Scenario 2: Market-Led Growth

Alternative Scenario 3: Preservation /Limited Development Approach

Scenario 4: Sustainable Development with strong Green Infrastructure Framework

### **1.7.1 Scenario 1- Extend the lifespan of the Ballycullen – Oldcourt Action Area Plan 2000**

This scenario involves continuing to implement the Ballycullen – Oldcourt Action Area Plan 2000 and the extension of those policies and objectives into the adjoining areas subsequently zoned for development.

Under this scenario higher residential densities would be prevalent throughout the plan lands. The intensity of residential development throughout the plan lands would lead to the removal of existing hedgerows in the Oldcourt area which would also impact on the biodiversity network in the area. Higher density development would also have an impact on the landscape.

Under this scenario, surface water drainage would be guided by policies within the County Development Plan and the Greater Dublin Drainage Strategy rather than within

the LAP itself; the opportunity to implement a of Sustainable Urban Drainage Systems (SuDS) would be lessened .

### **1.7.2 Alternative Scenario 2: Market-Led Growth**

This scenario involves allowing growth to follow the demands of the market, facilitating flexibility with planning guidelines, infrastructure capacity or environmental constraints. The location and nature of development would be completely dependent upon market demand and applications would be evaluated on a case by- case basis by the Council.

The relaxation of planning controls throughout the plan lands would lead to the continued expansion and demand for the provision of housing permeating throughout the residentially zoned land in this scenario, with little or no provision of community infrastructure to accommodate the existing and future population. There would be little attempt made to integrating adjoining existing development both within and outside the LAP area with new development into a coherent urban fabric.

The development of all of the land at very low densities would increase the likelihood of displacement of housing into other, possibly unzoned land, outside the LAP area.

### **1.7.3 Alternative Scenario 3 Preservation /Limited Development Approach**

This scenario prioritises the amenity and character of existing residential areas together with the protection of the land adjoining the foothills of the Dublin Mountains (although this land has already been zoned for residential development). This option would result in either the lands being de-zoned (through a variation of the current Development Plan) or the incorporation of polices into the plan providing for the preservation and protection of the existing built and the rural environment by limiting development to very

low densities apart from the land where permissions have already been granted.

However, while the Plan Lands would remain substantially undeveloped, this would hinder the chances for the provision of greatly needed open space/parkland, community (including the primary school) and retail facilities to meet the existing population in the area. This would also hinder opportunities to create a softer edge between the urban and rural environment.

The Council are also required to meet the housing figures as outlined in the Regional Planning Guidelines. A portion of the Council's required housing numbers is accounted for on the subject lands (100ha). If the lands were to be de-zoned, it would remove the possibility of developing the land at medium to low densities currently favoured by developers and would create pressure to provide such housing on land more suitable of support densities required to make public transport efficient at locations where major infrastructural investment has been.

#### **Scenario 4 - Sustainable Development with strong Green Infrastructure Framework**

This scenario would involve the development of the Ballycullen Oldcourt LAP lands using the concept of Green Infrastructure as a guiding theme for development and also as a means of integrating adjoining existing development both within and outside the LAP area with new development into a coherent urban fabric. The components of Green Infrastructure are green spaces, greenways, parks, the Ballycullen and Oldcourt streams and tributaries, hedgerows and trees, areas around community and institutional land, such as schools. Allowance is made in this scenario for limited trade off between development and environmental protection with mitigation measures ameliorating any negative environmental impacts.

This scenario seeks to focus on the multi-functionality of Green Infrastructure, which

when planned in a coherent manner provides social and economic benefits for the surrounding communities. It provides a holistic approach to developing the landscape inclusive of other influences such as ecological development, improving air, water and soil quality, flood protection access provision and linkages, climate change/amelioration, pollution control and quality of life issues. It can be recognised as a significant element within sustainable communities, contributing directly or indirectly to economic development and delivering real benefits to people's quality of life.

This scenario would safeguard the distinctive character and openness of the area and would conserve the natural and cultural heritage. The existing streams and hedgerows which traverse the plan lands would be safeguarded, enhanced and maintained with cycle/pedestrian routes provided in strategic locations throughout the plan lands, enabling recreation whilst providing a pleasant environment for the existing and future populations and maintaining opportunity to access the Dublin Mountain foothills. The SuDS approach sets out to ensure that developments do not generate any additional surface water discharge over the baseloads of existing greenfield sites

The scenario provides for the development of land already with planning permissions to be developed as lower densities but in a manner that still provides for a significant number of new dwellings and allows for the provision of phased infrastructure for new and existing housing.

## **1.8 Evaluation of Alternative Plan Scenarios**

Each of the Alternative Scenarios were examined under the Strategic Environmental Objectives.

Alternative Scenario 1: Extend the lifespan of the Ballycullen – Oldcourt Action Area Plan 2000

This scenario would require that the densities envisaged in the previous plan be delivered and could result in an additional 3,600 dwellings being built. With such high densities, there is likely to be significant negative impact on the landscape and on the biodiversity network with this scenario. The use of an effective Sustainable Urban Drainage Systems (SuDS) would be unlikely with the use of underground attenuation tanks required to deal with increased surface water run-off: flood risk would be likely, both in and downstream of the LAP lands.

Alternative Scenario 2: Market-Led Growth

Overall, many of the impacts that might result from development would be uncertain depending on the nature of the development as determined by the market, very low or high densities.

The relaxation of planning controls throughout the plan lands would lead to significant impacts on the Biodiversity network and the absence of SuDS measures would compromise the quality of groundwater, surface water and the likelihood of pollution/contamination and also increase the likelihood of flood risk. There would be little attempt made to integrating adjoining existing development both within and outside the LAP area with new development into a coherent urban fabric, with little or no provision of community infrastructure to accommodate the existing and future population. There would be an increase in unsustainable car based transport, thus impacting on/increasing air quality/emissions.

Alternative Scenario 3: Preservation /Limited Development Approach

This scenario prioritises the amenity and character of existing residential areas together with the protection of the land

adjoining the foothills of the Dublin Mountains. This option would result in either the lands being de-zoned (through a variation of the current Development Plan) or the incorporation of polices into the plan providing for the preservation and protection of the existing built and the rural environment by limiting development to very low densities apart from the land where permissions have already been granted.

While the impact on the SEO's within the plan area would be positive, it is likely that the housing would be displaced into other areas, some zoned and others unzoned and thus have significant indirect negative impact in those areas

Alternative Scenario 4: Sustainable Development with strong Green Infrastructure Framework

is more likely to bring about better environmental outcomes because of its ability to provide for sustainable development and integrate it into the biodiversity networks and SUDs provision in the plan lands, as well as providing for increased connectivity and permeability thereby improving the surrounding environment.

The Proposed Local Area Plan option that has emerged from the Plan preparation process has a close correlation to Alternative Scenario 4.

## 1.9 Mitigation Measures

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Local Area Plan. Mitigation involves ameliorating significant negative effects. Where there are significant negative effects, consideration is given in the first instance to preventing such effects or,

where this is not possible for stated reasons, to lessening or offsetting those effects.

The introduction of the concept of Green Infrastructure to the LAP ensures the conservation and enhancement of biodiversity; the provision of accessible parks, open spaces and recreational facilities; the sustainable management of water ; the maintenance of landscape character; and the protection and enhancement of the architectural and archaeological heritage. Particular mitigation measures are recommended in the Environmental Report for the following topics:

- Biodiversity
- SuDS as means of surface water disposal and flood risk prevention
- Landscape

## **1.10 Monitoring**

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. The Environmental Report puts forward proposals for monitoring the Plan which are adopted alongside the Plan. Monitoring enables, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action. In addition to this, monitoring can also play an important role in assessing whether the Local Area Plan is achieving its environmental objectives and targets - measures which the Local Area Plan can help work towards - whether these need to be re-examined and whether the proposed mitigation measures are being implemented.

The Environmental Report identifies indicators - which allow quantitative measures of trends and progress in the environment over time. Measurements for indicators come from a range of existing monitoring sources and from a series of meaningful indicators that can be derived from the Development Management system using the Council's SEA Monitoring System.

A preliminary monitoring evaluation report on the effects of implementing the Local Area Plan will be prepared within two years of the making of the plan. The Council is responsible for collating existing relevant monitored data, the preparation of a monitoring report, the publication of this report and, if necessary, the carrying out of corrective action.

## **1.11 Conclusion**

The Environmental Report of the Draft Ballycullen Oldcourt Local Area Plan 2013-2019 contains the full detail and maps of the information summarised above.