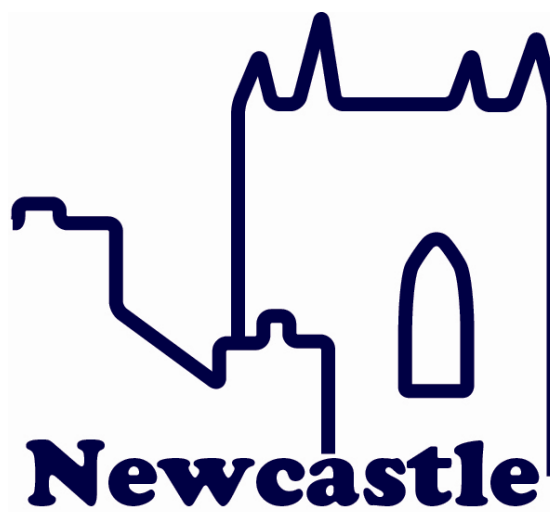


ENVIRONMENTAL REPORT

OF THE

PROPOSED NEWCASTLE LOCAL AREA PLAN 2012-2018

STRATEGIC ENVIRONMENTAL ASSESSMENT



South Dublin County Council

County Hall

Tallaght

Dublin 24



JULY 2012

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List of Abbreviations

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

The aim of the Environmental Report is to identify:

1. The existing environmental issues in the Newcastle 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 Newcastle Local Area Plan with the aim of achieving sustainable development in the County without causing adverse harm to the environment.

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 in the Newcastle LAP area. This report should be read in conjunction with the Newcastle 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 Newcastle and where it occurs will be significantly determined by the implementation of the Newcastle Local Area Plan. Real improvements in environmental management and planning can be achieved in Newcastle 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 Directive¹.

¹ Implementation of SEA Directive (2001/42/EC) Assessment of the Effects of Certain Plans and Programmes on the

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.

Section 2 SEA Methodology

2.1 Introduction

This section details how the SEA for the Newcastle 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
<p>1. Screening</p>	<p>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 Newcastle LAP area was 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. Consequently it is including Strategic Environmental Assessment as part of the production of the LAP</p>
<p>2. Scoping Issues Paper</p>	<p>A Scoping Issues Paper was prepared containing baseline environmental data which was sent to the Environment Authorities on the 30th September 2011.</p>
<p>3. Consultation with the Environmental Authorities</p>	<p>Submissions received from the Environmental Authorities.</p>
<p>4. Preparation of Environmental Report and Draft Local Area Plan</p> <ul style="list-style-type: none"> ○ Environmental Objectives Established ○ Assessment of Alternative Scenarios ○ Mitigation Measures Detailed ○ Monitoring Measures Detailed 	<p>Establishment of SEA team to create policy consistent documents and to examine the effects on the environment of implementing the objectives and policies.</p> <ul style="list-style-type: none"> ○ Objectives and Polices created in Proposed Newcastle Local Area Plan assessed in Environmental Report and alternative Development Scenarios for the area examined. ○ Favoured scenario chosen. ○ Mitigation measures discussed and chosen. ○ Monitoring incorporated into existing methods.

<p>5. SEA Statement</p>	<p>At the end of the process, a statement will be issued by the Council summarising:</p> <ul style="list-style-type: none"> ○ how environmental considerations have been integrated into the plan, ○ 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. ○ the reasons for choosing the plan, as adopted, in the light of the other reasonable alternatives dealt with, and ○ the measures decided upon to monitor the significant environmental effects of implementation of the plan.
<p>6. Monitoring the Newcastle Local Area Plan</p>	<p>Monitoring significant environmental effects over the lifetime of the Newcastle 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 Newcastle 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 problems², thereby avoiding

² 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

resources being wasted on unnecessary data collection.

An SEA Scoping Issues Paper was issued to the designated Environmental Authorities on 30th September 2011 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, Fisheries and Food (DAFF)

current environmental conditions and ideal targets. If environmental problems are identified at the outset they can help focus attention on important issues and geographical areas where environmental effects of the plan or programme may be likely.

- to identify and consult on the environmental objectives, which will be used to ensure the integration of the environment into the preparation of the Newcastle 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 Department of Arts, Heritage and the Gaeltacht.

The most important strategic environmental issues in the Newcastle LAP area arising from the scoping exercise and from the consultations were identified as follows:

- The use of Sustainable Urban Drainage Systems (SUDS) in the LAP lands will be primary strategies in the plan.
- A commitment to implementing the recommendations of the Eastern River Basin District Management Plan and associated Programme of Measures, as relevant to Newcastle-Lyons, in order to improve water quality within the Plan area, having regard to the 'Bad' status of the Lower Griffeen River and the 'Moderate' status of the River Liffey, under the Water Framework Directive.
- Need to maintain Biodiversity Network, in particular along existing burgage hedgerows and the need to comply with the Habitats Directive.
- Loss of habitat due to hedgerow removal, thus impacting on the presence of a significant number of bats in the area, which are a Protected Species under domestic and EU legislation.

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 Newcastle 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 Newcastle 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 Newcastle LAP is also described.

2.4 Strategic Environmental Objectives

The making of the new Newcastle 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 Newcastle 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 Newcastle 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 Newcastle 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 Newcastle 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 Newcastle 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 Newcastle 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 Newcastle 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)³ and includes the relevant sections of this report which deal with these requirements.

³ DEHLG (2004) *Implementation of SEA Directive (2001/42/EC): Guidelines for Regional Authorities and Planning Authorities* Dublin: Government of Ireland.

Information Required to be included in the Environmental Report	Corresponding Section of this Report
(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

Table 2.2 Checklist of Information included in this Environmental Report

2.9 Difficulties Encountered

There are still a number of data gaps in the Baseline information for Newcastle. 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
- Flood Risk information is confined mainly to the OPW's Preliminary Flood Risk Assessment (PFRA)

A Biodiversity Plan will be commencing shortly and is expected to be finalised by late 2012/early 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. Detailed information concerning floodplains will become available following the completion of Catchment Flood Risk Assessment Management Studies (CFRAMS) for the River Liffey which is part of the Eastern CFRAM study.

2.10 Planning Authority Team

A SEA team comprising of two planners has been established in order to examine the significant environmental impacts which may result from the implementation of the new Local Area Plan; the SEA team are a separate team from the Local Area Plan project team.

Section 3 Newcastle’s Baseline Environment

3.1 Introduction

The environmental baseline within Newcastle 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 location of the Newcastle Local Area Plan lands are shown in Figure 3.2 on the 1:50,000 Ordnance Survey Map.

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 Statement⁴ relating to major residential and infrastructure schemes.

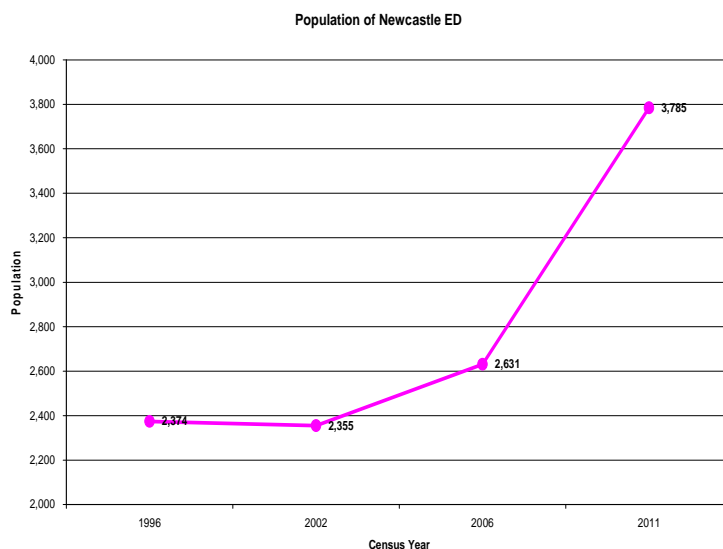
⁴ Tenbury Development, SD05A/0344, EIS for residential development of c.700 dwelling units

Further legislative and contextual information on the environmental topics can be found in the Environmental Report of the South Dublin County Development Plan 2010 – 2016.

3.2 Population

3.2.1 Introduction

The LAP lands are predominantly comprised of residentially developed lands. The LAP lands are located within the Newcastle District Electoral Division (DED). While in general, there is a decline in population in the older parts of the County, areas at the periphery of the County, such as Newcastle have experienced growth with the 2011 population (3749 persons) recording an increase in population level of 42.5% from the 2006 level of 2631 persons and an increase of 59.2% from the 2002 total population of 2355 persons (Census 2002, 2006 and 2011⁵).



Source: CSO 1996-2011

Figure 3.1 Population by ED 1996-2011

⁵ Census 2011- Preliminary Results

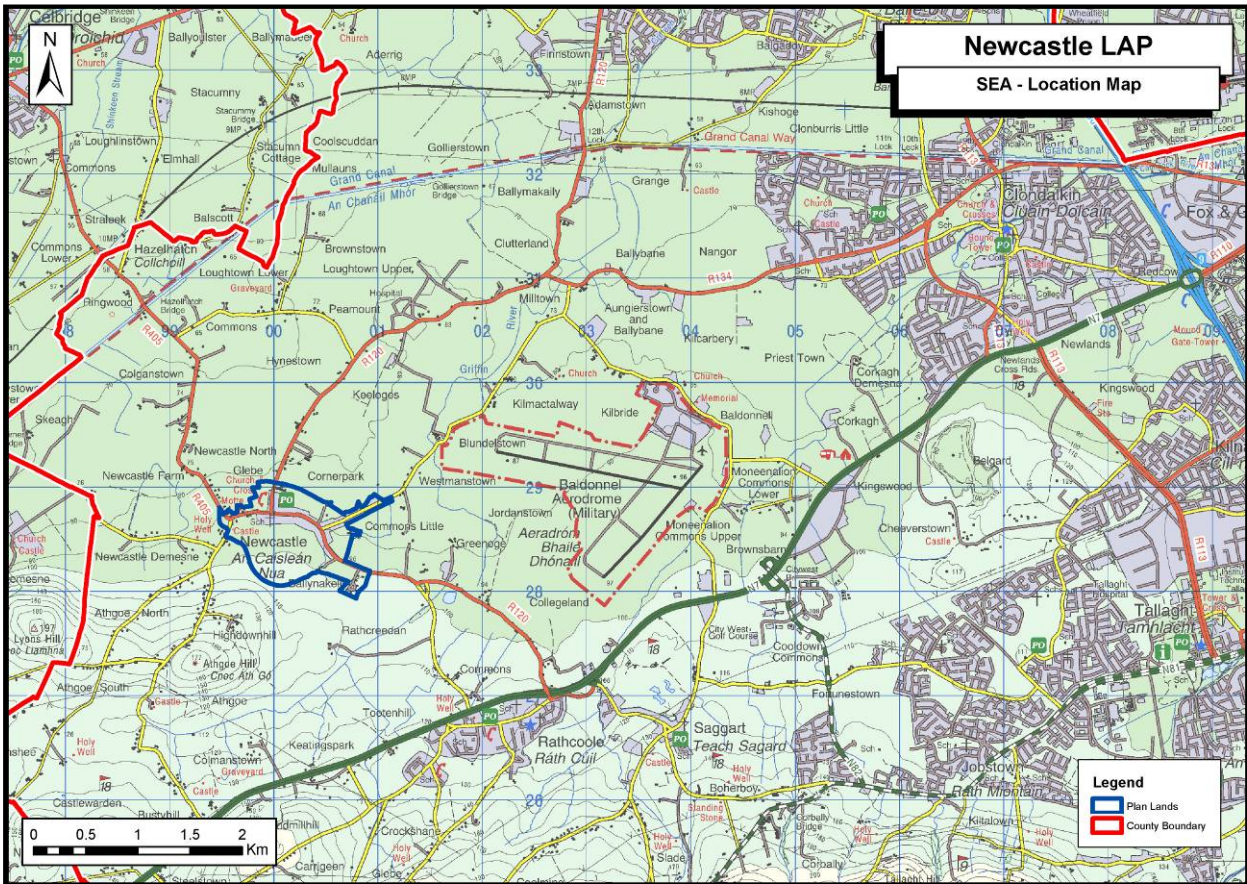


Figure 3.2 1:50,000 Ordnance Survey Map of South Dublin

3.2.2 Population Issues: Existing Problems / Environmental Considerations

South Dublin is experiencing two main issues in relation to population; that of depopulation in older established areas, and population growth in Greenfield areas at the periphery of the urban fringe. The Census 2006 indicated that an increasing number of households and decreasing household size is creating demand for more housing units.

In the preliminary results of the 2011 Census however, a large increase in high vacancy and oversupply of housing units were noted. The areas of high vacancy/oversupply coincide with the areas of low or negative population growth, which suggest that they will suffer ongoing issues of oversupply for many years. It is noted in the Census 2011 that there is a 10.7% vacancy rate of the total housing stock in Newcastle ED, in spite of the population increasing in the area during this same period

(2006-2011). The Newcastle LAP lands are located on the periphery of the consolidated urban expansion area. For an area that would be somewhat remote to the main urban agglomeration, it has experienced significant expansion and growth between 2002 and 2011 (Figure 3.1). During this expansion, however, good public transport and community infrastructure were not fully delivered and it remains quite remote to the remainder of areas in the county.

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 the effect of emissions and traffic noise on human quality of life. 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 green-field lands predominately to the south and south-west. 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 Newcastle 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 Grand Canal proposed Natural Heritage Area is located c.2km to the north of the plan lands; it is a man-made waterway linking the River Liffey in Dublin with the Shannon at Shannon Harbour and the Barrow at Athy, (Figure 3.4)

SITE NAME: GRAND CANAL. SITE CODE: 002104

The Grand Canal is a man-made waterway linking the River Liffey at Dublin with the Shannon at Shannon Harbour and the Barrow at Athy. The Grand Canal proposed Natural Heritage Area (pNHA) comprises the canal channel and the banks on either side of it. The canal system is made up of a number of branches - the Main Line from Dublin to the Shannon, the Barrow Line from Lowtown to Athy, the Edenderry Branch, the Naas and Corbally Branch and the Milltown Feeder. The Kilbeggan Branch is dry at present, but it is hoped to restore it in the near future. Water is fed into the summit level of the canal at Lowtown from Pollardstown Fen, itself a pNHA.

A number of different habitats are found within the canal boundaries - hedgerow, tall herbs, calcareous grassland, reed fringe, open water, scrub and woodland. The ecological value of the canal lies more in the diversity of species it supports along its linear habitats than in the presence of rare species. It crosses through agricultural land and therefore provides a refuge for species threatened by modern farming methods.

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 codified⁶ 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 either within or directly adjacent to the proposed LAP lands. There are three Natura 2000 sites within South Dublin County (Glenasmole valley SAC, Wicklow Mountains SAC, and Wicklow Mountains SPA). 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 Liffey Valley, the Dodder Valley and the Grand Canal. While the River Griffeen is not subject to environmental designation, it is none-the-less an important biodiversity corridor. 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

⁶ 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.

boundaries, and stepping stone areas such as defunct quarries, ponds, pools and areas of woodland or substantial tree-lines.

Local Area Plan Lands: A vast majority of the LAP lands are currently undeveloped. These lands consist largely of medium to large grassland plots which form part of an overall field system and burgage plots which has remained largely intact in parts since the turn of the 13th Century and are located in the northern and southern quadrants of the plan lands.

Extensive residential development has occurred in the south-eastern part of the plan lands in recent years and a large part of this area remains as an open construction area from which the topsoil has been removed.

The River Griffeen, which is a tributary of the River Liffey, is located to the southeast of the LAP lands, outside of the LAP boundary. The Griffeen rises in Saggart Hill, 6km to the southeast of Newcastle. It is fed by nearby streams and flows northwards joining the River Liffey. A tributary stream of the River Griffeen (sections of which have been culverted) is located in the eastern quadrant of the plan lands, running in a northeast to southwest direction.

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 Newcastle have been identified under two main categories- built land, improved grasslands (agricultural and amenity). Improved agricultural grassland (located principally in the north and south 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. Amenity grassland (located in the southeastern area of the plan lands) 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, which is the most predominant category in 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).

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. These hedgerows are located along the Peamount Road (north to south direction), along Main Street (east to west direction) and extending out both the Alymer Road and the Hazelhatch Road. A large proportion of these hedgerows have been removed through time to facilitate development, but sections of the hedgerows do remain throughout (Figure 3.3).

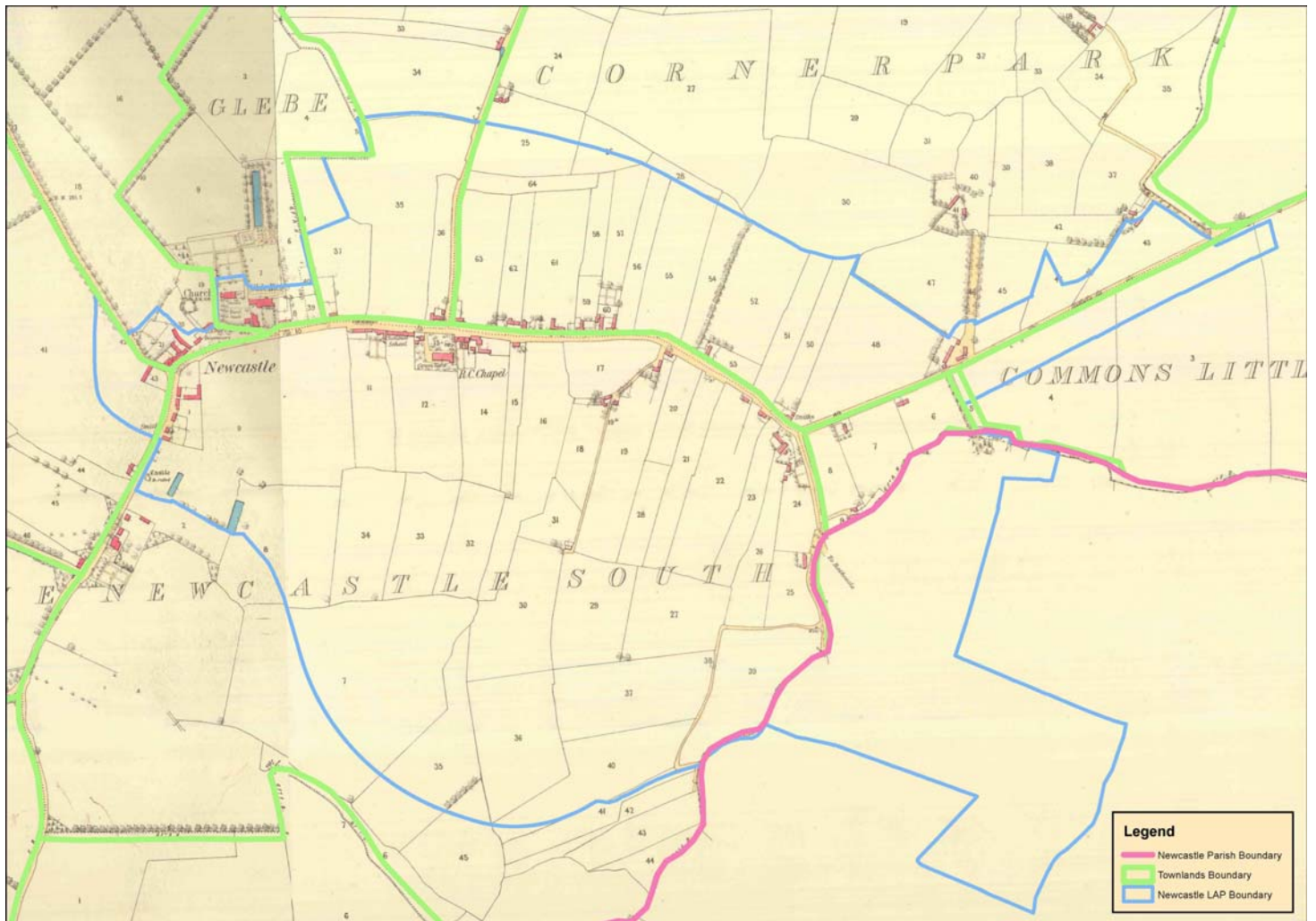


Figure 3.3 Newcastle Parish Map

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. 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 (i.e. where the LAP lands are located) is likely to sit within the *Daubenton's* core range. Most or all of South Dublin County, however, 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.

Further to this survey, a number of roosting sites have been identified on the plan lands, predominately along the Main Street. These sites were identified in bat surveys carried out during the planning application process. One

such site is located the southern side of the Main Street⁷, in close proximity to the 'T' junction between the Main Street and Peamount Road (R120). A bat assessment report was submitted which was based on a preliminary survey undertaken at the beginning of May 2010 just before the peak in maternity roost activity. This survey recorded 67 bats drawn from 3 different breeds- Common Pipistrelle, Soprano Pipistrelle and *Leislars*). These bats emerged from the apex of the roof of the main building on the site, which was a two storey building. As this was not the only exit point from this roof, the report estimates that the number of bats roosting in the roof would be over 100.

Another roost was also identified at Oakville House, on the northern side of the Main Street, in a bat survey carried out for a proposed development (Planning Register Reference SD10A/0017 and An Bord Pleanala PL06S.237827 refers). The presence of a maternity roost of 200 Soprano Pipistrelle bats was identified within the two storey building. Subject to mitigation measures carried out to facilitate the bats located on site, permission was granted for the redevelopment of this site (no construction has commenced to date). Further bat surveys carried out within the village as part of planning applications have identified the presence of bats, either in the location of roosts or identifying flight paths and foraging routes of bats.

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.

⁷ Planning Register No. SD10A/0019 and An Bord Pleanala PL06S.237955 refers. Permission for the redevelopment of this site was refused by An Bord Pleanala on appeal, with one of the reasons for refusal relating to the presence of bats on site.

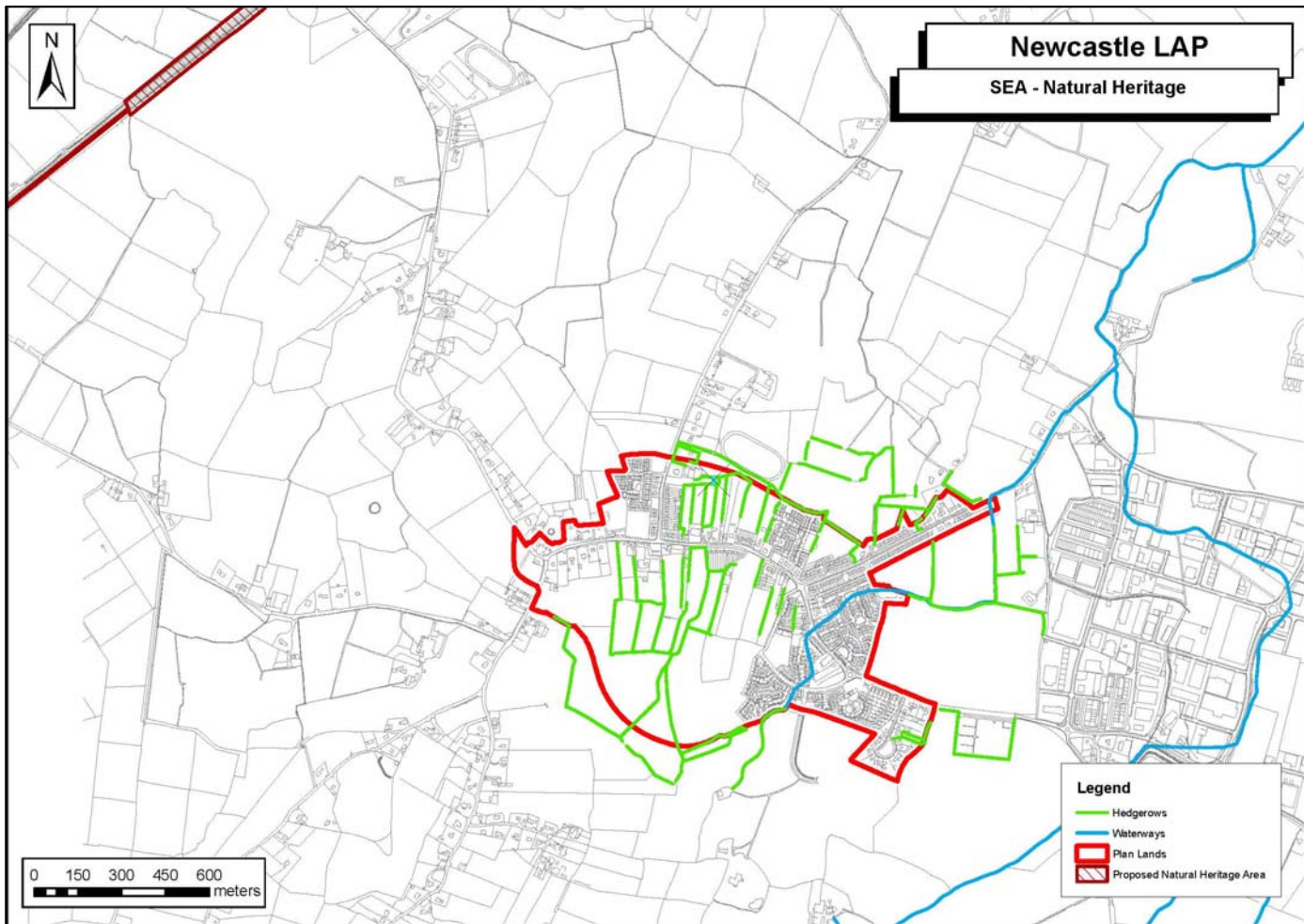


Figure 3.4 Newcastle's Natural Heritage

3.3.4 Aquatic Biodiversity, Flora and Fauna

The River Griffeen is a tributary of the River Liffey. Brown Trout and Three-spinned stickleback were found to be present in the river during a fish salvage operation during the Griffeen Castle weir installation⁸. The River Liffey supports Atlantic Salmon (*Salmo salar*, Annex II of the Habitats Directive), and brown and sea trout.

- Loss of habitat due to hedgerow removal, thus impacting on the presence of a significant number of bats in the area, which are a Protected Species under domestic and EU legislation.
- Use of Sustainable Urban Drainage Systems as a means of retaining existing biodiversity and developing biodiversity network
- Need to establish a Biodiversity Network, along the hedgerows (in particular incorporating the burgage plots) and ditches.

3.3.5 Biodiversity: Existing Problems and Environmental Considerations

- Significant habitat fragmentation has already occurred in the south-eastern LAP land area

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.

⁸ Eastern Regional Fisheries Board- Annual Report 2007

Ecological connectivity could not be provided, resulting in further habitat fragmentation

through the removal of hedgerows and disturbance to the bat population in the area.

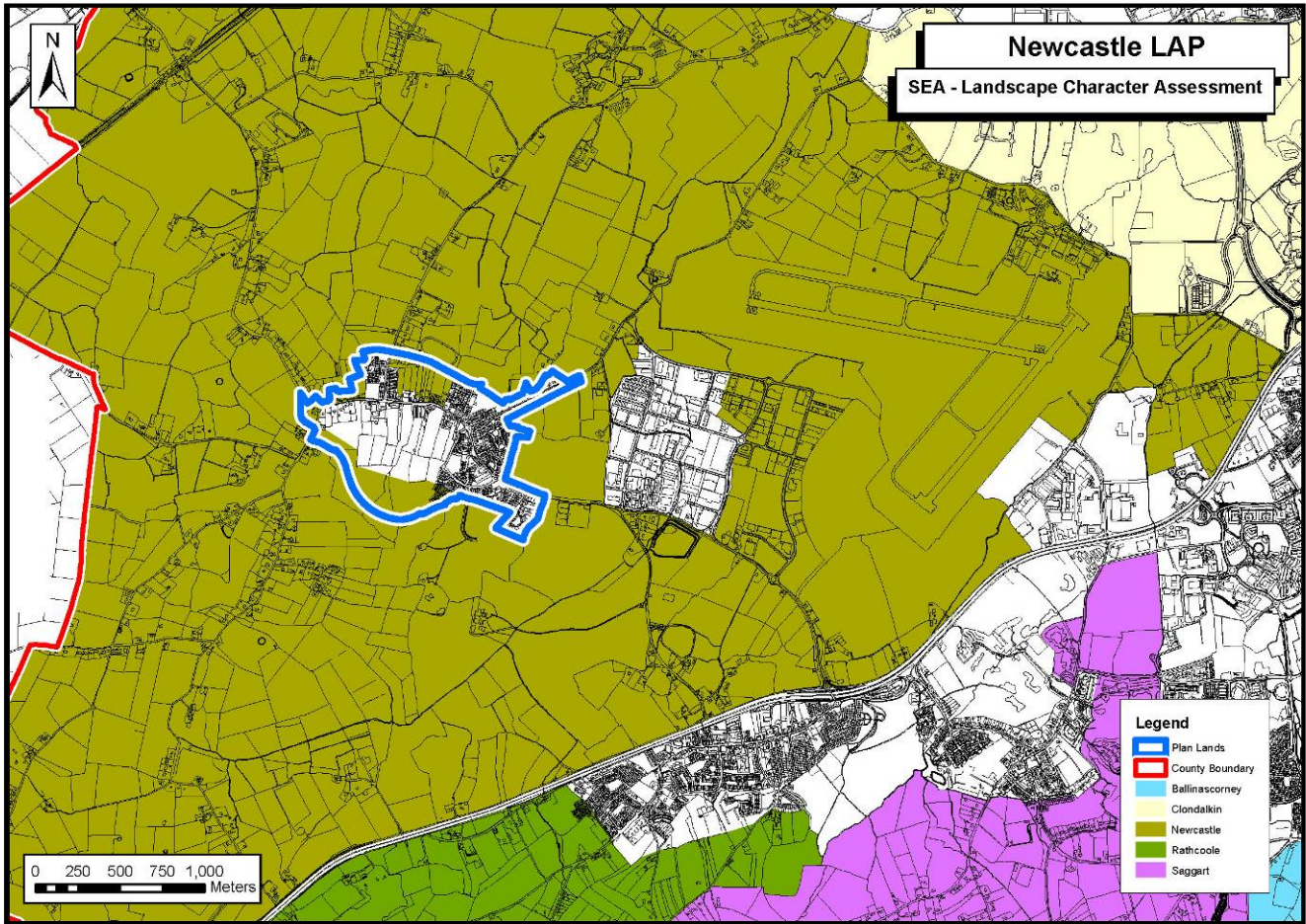


Figure 3.5 Location of Landscape Character areas

3.4 Landscapes

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.

South Dublin County Council undertook a partial Landscape Character Assessment in 2004 as part of the preparation of the County Development Plan 2004-2010 (Figure 3.5). The plan lands are located within the Newcastle Character Area as identified in the Landscape Character Area Assessment in the County Development Plan 2010-2016 (Table 3.1). The plan lands boundary, however, while centrally located within the character area, have been identified within the urban agglomeration.

Location	Description	Issues of Sensitivity
4. Newcastle	Rural area of arable farming and grazing, with well defined field boundaries. Little forestry exists. Flat grassland dominates the aerodrome area to the east	<ul style="list-style-type: none"> • Area around Newcastle Village and Baldonnell is subject to considerable development pressure ▪ Intact field patterns with hedgerow boundaries are under threat ▪ Grand Canal and banks to be conserved ▪ Open, expansive and rural character of the area ▪ Military aerodrome to the east, at Baldonnell has maintained open character of area. ▪ Mixed planting at Castlewarden Golf course ▪ Rich architectural heritage ▪ The Griffeen River forms a potential green link

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

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 areas⁹. 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. It also proposes to develop a new system for the identification, registration and conservation of historic landscapes. The Bill will include a broad definition of landscape and will have two levels of protection for historic landscapes. The first level will include a small number of iconic landscapes to be known as Outstanding Historic Landscapes. The second level will be comprised of Special Historic Landscapes; these will be more locally based historic landscapes, mainly complexes of archaeological monuments. To date, the proposed Bill has not been signed into law and therefore there is no statutory protection of historic landscapes in Ireland to date.

At a local level, the County Development Plan 2010-2016 contains a number of objectives for the protection of the landscape. In addition, there are a number of objectives to protect views from certain roads; one such view is located within the plan lands boundary along the Hazelhatch/Celbridge road. This protected view is from the road looking in a south-westerly direction towards Athgoe Hill.

⁹ Landscape Character Assessment in Ireland: Baseline Audit and Evaluation March 2006; Julie Martin Associates

3.4.3 Newcastle Landscape Character

The 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 Newcastle village had not occurred at that time. In terms of "issues of sensitivity", the northern and southern parts of the village (some of which have since become rezoned and developed upon in recent years) and the environs of Newcastle have been identified as being "*within an area of considerable development pressure.*" The rural character of the village has already suffered negative impact due to the high levels of interference and degradation from extensive housing developments, roads and industry, in particular in the south-eastern quadrant of the lands (at Ballynakelly) where extensive development has occurred in the past number of years. There are a number of remaining lands along the Main Street (R120/R405) and to the rear of existing properties which remain undeveloped and on which some hedgerows do exist and remain intact.

An action of the South Dublin County Council Heritage Plan 2010-2015¹⁰ involves commencing Historical Area Assessments (HAA) with a view to constructing a County Historic Landscape Characterisation. In 2011, a Historical Area Assessment of Newcastle-Lyons was carried out by South Dublin County Council and sought to define the character of the area of Newcastle through the detailed documentation of the surviving historic buildings and elements of the landscape, such as the street patterns, boundaries and open spaces, which provide their setting. For the purpose of the study, the area of Newcastle-Lyons was divided into nine different zones, Zone A-I. Their individual character was defined from a combination of factors including architectural information, plot size, green spaces and evolution of the zone. It was stated from analysis of the findings of the HAA that the character of Newcastle-Lyons village is that of a manorial village with a linear street pattern, the inhabitants of which exploited the agricultural potential of the surrounding countryside. It was marked by low-key development for the majority of its history with the consequence of excellent preservation of

¹⁰ SDCC Heritage Plan 2010-2015-Action 3, Objective 1(vi)- "*Expand on the Council's Landscape Character Assessment for the County and commence Historic Area Assessments with a view to constructing a County Historic Landscape Characterisation.*"

much of its historical features. Mounting development pressures during the early 21st century irreparably changed this character which is now dominated by high-density housing to the east of the village.

There are also protected views within the LAP plan lands, located on the Hazelhatch Road in the north-western quadrant of the plan lands. It is a specific objective of the South Dublin County Development Plan 2010 – 2016 to preserve the views from this section of the Hazelhatch Road nearest the Village to the surrounding countryside, Athgoe Hill and Lyons Hill.

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 Historic Area Assessment, however, has helped in establishing baseline information and identifying the key aspects of the area that warrant protection and enhancement. The key aspects and issues that need to be given consideration include

- Erosion of the historical land holding system
- Removal of hedgerows and burgage plots
- Loss of public spaces and amenities
- Landscape under considerable urban related development pressure
- Evolving Special Historic Landscape area
- The need to maintain the Landscape and particular protected views to the countryside thereby maintaining the relationship between the Historic Area and its surrounding setting

3.4.5 Evolution of Landscape in the Absence of a County Development 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 Newcastle Area (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 Dinantian Upper Impure Limestone. The bedrock to the south of Newcastle is Dinantian Lower Impure Limestone and Silurian Metasediments and Volcanics

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 include the area adjoining the Blackrock-Rathcoole Fault which runs to the south of the Newcastle LAP area. South Dublin County Council granted planning permission (Planning Register Reference SD10A/0283) in Rathcoole, just outside the Newcastle LAP area to the east, for the development and operation of the first geothermal electricity generation plant in Ireland. The development will consist of the initial drilling of two deep wells to an approximate depth of 4000 metres. The wells will be used for the extraction and re-injection of natural hot geothermal water. The heat from the water will then be used to operate a geothermal electricity generation plant that will generate up to 4.5 megawatts of electricity which will be fed into the National Grid.

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; following consultation with the Geological Survey of Ireland, a number of sites considered to be geologically sensitive and important were identified. One such site is located approximately 0.7km outside of the plan lands to the northwest, as detailed below.

Site Location	Principal Characteristics	Classification	Summary
Newcastle	Fill-in channel and cave sediments.	Potential Natural Heritage Area (NHA)/Definite County Geological Site (CGS)	Of Regional Importance, but potentially of greater status.

Table 3.2 Sites of Geological Interest- Newcastle

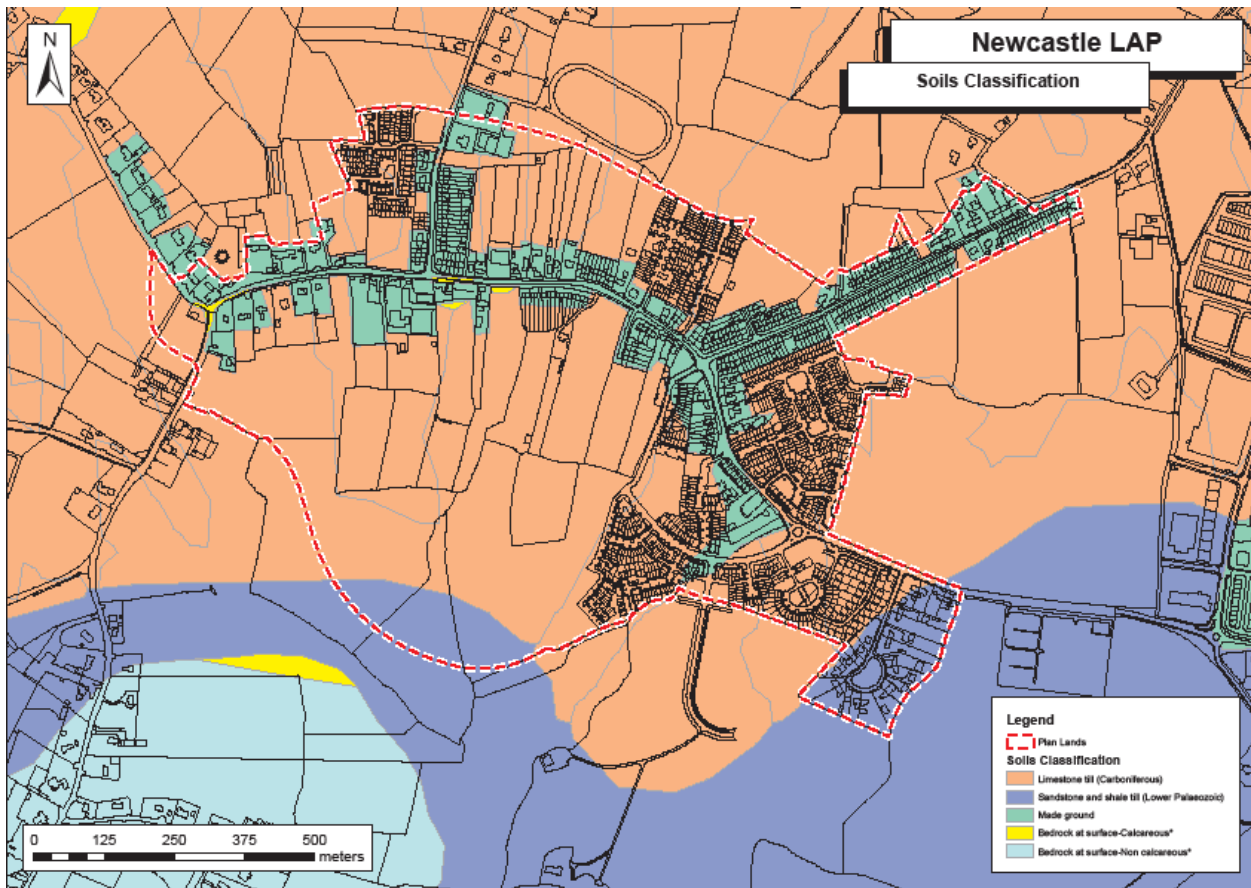


Figure 3.6 Newcastle Soils

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 proposed LAP lands comprise of two soil types-Limestone Till is the predominant soil type and covers the northern, western and eastern portions of the lands. The pattern of development in the village has concentrated along the road network within the plan lands and therefore has resulted in the soil type at these locations being categorised as Made Ground¹¹ (Figure 3.6).

¹¹ Made Ground typically comprises of demolition rubble made up of concrete, brick, glass, ash, pottery and mortar in a matrix of gravelly clay.

3.5.4.1 Contaminated Soils

A number of sites (extant and closed) are located in the County which have had a negative affect on the soil resource in which they are located. These include contaminated areas such as old landfills and Seveso sites. 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. A number of these sites are monitored by South Dublin County Council, with a view to providing remedial action when required. None of the Contaminated Sites are within the Newcastle LAP area.

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

6km to the south-east of the LAP lands. There is another quarry located 2.7km to the south of the LAP lands at Windmill 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 Section 22 contaminated soil sites and quarries 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 Newcastle LAP area can be categorised as "Urban fringe farmland" subject to urban development pressures due to proximity to Dublin Metropolitan area.

Although the proposed LAP lands predominantly consist of residentially developed lands, there is some unmanaged or abandoned agricultural land surrounded by existing residential and commercial development located within the village. Lands surrounding the plan lands to the southwest, north and northwest remain in active agricultural used (stocked grassland and tillage).

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 Newcastle 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 Newcastle Local Area Plan lands are all located within the River Griffeen and River Liffey catchment areas.

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 Newcastle LAP lands are located within both the Liffey Lower and the Griffeen Catchment areas.

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 Newcastle plan lands are located within the Liffey Catchment. There are five (5) stations monitoring the Liffey within South Dublin. The most recent¹² water quality data indicates the quality of water in the south Dublin sections of the Liffey as being as good status (Q4)¹³.

The Eastern River Basin District River Basin Management Plan 2009-2015 indicates that the overall status of the Liffey Lower is moderate. It is an overall objective to restore the status of the river to 'good' by 2027¹⁴. The overall status of the Griffeen Lower is Bad and it is an overall objective to restore the status of the river to 'good' by 2027. (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

¹² EPA (2010) Water Quality in Ireland 2007-2009, Wexford: EPA

¹³ 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.

¹⁴ 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).

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 Griffeen and Liffey Lower back to good status.

The additional measures for the River Griffeen and Liffey Lower 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

	Liffey Lower	Griffeen Lower
<i>Overall Status</i>	Moderate	Bad
<i>Objective</i>	Restore 2027	Restore 2027
<i>Risk</i>	At Risk	At Risk
<i>Heavily Modified</i>	No	No
<i>Macroinvertebrate Status</i>	Moderate	Not Assessed
<i>Physico-Chemical Status</i>	Moderate	Good

Table 3.3: Status Report of the Liffey and Griffeen Rivers¹⁵

¹⁵ Source: www.wfdireland.ie

3.7.4 Groundwater and Aquifer Vulnerability¹⁶

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 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.

The groundwater vulnerability within the proposed LAP lands varies from high to extreme vulnerability in the centre of the plan lands and extending to the northwest; the south-eastern quadrant of the plan lands have been identified as moderate vulnerability

3.7.4.1 Aquifer Vulnerability

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

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

¹⁶ Information on Groundwater and Aquifer Vulnerability from www.gsi.ie

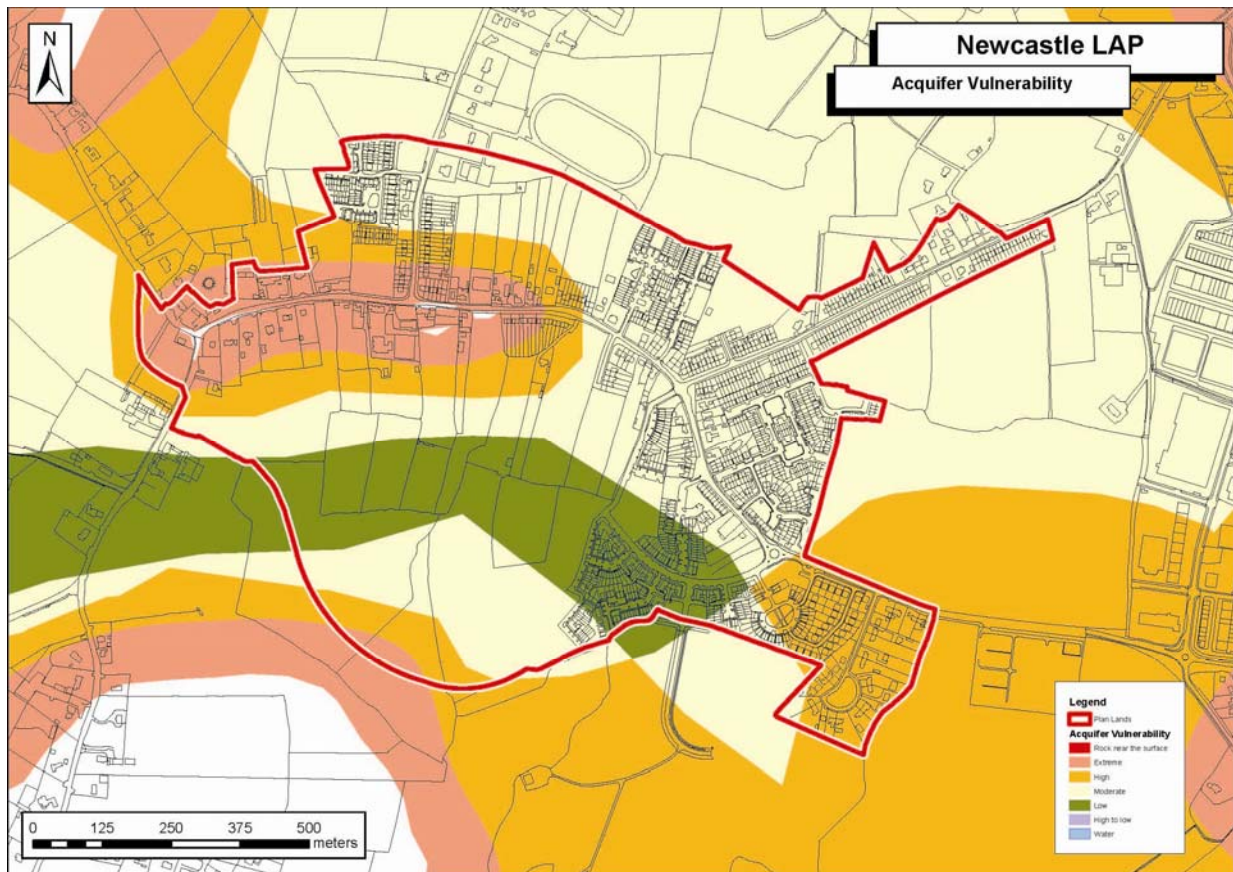


Fig 3.7 Newcastle LAP Aquifer Vulnerability

3.7.5 Surface Water

The Newcastle LAP area is predominantly within the Shinkeen Stream catchment with the eastern part of the LAP area being within the Griffeen River catchment: both water-bodies are tributaries of the River Liffey.

The Shinkeen Stream and its tributaries form just to the north and north-west of Newcastle Village and outside the boundaries of the LAP. The Newcastle LAP lands slope down gradually from South (108m) to North (84m) with the higher lands of Athgoe Hill (177m) just within one kilometer to the south-west. The route of surface water drainage to the Shinkeen Stream follows the contours and direct water, from the higher lands in the south, northwards. There is a small culvert under the Main St which feeds a pool in the grounds of Glebe House. The larger of the Retention Ponds identified in the Newcastle Parish Map OS 1865 at the western end of Newcastle South Townland still appears to exist in some manner (ground heavily pooled following rainfall). A natural swale exists to the north of the village, just outside of the Plan lands, which leads to the origins of part of the

Shinkeen Stream system which crosses the Peamount Road approximately 1km from the centre of the village. There has been recent interference to this swale (as result apparently of creating access to an agricultural field) on a 20-30 metre section of ditch which is causing surface water ponding.

The Griffeen rises in Saggart Hill (395m OD), 3 km to the south of Rathcoole and Northwest of Brittas. It is fed by nearby streams which rise near Athgoe in Lyons Hill (197 mOD) and Athgoe Hill (177 mOD) just Southwest of Newcastle. It flows from there northwards through comparatively flat lands west of Baldonnel Aerodrome from Commons Little to the Grand Canal and on into the Liffey at Lucan.

The recent residential development at the eastern end of Newcastle resulted in the culverting of a section of one of the tributaries of the Griffeen. Provision for dealing with the surface water within these developments included the construction of a number of underground retention tanks.

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.

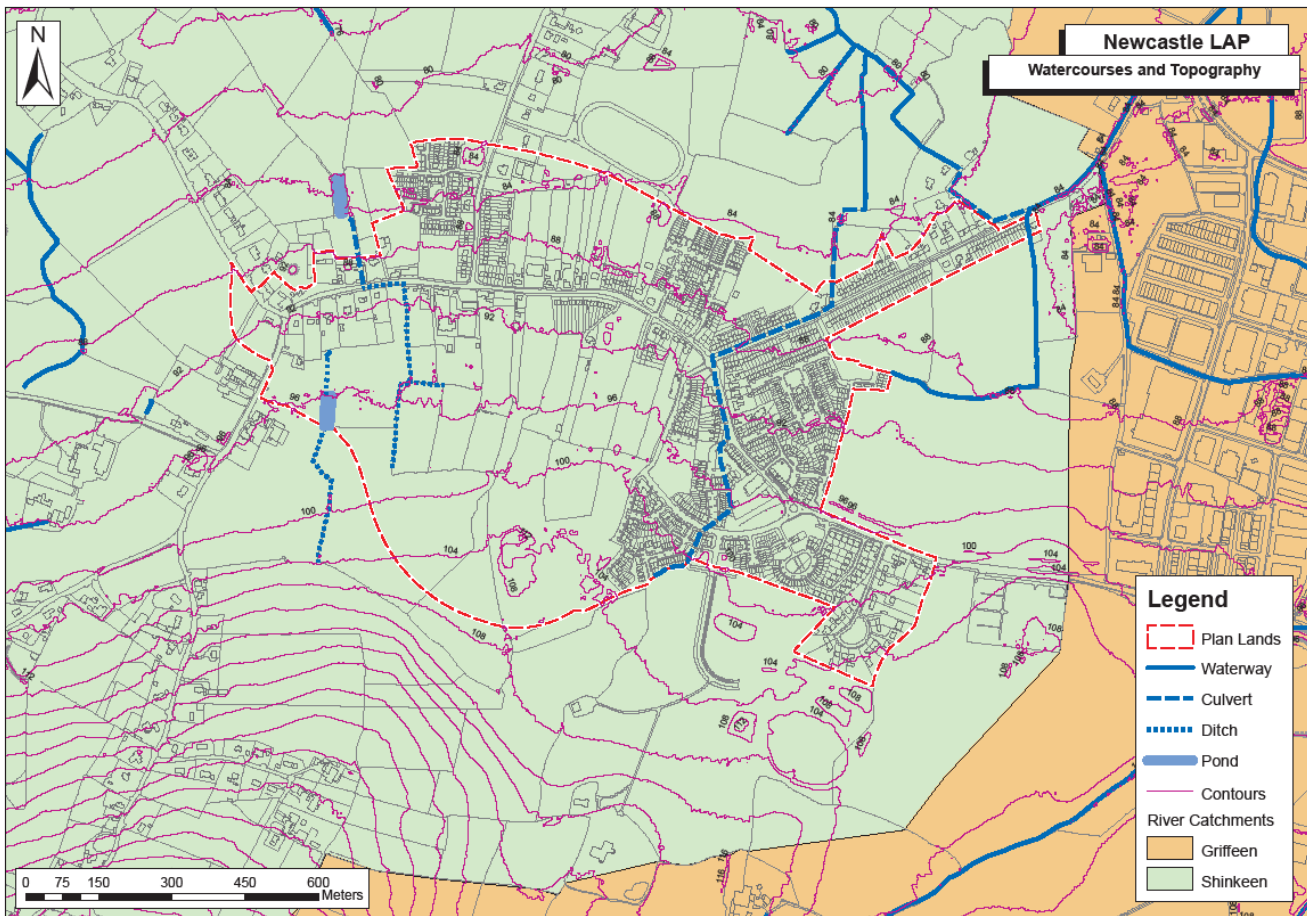


Figure 3.8 Newcastle Watercourses and Topography

3.7.6 Flooding.

3.7.6.1 OPW National Flood Hazard Mapping

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. The Eastern CFRAM study commenced in the Eastern district in June 2011 and will run until the end of 2015. At present, a number of contractors are

undertaking survey work which forms part of the critical path within the delivery programme of the CFRAM studies and is expected to be completed in September 2012.

3.7.6.2 Griffeen and Liffey River Flooding

The Newcastle LAP area is within the Liffey and Griffeen catchment. 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.

The Office of Public Works (OPW) Draft Preliminary Flood Risk Assessment (PFRA)¹⁷, using fluvial and pluvial data records, has identified a number of areas in and around the plan lands which would be areas of potential flood risk (Figure 3.9 below). To the northeast of the plan lands, along the Alymer Road, fluvial data identifies a 1% Annual Exceedance Probability (AEP) 100year event occurring in this area, running in a northeast to southwest direction, within the River Griffeen upper catchment area. The pluvial data records identifies a 1% AEP 100year event occurring on a smaller scale in a number of locations along the Main Street within the plan lands. Flood events have been recorded by the OPW as occurring on the Alymer Road to the northeast of the plan lands and also along Main Street in the village, which occurred in November 2000¹⁸. It has also highlighted some reoccurring flooding that has occurred in these areas.

¹⁷ The OPW Draft Preliminary Flood Risk Assessment is currently closed for public consultation. It is part of the Catchment Flood Risk Management Programmes (CFRAMPs) which is a long-term strategy for the reduction and management of flood risk in Ireland.

¹⁸ Source: OPW website- www.floodmaps.ie

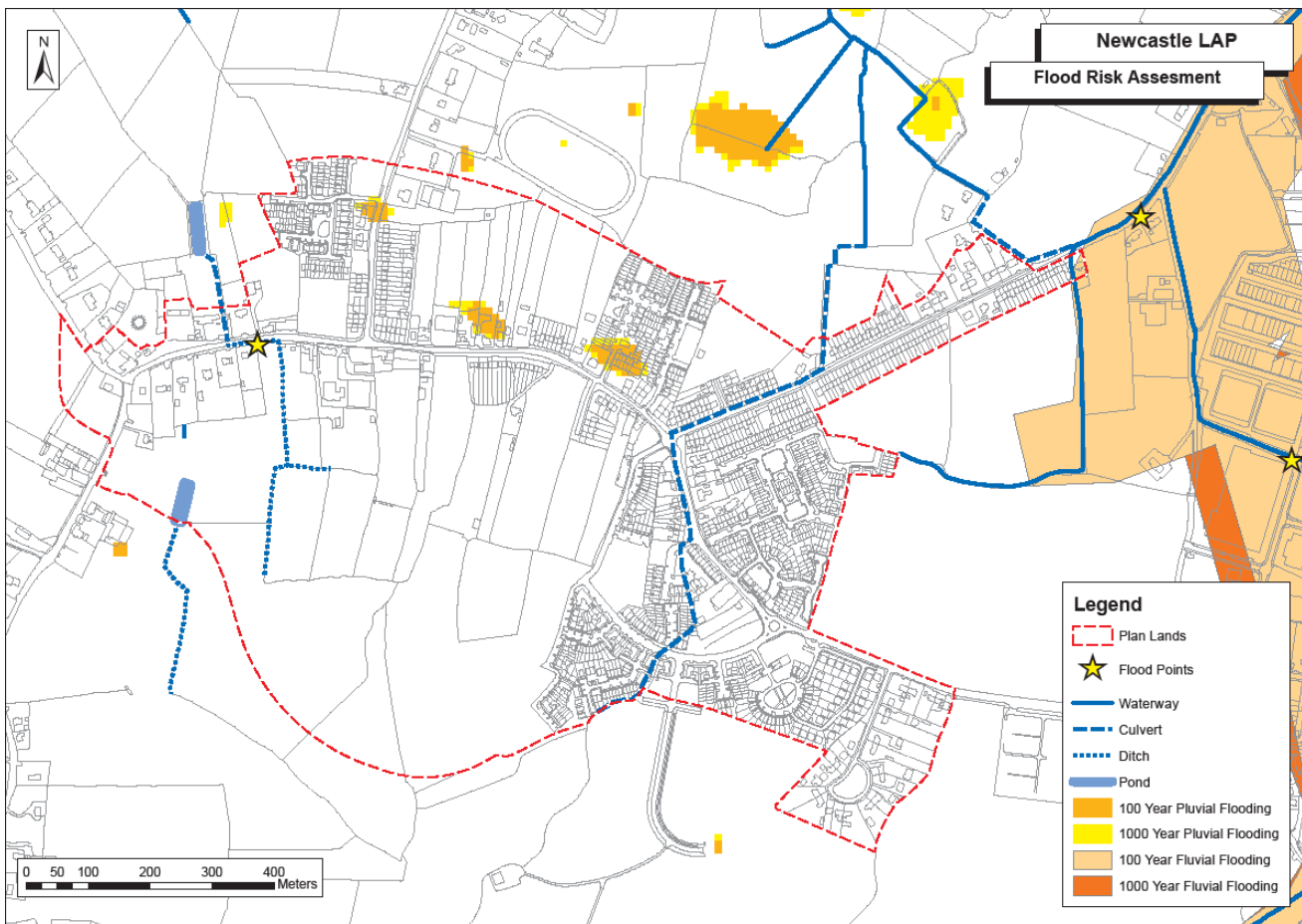


Figure 3.9: Newcastle Flood Risk Map

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 Liffey Lower and Griffeen River in South Dublin and projects a timeframe of 2027 for compliance with the WFD regarding rivers.

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

The groundwater vulnerability within the LAP lands varies from high to extreme vulnerability in the centre of the plan lands and extending to the northwest; the south eastern quadrant of the plan lands have been identified as moderate vulnerability. The high/extreme groundwater vulnerability is also located on a Locally Important Aquifer. 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 Newcastle Local Area Plan area identified as part of the River Basin Management Plan for the ERBD.

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.

Several areas of potential flood risk are also identified within the Newcastle LAP land zoned for development. In addition, a number of other hotspots of flooding potential have been noted. 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.

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

In the absence of the Newcastle 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 winds which sweep in are from the mountains and the south-west. Located at the base Athgoe Hill, which adjoins the foothills of the Dublin Mountains, the Newcastle 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 (SO₂)(both from home heating) and lead (petrol based) to monitoring benzene, nitrogen oxide (NO_x) and particle matter (PM₁₀), which are derived from traffic based sources. Significant reduction of nitrogen oxides (NO_x) 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 EPA¹⁹ does not expect NO_x 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 10 kilometres from the plan lands. Monitoring is done using a continuous monitor for Sulphur Dioxide and Particulate Matter (PM₁₀) at this station.

A temporary monitoring station was also located in Celbridge, Co. Kildare, approximately 5

¹⁹ EPA. Irelands Environment 2008. Air Quality. P43.

kilometres to the northwest of the plan lands between July 2010 and May 2011. Monitoring was done using continuous monitors for carbon monoxide, sulphur dioxide, nitrogen oxides and Benzene, while PM₁₀ concentrations were assessed using a combination of TEOM and Partisol measurements. An assessment report detailing the observed concentrations is expected to be available from the EPA in mid-2012.

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 year²⁰. The PM₁₀ limit, however, has been breached three times to date in 2011. The daily limit for PM₁₀ is 50 ug/m³. 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 31 August 2011.

Station Name	Number of values greater than 50 ug/m ³ (year to date)	Station Location	Station Type	Data available to	Station Operator
Tallaght	3	Dublin 24	Suburban Background	31 July	South Dublin County Council

Table 3.4 Air Monitoring Exceedances at stations in South Dublin

Given that traffic emissions generate a significant amount of airbourne 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

²⁰Source: EPA Website.
www.epa.ie/whatwedo/monitoring/air/data

disturbance from roads would also have a high incidence of traffic generated air pollutants.

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

PM₁₀ and NO_x.

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, regional and distributor road network. Areas of impact, or where high levels of noise do not appear to impact upon residential properties should be noted, and use made of policies in the Newcastle 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.

Increased amounts of private transport movements are a significant concern within the county. Large amounts of travel takes place along the N7 which is located to the south of the plan lands. Reduction in private car movements will result in a reduction in emissions such as

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

In the absence of the Newcastle Local Area Plan, the opportunity for the provision of a higher quality public transport provision would not be realised and this would result in increased transfer to private modes of transport with consequent increase in noise levels and reduction in air quality.

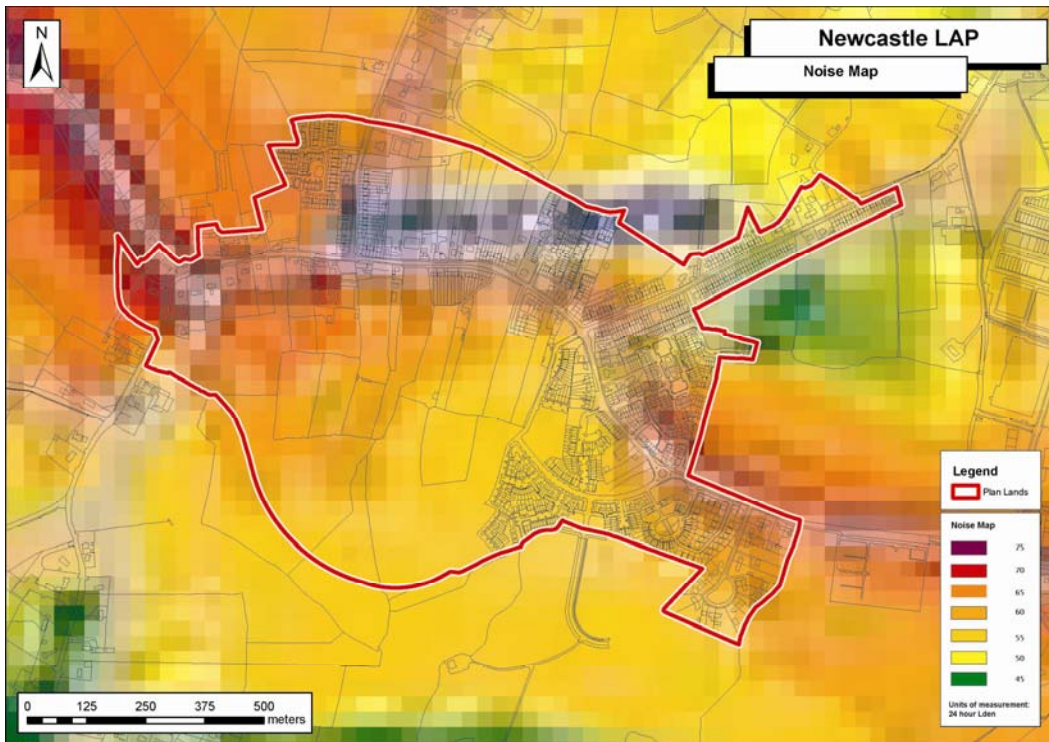


Figure 3.10 Noise Mapping for Newcastle LAP area

3.9 Cultural and Material assets

The Cultural and Material Assets of the Newcastle 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)²¹. This amounts to 79.8% of the population for the full Greater Dublin Area (including the functional

²¹ GSDS Final Strategy Report. Table 4.3 Population Equivalent loads by foul and WWTW catchment (2005).

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 2031²². The population for the Ringsend Catchment was predicted to grow to 1,131,700 (2011) and 1,456,590 (2031)²³.

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 Area²⁴.

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 Newcastle Local Area Plan would be partially offset as a result of dropping loading in older parts of the county²⁵ (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 within the county until the upgrade is complete in 2014.

²² GSDS Final Strategy Report. Table 4.3 Population Equivalent loads by foul and WWTW catchment (2005).

²³ GSDS Final Strategy Report. Table 4.3 Population Equivalent loads by foul and WWTW catchment (2005).

²⁴ Final Environmental Report for the SEA of the GSDS (May 2008) Section 3.3

²⁵ GSDS Final Strategy Report. Table 4.3 Population Equivalent loads by foul and WWTW catchment (2005).

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 Newcastle 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 Newcastle. This scheme provides for the construction of 41km of watermain, new reservoirs 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.

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 311 check and 17 audit samples in 2006, exceeding the minimum monitoring requirements as outlined in the Regulations. 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

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

- Delay on the deliverance of the Boherboy Water Scheme

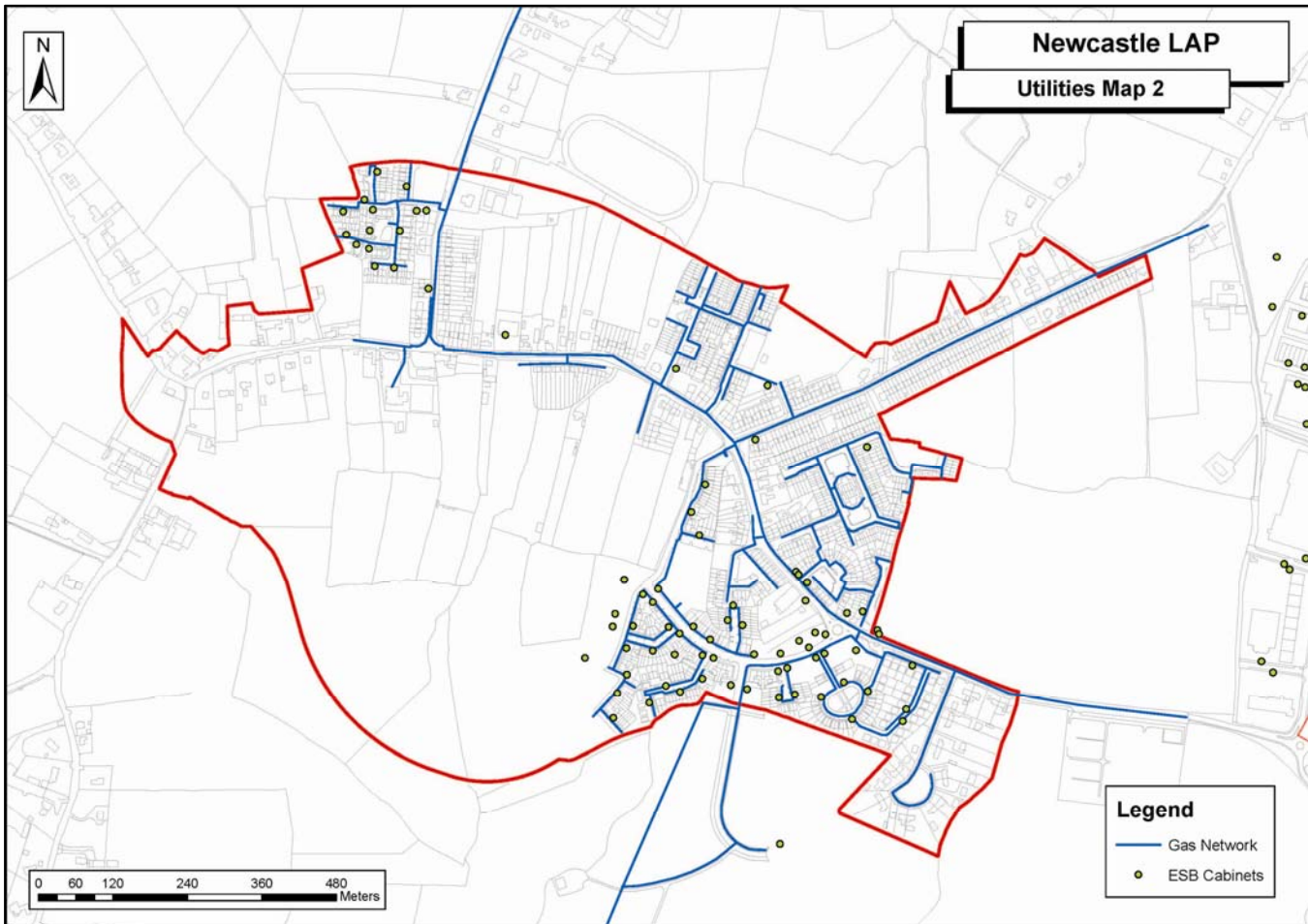


Figure 3.11 Newcastle Utilities

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.

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 3.5 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.

Table 3.5 Travel Modes within South Dublin and Newcastle (by percentage)

Means Of Travel	South Dublin	Newcastle
On Foot/Bicycle	19.3	10.45
Bus/ Mini bus/coach	15.3	
Train/DART Luas	1.8	13.27
Car Driver/ Car Passenger	54.3	64.26

Source: CSO-2006

The plan lands are served by relatively limited public transport options; the Dublin-Kildare Rail Line passes through Hazelhatch Station which is located approximately 3 kilometres from Newcastle Village and operates on a frequent daily basis. One bus route (no. 68) operated by Dublin Bus runs from Newcastle to Dublin city centre daily. Dualway Bus (a local bus service) operates between Newcastle, Rathcoole, Saggart, Tallaght, and more recently into the city centre. The nearest Luas stop to Newcastle is located at Saggart, approximately 4.5 kilometres to the south 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 3.12 below. There are a number of buses that serve the LAP lands; the frequency of these bus services is considered to be predominantly low to medium. There is only one public bus service which serves the LAP lands and one private company (Dualway); the frequency of this bus services in conjunction with the Main-Rail Line service is considered to be predominantly low. 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 situated to the south of the N4 (National Primary), to the north of the N7 (National Primary) and to the west of the M50 motorway. The R120 Rathcoole-Newcastle-Lucan Regional Route and the R405 Newcastle-Celbridge-Maynooth Regional Route both pass

through the village – the R120 connects to the N7 to the south and the N4 to the north and the R405 connects to the M4 to the northwest. There is an identified lack of cycle ways and connecting footpaths located throughout the village. The lack of connectivity 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. With respect to major roads, the completion of the Outer Ring Road linking Lucan with Tallaght is significant.

Fig 3.12 Newcastle LAP Existing Public Transport Frequency and Accessibility Levels



3.9.6.3 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 GDSDS 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 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 will, when complete, provide 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 or 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 Saggart, Newcastle and Rathcoole, 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.

3.9.9.1 Architectural Heritage

Newcastle is designated as an Area of Archaeological Potential and is the largest such designation within the County (DU020-003). There are a number of Protected Structures located within the plan lands, with some of these Protected Structures also listed as Recorded Monuments (RM);

- Map Reference No: 223-St Finian's Church of Ireland (Church and Cross) (RM)
- Map Reference No: 225- St Finian's Church of Ireland (Medieval Four Storey Tower House with Arched Doorway) (RM)
- Map Reference No: 226 -The Old Glebe (House, Tower House) (RM)
- Map Reference No: 227-Newcastle North (Detached Three Bay Single Storey House)
- Map Reference No: 229- The Loft, Newcastle (Detached Five Bay Two Storey House)
- Map Reference No: 230-Newcastle National School (Detached Two Bay Two Storey Former Primary School)
- Map Reference No: 232- St Finians' Roman Catholic Church (Church, Graveyard and Gates)

There are a number of Protected Structures located adjacent to the LAP boundary in the south-western quadrant of the plan lands:

- Map Reference No: 238- Newcastle Farm, Newcastle (Detached Five Bay Two Storey Farm House and Range of Outbuildings)

- Map Reference No: 241- Newcastle South Castle (Stone Castle (Ruin), Tower House Possible) (RM)
- Map Reference No: 243- St. Finian's Well (Stone Holy well and Lintel) (RM)
- Map Reference No: 247-Newcastle Lodge (House)
- Map Reference No: 248-Newcastle House (Two Storey House, Out-offices and Gates)

- Main Street- Prehistoric activity in this area is focused on ritual practices with sites including a middle Age Bronze Age ring ditch and a pit cremation cemetery. This activity is focused to the south of Ballynakelly Cottages.

3.9.9.2 Archaeological Heritage

As previously noted, Newcastle is designated as an Area of Archaeological Potential and is the largest such designation within the County (DU020-003). There are a number of Recorded Monuments located within and adjacent to the plan lands e.g. DU021-095- Fulacht Fia located in the south-western corner of the plan land and a number of the Protected Structures detailed below which are also Recorded Monuments (Figure 3.9).

It is noted in the Historic Area Assessment of Newcastle that the Bronze Age is the period associated with the earliest substantial human activity that can be identified by the archaeological excavations and surveys in Newcastle. A significant number of excavations uncovered various activities associated with the Bronze Age in Newcastle including the following:

- Newcastle South, Ballynakelly and Rathcreedan townlands²⁶ -These excavations occurred as a consequence of development to the south-east of the village. A circular enclosure was excavated to the south of the main street in Newcastle South. It was radiocarbon dated to the middle Bronze Age (1,269 – 1,413 BC) which was supported by the ceramics retrieved from the ditch fill.
- Newcastle Manor- Bronze Age activity was identified when a Fulacht Fiadh was uncovered during archaeological testing prior to development²⁷.

Newcastle is also an example of an Anglo-Norman manorial centre founded at the turn of the 13th century. The layout of the original medieval village and field systems has largely remained intact since the 13th century, despite the fact that the existing buildings fronting the Main Street are mainly 20th century structures. Although changes had occurred to the land-holding system during the later medieval and early modern periods many of the former burgage plots remain visible as topographical features on the ground, or are identifiable through LiDAR or in aerial photographs.

Many of the original features of the manorial settlement still survive, including the 13th Century motte (DU020-0031) and a later medieval parish church (DU020-00302). A granite cross (DU020-00303) may indicate the presence of an earlier pre-Anglo-Norman foundation. These are located outside the Local Area Plan lands. A series of medieval tower houses, both upstanding (DU020-00304, DU020-00307) and known from documentary sources and through archaeological field-survey (DU020-00306, DU021-01702) are located throughout the Village core including on the Local Area Plan lands.

Geophysical survey and excavation (Excavation Report Number 02E0859), prior to development, to the north of Main Street have revealed evidence for the Anglo-Norman burgage plots and the 15th-century borough defences. The geophysical survey also revealed evidence for a circular enclosure. This was preserved in-situ and the development adjusted accordingly so as to leave the site unaffected. Geophysical survey and test excavation (Excavation Report Number 04E1426) within the immediate vicinity of one of the upstanding tower houses (DU020-00307) revealed evidence for late medieval and early modern settlement and agriculture

The juxtaposition of surviving medieval archaeological features, the evidence gathered from archaeological survey and the remnant land-holding system in which these monuments are set means that Newcastle-Lyons is an exceptionally well-preserved example of a medieval manorial settlement. It is considered

²⁶ Planning Register Reference SD05A/0344 with Excavation file 06E1137 and Planning Register Reference SD06A/0659 with Excavation File 07E0245 relate to these discoveries

²⁷ Planning Register Reference SD04A/0276 or Excavation file 01E1068/03E0369 relate to this discovery

by landscape historians, historical geographers and archaeologists to be of regional and possibly also of national importance.

Developments to the east of the village, within the plan lands, have uncovered, previously unknown, archaeological evidence for extensive late prehistoric and early medieval activity in the area. These archaeological remains included evidence for late prehistoric ritual activity including funerary activity in the form of pit-cremations, Bronze Age and Iron Age ring-ditches, a Bronze Age burnt mound and a large Bronze Age ritual pool. These sites were excavated under license and are preserved in record in the National Monuments Service, Department of the Arts, Heritage and the Gaeltacht (Excavation Report Numbers 03E0369, 06E1137, 07E0245). Evidence for early medieval settlement activity included an enclosed settlement site (rath), evidence for unenclosed settlement and multiple cereal-drying kilns. These sites were excavated under license and are preserved in record in the National Monuments Service, Department of the Arts, Heritage and the Gaeltacht (Excavation Report Numbers 06E0176, 06E1137, 07E0245).

A D-shaped enclosure has been recently identified to the southwest, outside of the plan lands at Ballynakelly. This is within close vicinity of the early medieval settlement activity previously identified via excavation (Excavation Report Number 07E0245). South Dublin County Council has recently informed the National Monument Service of the presence of this enclosure. The response from the National Monuments Service will determine whether or not this structure should be included in the Record of Monuments and Places.

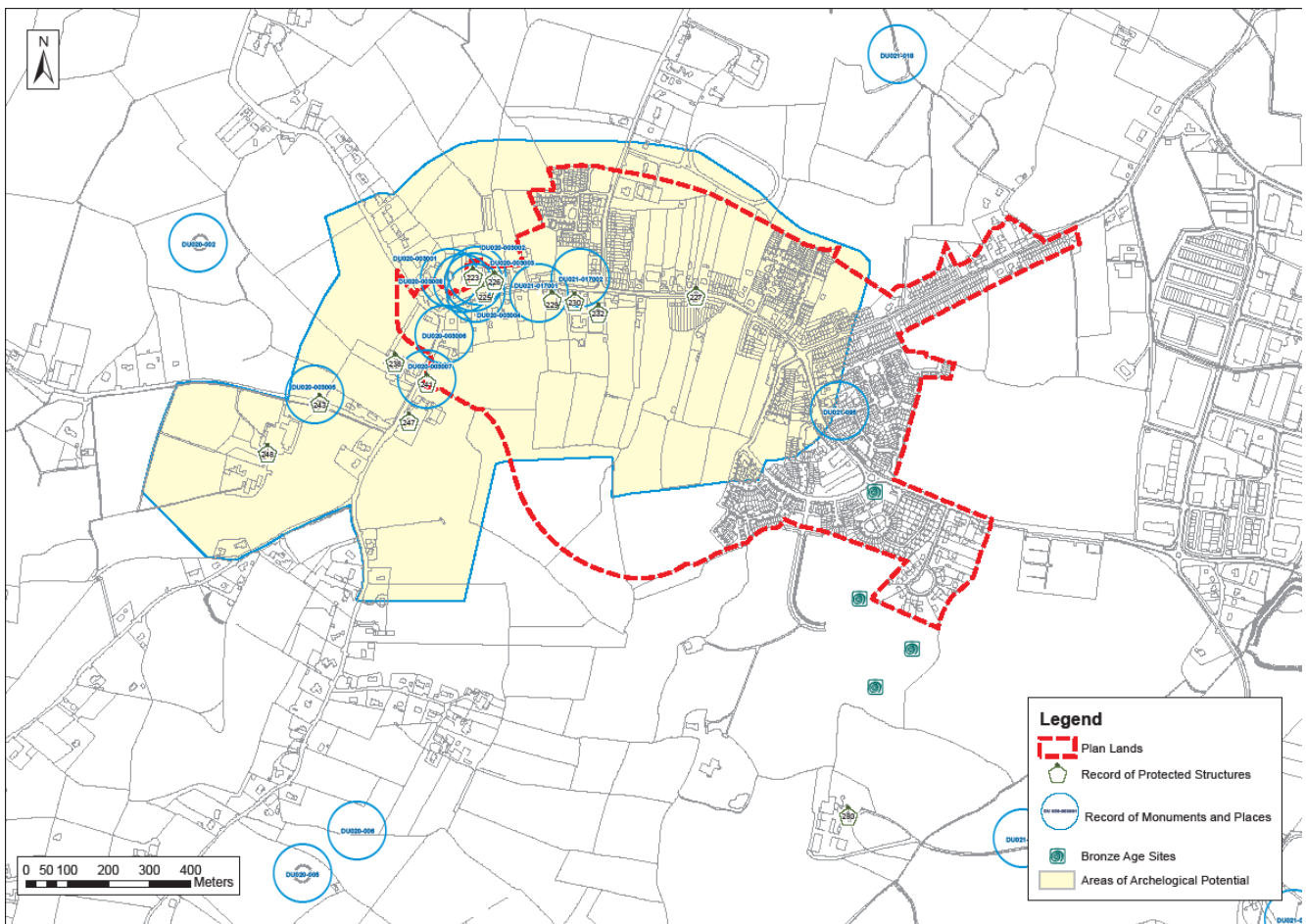


Fig 3.13 Newcastle LAP Built Heritage

3.9.10 Cultural Assets Issues

In the context of the Newcastle LAP area, development within the village and surrounding area should be assessed in order to indicate any negative conservation and archaeological impacts on the village and surrounding landscape. Furthermore, the Historic Area Assessment carried out for Newcastle identifies a number of recommendations for the plan lands, in particular

- Establishing a Historic/Cultural Core around the cluster of upstanding medieval monuments, situated to the west of the village, in order to enhance the character and identity of the village
- Establishing the full extent of the Glebe townland boundary and the remaining townland boundary shared between Ballynakelly and Newcastle South, and Ballynakelly and Commons Little which predates the mid-17th century. This should be preserved fully in situ.
- Full extent of any landholding boundaries revealed during archaeological geophysical survey and excavation should be recorded and mapped
- Implementation of a design guide to encourage new developments to reflect the traditional character of the village
- Any proposal to develop the lands adjoining the larger of the Retention Ponds identified in the Newcastle Parish Map OS 1865 at the western end of Newcastle South Townland be

accompanied by a report on the Historic significance of this feature

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 take place due to the continued protection afforded by the Record of Monuments and Places.

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 Newcastle 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.

as reducing public transport movement to workplaces. It would also result in increased amounts of greenhouse gas emissions from transport movements.

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

3.11 Overlay Mapping of Environmental Sensitivities

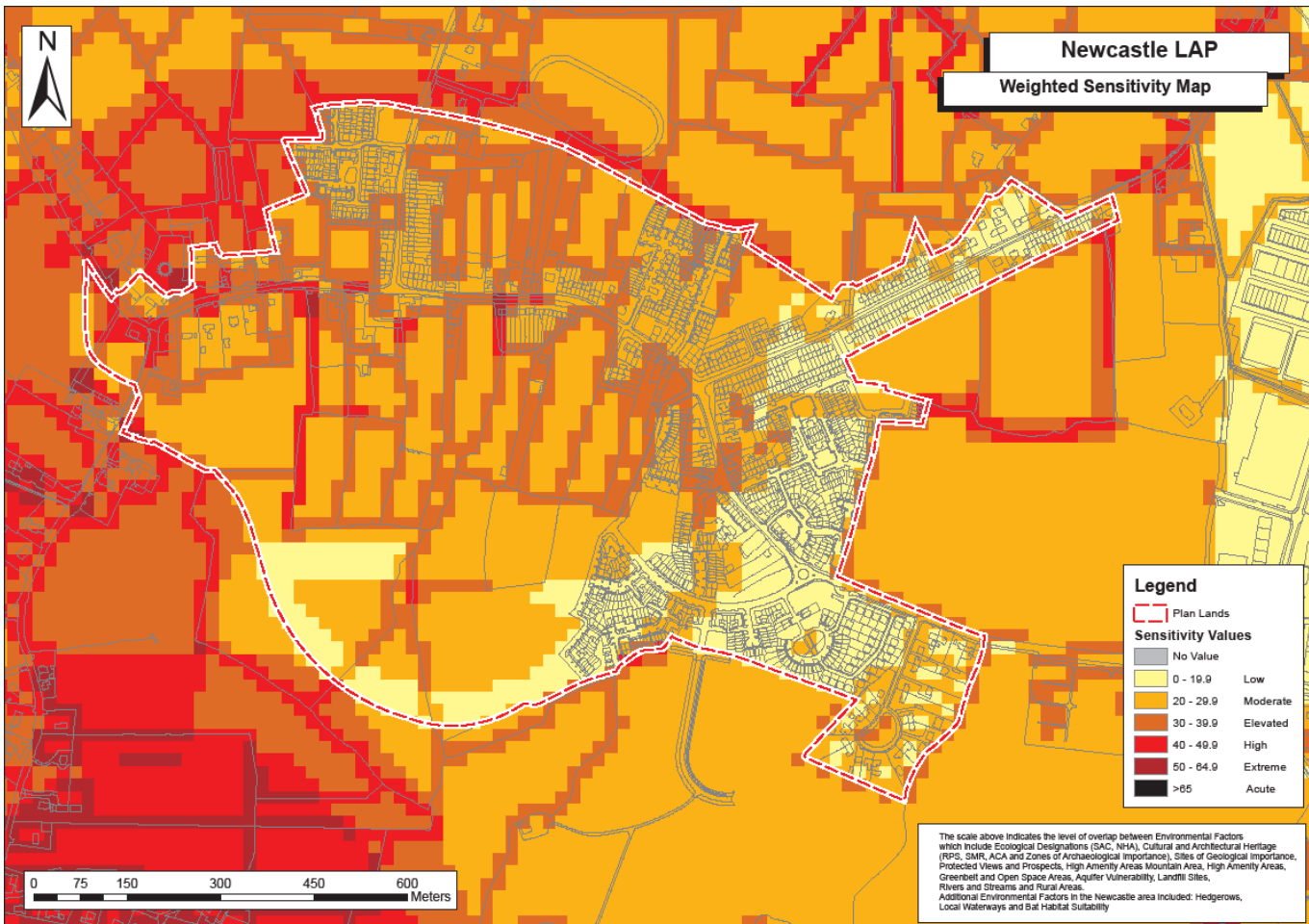
3.11.1 Introduction

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 Newcastle LAP area.

Figure 3.14 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)²⁸ 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 2002²⁹ 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

²⁸ DOEHLG (2004) *Implementation of SEA Directive (2001/42/EC): Guidelines for Regional Authorities and Planning Authorities* Dublin: Government of Ireland.

²⁹ 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)³⁰, 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

³⁰ 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.

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

SEO B2:	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

SEO B3:	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

SEO HH1:	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

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.

SEO S1:	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

4.4 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

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 Newcastle 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 pesticides³¹, including their relevant metabolites, degradation and reaction products - 0,1 µg/l and 0,5 µg/l (total³²).

³¹ '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.

³² 'Total' means the sum of all individual pesticides detected and quantified in the monitoring procedure, including their relevant metabolites, degradation and reaction products.

Irish groundwater threshold values³³ 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 Newcastle 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 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

³³ 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.

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.

SEO W1:	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) ³⁴ 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

SEO W2:	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
SEO W3:	To prevent development on lands which pose - or are likely to pose in the future - a significant flood risk ³⁵
Indicator W3:	Number of developments granted permission on lands

³⁴ 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.

³⁵The 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.

<p>Target W3:</p>	<p>which pose - or are likely to pose in the future - a significant flood risk</p> <p>Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk</p>
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Traffic noise harms the health of almost one third of Europeans³⁶. 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.

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 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.

The LAP lands are situated to the south of the N4 (National Primary), to the north of the N7 (National Primary) and to the west of the M50 motorway. The R120 Rathcoole-Newcastle-Lucan Regional Route and the R405 Newcastle-Celbridge-Maynooth Regional Route both pass through the village – the R120 connects to the N7 to the south and the N4 to the north and the R405 connects to the M4 to the northwest.

Due to the location of the plan lands, served by a number of connecting commuter routes, the emissions and noise which result from high levels of traffic through the LAP lands contribute to the creation of an environment which is harsh for pedestrians.

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:

- draw up *strategic noise maps* for major roads, railways, airports and agglomerations, using harmonised noise indicators³⁷ 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,

³⁶ 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

³⁷ [L_{den} (day-evening-night equivalent level) and L_{night} (night equivalent level)]

- 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.

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.

SEO C1:	To minimise increases in travel related greenhouse emissions to air
Indicator C1i ³⁸ :	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 ³⁹ :	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
SEO C2:	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

³⁸ As measured by the Central Statistics Office

³⁹ 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 Newcastle. 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.

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

SEO M2:	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 2002⁴⁰ 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.

⁴⁰ 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 DOEHLG⁴¹ 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. Newcastle 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.

⁴¹ 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.

SEO CH1: To protect the archaeological heritage of the South Dublin with regard to entries to the Record of Monuments and Places - including the Newcastle Zone of Archaeological Potential - and the context of the above within the surrounding landscape where relevant

Indicator 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

Target CH1: No unauthorised developments occurring which result in full or partial loss to entries to the Record of Monuments and Places - including Newcastle Zone of Archaeological Potential - and the context of the above within the surrounding landscape where relevant

SEO CH2: 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

Indicator 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

Target 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

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.

SEO L1:	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 Mountains Area
Indicator 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

Target 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
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Figure 4.9 SEO Summary Table

SEO Code	SEO
B1	To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites
B2	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
B3	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
HH1	To protect human health from hazards or nuisances arising from traffic and incompatible landuses
S1	To maximise the sustainable re-use of brownfield lands and the existing built environment
W1	To maintain and improve, where possible, the quality of the River Liffey and Griffeen, its tributaries and surface water
W2	To prevent pollution and contamination of ground water
W3	To prevent development on lands which pose - or are likely to pose in the future - a significant flood risk
C1	To minimise increases in travel related greenhouse emissions to air
C2	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
M1	To serve new development under the LAP with appropriate waste water treatment
M2	To maintain and improve the quality of drinking water supplies
CH1	To protect the archaeological heritage of South Dublin with regard to entries to the Record of Monuments and Places - including the Newcastle Zone of Archaeological Potential - and the context of the above within the surrounding landscape where relevant
CH2	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
L1	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 ⁴²

Strategic Environmental Objectives (SEOs) ⁴³

⁴² This SEO is taken from the 2010-2016 County Development Plan's Environmental Report; while it is noted that the plan lands are not located directly adjacent to the Dublin Mountain Area, they are adjoining the foothills i.e. Athgoe Hill. It is considered that the standardisation of this SEO will aid in the monitoring of the LAP within the existing SEA Monitoring System.

⁴³ 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 Newcastle 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 Newcastle Local Area Plan has been prepared in response to the development pressures facing Newcastle 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 Newcastle 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 Newcastle Local Area Plan

5.2.1 Structure and Content

The draft Newcastle 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: Overall Vision

This section describes the vision of a rejuvenated and vibrant Newcastle in the future which would be integrated fully with its surroundings.

Section 3: Heritage Appraisal

This section presents a brief appraisal of the natural and man made heritage of Newcastle Village including details of evidence on Prehistoric to Later Historic activity and settlement, topography, flora and fauna and water courses

Section 4: Analysis of Modern Development of Village

This section provides a brief description of recent development in Newcastle Village and a chronology of recent plans that pertain to the village followed by an analysis of development and demographic statistics

Section 5: LAP Strategy

This section identifies the overall strategic objectives for the LAP, and sets out the key objectives to be achieved in the development of the area.

Section 6: Neighbourhoods

This section sets out framework plans for key neighbourhood development sites within the LAP area. A detailed design framework is provided for the neighbourhoods detailing land uses, access and movement, built form and landscape and community facilities.

Section 7: 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

Section 8: Phasing

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

5.2.2 Vision and Goals of LAP

The core policy aim of this Local Area Plan is to promote a more consolidated and connected village which retains much of its existing character. This will entail the following;

- Facilitate a layout that integrates new development with the existing village and surrounding development;
- Provide a framework for development that is sensitive to the historic and semi-rural context of the village and ensures for the sustainable drainage of water;
- Promote high quality design for streets, spaces and buildings that responds to the different character areas and settings of the villages;
- Provide for a choice of dwelling types and sizes that cater for varying age groups;
- Reinforce and invigorate Main Street through the encouragement of infill mixed use development and public spaces;
- Require the provision of community facilities including an expansion site for the existing primary school that is development ready and a site for the provision of an additional primary school;
- Ensure for the provision of a network and hierarchy of public spaces of varying sizes and uses that are appropriate to their location and function;
- Preserve, incorporate, enhance and respond to the setting of existing archaeological and historic features

including Burgage plots and tower house sites;

- Provide a network of convenient walking and cycling routes whilst reducing the need for car trips;
- Ensure that development is phased in a manner that provides for community and parkland development 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 Newcastle 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.

5.4.8 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.

Within the County Development Plan, Newcastle is considered to be a County Village. The Sustainable Residential Development in Urban Areas – Guidelines for Planning Authorities (2008) define smaller towns and villages as those with a population ranging from between 400 – 5,000 persons. These types of urban settlements within South Dublin County have come under pressure from increased development because of their location within easy commuting distance of Dublin City.

The County Development Plan applies the following general development principles to County Villages:

- protect the rural character and streetscape of the village in question, including features of local heritage importance;
- protect and/or improve residential amenity;
- protect, provide for and or improve local centre facilities
- protect important biodiversity resources.

Any LAP which is adopted for the Newcastle 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, both along the Main Street and to the south of it, is zoned Objective LC; To protect, provide for and/or improve Local Centre facilities.
 - The southern most part of the plan lands has an area zoned Objective F; To preserve and provide for Open Space and Recreational Amenities.
 - There is specific objective on the lands to the southwest of Main Street- PS; To provide for a Primary School.
 - There are also two Specific Local Objectives pertaining to the plan lands: SLO 12 'Libraries-Building Programme' and SLO 46 'Newcastle-Burgage Plots'
- implement them at the local level in Newcastle.

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.

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

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 Newcastle 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 Newcastle 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 Newcastle 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 Newcastle 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.

Newcastle is categorised as a 'Village' within the Settlement Hierarchy of the Regional Planning Guidelines.

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.

Newcastle is categorised as a County Village under the Development Plan. The Sustainable Residential Development in Urban Areas-Guidelines for Planning Authorities (2008) defines smaller towns and villages as those with a population ranging from 400-5000 persons. The role of these villages is evolving with the spread of the city further out into the Metropolitan Area. The preparation of approved plans will be required to direct the future development of these village settlements and to ensure that they are developed in a sustainable and consolidated manner.

6.4 Alternative Scenarios

Scenario 1- Extend the lifespan of the 2003 Newcastle Local Area Plan

This scenario involves the continuance to implement the 2003 Local Area Plan for Newcastle.

Under this scenario, the total amount of zoned land for development remains unchanged, with the plan lands subject to a number of zoning objectives including 'A' (residential), 'LC' (local centre) and 'B' (rural amenity).

Higher residential densities would be prevalent throughout the plan lands. Commercial development would be partially focused on the Main Street, with an expanded mixed use Village Core extending to the south (rear) of the Main Street. A new principal access road would be located to the rear of the Main Street, running in an east to west direction, connecting the Rathcoole Road to the Hazelhatch Road.

The intensity of residential development throughout the plan lands would lead to a reduction in the extent of burgage plots that would remain intact. The removal of existing hedgerows would also impact on the biodiversity network in the area. Higher density development would also have an impact on the archaeological and architectural heritage in the area. Limited information is contained within the LAP as to the significance and importance of the historical landscape within the village and lack of knowledge regarding this would lead to the gradual degradation of these features.

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 necessity for the use of Sustainable Urban Drainage Systems (SuDS) in Newcastle might be less apparent. The use of underground attenuation tanks, if continued, could impact on water quality and flood risk.

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 service.

Scenario 2- Market Led Growth

This scenario would involve allowing growth to follow the demands of the development industry as previously expressed through rezoning submissions to the Development Plan process, regardless of conformity 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 demand for rezonings has focussed largely on areas of the plan lands that are presently un-serviced and which are located on the outer settlement edges of the plan lands. Lands to the west of the Plan lands at Commons Little act as a green belt between two development areas i.e. the village and Greenogue Industrial Estate. Rezoning these lands to facilitate residential/commercial development would extend the village into the commercial centre of Greenogue and provide for a more urbanised settlement.

Lands to the southeast of the plan lands at Ballynakelly/Greenogue would be rezoned from agricultural lands to residential development; further extending the village settlement into the rural area.

The quantum of land proposed for rezoning and the nature of development proposed for these lands is not consistent with any clearly defined housing need within the County and the development patterns that would arise in this scenario would be unrelated to national or regional planning strategies. The substantial untapped development capacity of the existing Plan lands has not been considered in this approach, with a drive to rezone further lands, prior to the development of the current substantial greenfield residential land bank. This scenario would also lead to an increased demand on existing water/wastewater services, with little or no provision of community infrastructure to accommodate the existing and future population.

Scenario 3- Consolidation of Village Expansion/Development of Character Areas

Under this scenario, the commercial heart of the village would be concentrated along the Main Street and away from the backland location of a link road running in an east to west direction. The scenario would create a transition from the Main Street to the outer settlement edges with lower densities and also from the higher densities at the eastern edge to the lower densities in the west.

The encouragement for commercial development to be located along the Main Street may help create a greater demand for public transport to serve the area. The benefit of this scenario would be the creation of a viable village centre, preventing leakage to outer areas.

The concept of Green Infrastructure would also be prevalent throughout this scenario as a guiding theme for development. Green Infrastructure refers to the construction of a green network to ensure 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.

Under this scenario, surface water drainage would be dealt with through sustainable urban drainage systems (SuDS) and would be integrated as part of the overall Green Infrastructure network, further enhancing biodiversity through the utilisation of swales and wetlands where possible. A network of high quality/amenity green spaces that permeate throughout the plan lands while incorporating existing burgage hedgerows would be provided, with a total of five parks provided on lands to the south, west and north of the settlement. This would safeguard the natural and cultural

heritage of the area and integrate the plan lands into the rural area surrounding it. It would also serve to increase the biodiversity in the area and provide an ideal environment for bats and other wildlife fauna. Recent studies in relation to the presences of bats within the plan lands would serve as a baseline of information from which policies and objectives would evolve to ensure the protection of the species.

The significance of the historical landscape in the plan lands and its archaeological importance would be further explored within this scenario, in tandem with the large amount of Protected Structures and archaeological features, due to the availability of the Historic Area Assessment for the plan lands, which provides a greater understanding of the history surrounding the plan lands which dates to the Bronze Age. The Historic Area Assessment also identifies a number of character areas within the village from which the creation of neighbourhoods would be developed.

Furthermore, under this scenario, the built heritage of Newcastle which includes extensive Protected Structures and Recorded Monuments would be protected and utilised in such a manner as to enhance the overall historic character of the village.

Cycle routes would be provided along the primary roads, with pedestrian routes provided throughout all the plan lands linking through the parks, enabling recreation whilst providing a pleasant environment for the existing and future populations.

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 three alternative scenarios for the future development of the Newcastle LAP area. This determination sought to understand whether each alternative was 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.

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 three 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.

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 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’.

7.2.3

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

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
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Table 7.1 Criteria for appraising the effect of Plan provisions on Strategic Environmental Objectives

SEO Code	SEO⁴⁴
B1	To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites
B2	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
B3	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
HH1	To protect human health from hazards or nuisances arising from traffic and incompatible landuses
S1	To maximise the sustainable re-use of brownfield lands and the existing built environment
W1	To maintain and improve, where possible, the quality of the River Liffey and Griffeen, its tributaries and surface water
W2	To prevent pollution and contamination of ground water
W3	To prevent development on lands which pose - or are likely to pose in the future - a significant flood risk
C1	To minimise increases in travel related greenhouse emissions to air
C2	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
M1	To serve new development under the CDP with appropriate waste water treatment
M2	To maintain and improve the quality of drinking water supplies
CH1	To protect the archaeological heritage of South Dublin with regard to entries to the Record of Monuments and Places - including the Newcastle Zone of Archaeological Potential - and the context of the above within the surrounding landscape where relevant
CH2	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
L1	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 ⁴⁵

Table 7.2 Strategic Environmental Objectives (SEOs)

⁴⁴ 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.

⁴⁵ This SEO is taken from the 2010-2016 County Development Plan's Environmental Report; while it is noted that the plan lands are not located directly adjacent to the Dublin Mountain Area, they are adjoining the foothills i.e. Athgoe Hill. It is considered that the standardisation of this SEO will aid in the monitoring of the LAP within the overall existing SEA Monitoring System.

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
Alternative Scenario 1 Implement 2003 Newcastle Local Area Plan		B3 L1	M1 M2 W1-W3 CH1	HH1 C1 C2 CH2		B1 B2
<p>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; the use of underground attenuation tanks, if continued, could impact on water quality and flood risk (SEO W1-W3).</p> <p>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 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; there would be no likely impact on the SEO's as a result (SEO B1-B2). The impact of this scenario on the archaeological and architectural heritage of the area is uncertain, while there would be increased development pressures in certain areas, significant impacts would be likely to be mitigated (SEO CH1 CH2); architectural/archaeological heritage is protected under legislation, however, therefore potential conflict is likely to be mitigated against apart from the historical burgage plots. There is likely to be significant negative impact on the historical landscape with the loss of protected views within this scenario (SEO L1).</p>						
	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
Alternative Scenario 2 Market Led Growth		B3 HH1 S1 W1 W2 W3 C1 C2 M1 M2 CH1 CH2 L1				B1 B2

This scenario would result in increased pressure on water and wastewater provisions (**SEO M1 M2**). The appearance and character of the landscape, in particular the historical landscape, would be significantly and adversely affected due to quantum of development/urban sprawl (**SEO L1**). Quantum of development would compromise the quality of groundwater and surface water and the likelihood of pollution/contamination and also increase flood risk (**SEO W1-W3**). Existing habitats and ecological systems would be disturbed/ removed to facilitate development (**SEO B3**). Increase in unsustainable car based transport, thus impacting on/increasing air quality/emissions (**SEO C1 C2 HH1**). The archaeological/architectural heritage would be compromised due to development pressure in parts of the area (**SEO CH1 CH2**).

<p>Alternative Scenario 3</p> <p>Consolidation of Village Expansion/Development of Character Areas</p>	<p>W1 W2 W3 CH1 CH2 L1 S1</p>		<p>B3</p>			<p>B1 B2</p>
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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 improve the quality of groundwater (**SEO W2**) and surface water (**SEO W1**), and would decrease the risk of contamination or flooding (**SEO W3**). The architectural and archaeological heritage of the area would be protected and enhanced (**SEO CH1 CH2**). Landscape features, in particular the historical landscape (**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 re-use of brownfield lands within the village core and also 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 Newcastle 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).

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
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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.

SEO Code	Strategic Environmental Objective
B1	To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites
B2	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
B3	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
HH1	To protect human health from hazards or nuisances arising from traffic and incompatible landuses
S1	To maximise the sustainable re-use of brownfield lands and the existing built environment
W1	To maintain and improve, where possible, the quality of the River Liffey and Griffeen, its tributaries and surface water
W2	To prevent pollution and contamination of ground water
W3	To prevent development on lands which pose - or are likely to pose in the future – a significant flood risk
C1	To minimise increases in travel related greenhouse emissions to air
C2	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
M1	To serve new development under the LAP with appropriate waste water treatment
M2	To maintain and improve the quality of drinking water supplies
CH1	To protect the archaeological heritage of South Dublin with regard to entries to the Record of Monuments and Places - including the Newcastle Zone of Archaeological Potential - and the context of the above within the surrounding landscape where relevant
CH2	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
L1	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)⁴⁶

⁴⁶ 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.

	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
Vision and Plan Objectives of the Proposed Newcastle Local Area Plan						
<u>Plan Objectives</u>						
<ul style="list-style-type: none"> Facilitate a layout that integrates new development with the existing village and surrounding development; Provide a framework for development that is sensitive to the historic and semi-rural context of the village and ensures for the sustainable drainage of water; Promote high quality design for streets, spaces and buildings that responds to the different character areas and settings of the villages; Provide for a choice of dwelling types and sizes that cater for varying age groups; Reinforce and invigorate Main Street through the encouragement of infill mixed use development and public spaces; Require the provision of community facilities including an expansion site for the existing primary school that is development ready and a site for the provision of an additional primary school; 	<p>HH1 C1 C2</p> <p>CH1 W1-W3 L1</p> <p>S1 L1</p> <p>S1</p> <p>HH1 C1 C2</p>		<p>B1-B3 W1-W3 L1</p> <p>B3 W1- W3 L1 CH1 Ch2</p>			

<ul style="list-style-type: none"> • Ensure for the provision of a network and hierarchy of public spaces of varying sizes and uses that are appropriate to their location and function; • Preserve, incorporate, enhance and respond to the setting of existing archaeological and historic features including Burgage plots and tower house sites; • Provide a network of convenient walking and cycling routes whilst reducing the need for car trips; • Protect the amenities of existing dwellings; • Ensure that development is phased in a manner that provides for community and parkland development 	<p>HH1 C1 L1 B3 C2</p> <p>HH1 C1 C2 B3 W1-W3 L1 CH1 CH2</p> <p>HH1 C1 C2</p> <p>HH1 C1 C2 L1</p>					
<p>Overall, the vision for the proposed Local Area Plan will be likely to improve the status of many of the SEOs, particularly those relating to the consolidation of development within the village Main street and within walking distances of community and retail facilities, all of which will act to reduce emissions, car based movements, reduce noise and improve human health (SEO HH1 C1 C2). There is some potential for conflict with Biodiversity, water, landscape and archaeological/architectural objectives although these conflicts are likely to be mitigated (SEO B1-B2 W1-W3 CH1 CH2 L1). The provision of a biodiversity network will allow for the retention of the existing ecological networks and lessen the possibility of adverse impacts on the Dublin Bay designated sites (SEO B1-B3); the retention and use of burgage plots will also help enhance the archaeological heritage of the area (SEO CH1) Design and layout of developments will be required to ensure that the water quality is maintained and improved, providing for SuDS, and restricting development on lands susceptible to flooding (SEOW1-W3).</p>						

Strategy of the Proposed Newcastle Local Area Plan

The strategy to amend the Newcastle-Lyons Local Area Plan (2003) primarily comprises:

- The redistribution and relocation of the planned village park in a manner that provides a buffer and frames views of the rural area and the rising landscape to the south while providing additional and more dispersed planned neighbourhood parks.
- The redistribution of planned village squares to more central areas including Main Street and include for the sensitive integration of additional car parking in the Village Core.
- The revised designation of a larger site for a new or extended primary school from a backland location to a site that is readily accessible from Main Street within the Village Core. The designation of an additional primary school site adjacent to the recently established population outside the village core at Ballynakelly and adjacent to the planned revised village park.
- An upgrade of the movement framework to an informal grid that includes for a clear hierarchy of streets that protects burgage plot delineations; encourages greater connectivity and permeability between areas including open spaces; and upgrades the planned village by-pass to a route that calms traffic speeds.
- Development, movement and activity to be refocused on Main Street as the Village Core.
- To expressly require the incorporation and reinstatement of the burgage plot field system in a tangible manner into streetscapes, gardens and parks within a revised and consolidated 'Village Expansion' area.

B3 L1
HH1 C1
C2

C1 C2 HH1

C1 C2 HH1

HH1 C1
C2 B3

HH1 C1
C2

L1 B3
S1

<ul style="list-style-type: none"> • Adapt key frontages to the planned network of streets and spaces. • A re-establishment of the planned 'Village Core' to focus on Main Street and include for the provision of civic, cultural and retail nodes with a local centre in the Ballynakelly Estate. • Consolidation of the planned 'Village Expansion' area to straddle Main Street around the eastern side of the village and to incorporate the burgage plot cluster • To refocus a 'Settlement Edge' or buffer to the western, south western and northern fringes of the village in a manner that responds to the cluster of upstanding monuments and existing low density housing in these areas around the village. • A revision and update of the planned character areas to ensure that they are more identifiable, comprehensive and respond to the differing needs and contexts in and around the village especially the varying elements of heritage value. • The utilisation and incorporation of existing hedgerows, streams and natural swales with open parkland retention areas as part of an overall SUDS (Sustainable Urban Drainage System) framework. 	<p>S1 L1</p> <p>HH1 C1 C2</p> <p>B3 HH1 C1 C2</p> <p>S1 CH2 L1</p> <p>CH1 L1</p> <p>W1-W3</p>		<p>B3 W1- W3 CH1 CH2 L1</p>			
<p>Overall, the strategy for the proposed Local Area Plan will be likely to improve the status of many of the SEOs, particularly those relating to the consolidation of development within the village Main street and within walking distances of community and retail facilities, all of which will act to reduce emissions, car based movements, reduce noise and improve human health (SEO HH1 C1 C2); Providing for additional car parking may facilitate car movements and dependency, thus increasing car based emissions, although this is likely to be mitigated. There is some potential for conflict with Biodiversity, water, landscape and archaeological/architectural objectives although these conflicts are likely to be mitigated (SEO B1-B2 W1-W3 CH1</p>						

CH2 L1). The retention of the burgage and townland boundaries and the provision of flood swales will maintain the quality of the River Liffey and its tributaries the Griffeen and the Shinkeen; it will help contain contamination of the groundwater and will lessen the potential likelihood of flood risk (**SEO W1-W3**). The retention and reinstatement of the burgage plots and boundaries will also allow for effective operation of wildlife movements and habitat use within the area (**SEO B3**) and will enhance and protect the landscape (**SEO L1**). The strategy also provides for the protection and utilisation of the archaeological (**SEO CH1**) and architectural heritage of the area (**SEO CH2**). The Strategy also promotes the re-use of brownfield lands within the village core and by consolidating the settlement edges (**SEO S1**).

Objectives of the Proposed Newcastle Local Area Plan

Green Infrastructure

	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>Objective GI1</p> <p>It is an objective of the Local Area Plan that a linked open space hierarchy shall be implemented fully across the Plan Lands and all proposed developments shall contribute to the achievement of this integrated Green Infrastructure Network where relevant and at a minimum rate of 14% of A1 zoned lands. Where there is a shortfall in public open space provision from planned local and</p>	<p>B3 L1 HH1 C1 C2 W1-W3</p>					

<p>neighbourhood parks, this shortfall shall be taken up by pocket parks that are integrated into the design of neighbourhoods with a clear role and function. Pocket parks shall be adequately overlooked and shall be easily accessible from surrounding housing but shall not comprise residual open spaces.</p>						
<p>The provision of a green infrastructure network will allow for effective operation of wildlife movements and habitat use and retention of existing hedgerows within the area (SEO B3); it will also serve to protect and enhance existing landscape features (SEO L1). The provision of parks within new developments will reduce the need for unsustainable travel modes to access these facilities elsewhere (SEO HH1 C1C2). The incorporation of open spaces as part of the overall Green Infrastructure network will maintain the quality of the River Liffey and its tributaries the Griffeen and the Shinkeen; it will help contain contamination of the groundwater and will lessen the potential likelihood of flood risk (SEO W1-W3).</p>						
<p>Objective GI2</p> <p>It is an objective of the Local Area Plan that all proposed public open spaces shall have a clear role and function that falls within the Plan's open space hierarchy detailed under Table 5.1 and shall comply with the qualitative standards detailed under 'Sustainable Residential Development in Urban Areas' (2009).</p>						
<p>No impact on SEO's</p>						
<p>Objective GI3</p> <p>It is an objective of the Local Area Plan that play facilities shall be provided at a rate of 3 sq.m per dwelling and in accordance with</p>	<p>HH1 C1 C2</p>					

<p>'Planning Guidance on Provision of Children's Play Facilities in New Developments' (2007).</p>						
<p>Provision of play facilities within new developments will reduce the need to travel to facilities and promote walking/cycling based transport</p>						
<p>Objective GI4</p> <p>It is an objective of the Local Area Plan that where it is proposed to develop on existing playing pitches and/or training fields, alternative accessible playing pitches and/or training fields must be provided in the vicinity of Newcastle (within 1.6km of the edge of the Plan Lands) prior to the occupation of any unit (commercial or residential).</p>	<p>HH1 C1 C2</p>		<p>HH1 C1 C2</p>			
<p>Provision of play facilities within close proximity of new developments will reduce the need to travel to facilities and promote walking/cycling based transport, thereby reducing car based emissions (SEO HH1 C1 C2). The temporary delay in the provision of these may give rise to increased car based movements as residents have to travel to access facilities that have been postponed. These impacts could be mitigated by the inclusion of the requirement that the alternative facilities must be provided prior to the development of these site(SEO HH1 C1 C2)</p>						
<p>Objective GI5</p> <p>It is an objective of the Local Area Plan that developments adjacent to or including lands designated for landscaped squares shall provide for the development of these spaces, which may be calculated as contributing to the required minimum public open space provision.</p>						

No impact on SEO's						
<p>Objective GI6</p> <p>It is an objective of the Local Area Plan that all proposed public squares shall be landscaped to a high quality to include for park furniture and shall perform a clear civic function and provides for the range of intended uses detailed under Table 5.2. These spaces shall comply with the qualitative standards detailed under 'Sustainable Residential Development in Urban Areas' (2009).</p>	<p>HH1 C1 C2</p>					
The provision of high quality public squares will increase local usage and reduce the number of car journeys to amenities outside the plan area, thereby reducing the amount of car based emissions and improving human health						
<p>Objective GI7</p> <p>It is an objective of the Local Area Plan to protect the historic burgage plot boundary and townland delineations (including townlands boundaries to the Glebe, Ballynakelly Newcastle South and Commons Little) around Newcastle Village including their associated hedgerows and ditches.</p>	<p>B3 L1</p>					
Retention of on site landscape and biodiversity features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3)						

and will enhance and protect the landscape features (SEO L1).						
Objective GI8	B3 L1 W3					
It is an objective of the Local Area Plan that require all planning applications for development on lands that include or are bound burgage plot and/or townland hedgerow boundaries and ditches to clearly identify how these boundaries will be enhanced or reinstated and incorporated. All such applications shall include a comprehensive hedgerow survey and method statement (compiled by a suitably qualified person) for protection, incorporation and reinstatement of the historic boundaries before, during and after construction. This shall include for details on protecting any sections of hedgerow outside the application site that directly adjoin the application site.						
Retention of on site landscape and biodiversity features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (SEO L1). The retention of ditches will preserve the natural drainage system, will facilitate the SUDS approach and reduce potential flood risk (SEO W3)						
Objective GI9	B3 L1 W1 W2 W3					
It is an objective of the Local Area Plan that require that burgage and townland field boundaries and ditches are utilised wherever possible as SUDS elements as swales for						

conveying water; landscape features; and biodiversity-protecting elements.						
Retention of on site landscape and biodiversity features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (SEO L1) . The retention of the burgage and townland boundaries and the provision of flood swales will maintain the quality of the River Liffey and its tributaries the Griffeen and the Shinkeen; it will help contain contamination of the groundwater and will lessen the potential likelihood of flood risk (SEO W1-W3) .						
<p>Objective GI10</p> <p>It is an objective of the Local Area Plan to allow for limited sections of field boundaries (burgage and townland) 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. Where this occurs, high quality design cues that signal and delineate the pre existing plot line of the section of removed hedgerow boundary shall be utilised such as a change in materials with the use of high quality materials like cut stone and the use of lighting strips etc. Where part of a hedgerow has to be removed for access the street width shall be a maximum of 6 metres wide.</p>	HH1 C1 C2		B3 CH1			
<p>Provision of routes for pedestrians and cyclists will encourage and facilitate pedestrian and cycling movements and allow for a reduction in emissions and car dependence, thereby improving human health (SEO HH1 C1 C2).</p> <p>There is a Potential Conflict with status of SEOs, in that the removal of sections of the field boundaries to facilitate the creation of successful streets and spaces and to provide pedestrian/cyclist facilities is likely to have a negative impact on the existing biodiversity network (SEO B3), due to habitat</p>						

fragmentation and the removal of sections of Burgage Hedgerows (**SEO CH1**). A considerable number of measures have been introduced to mitigate these impacts, and it is likely that there most of the impacts will be mitigated.

Objective GI11

It is an objective of the plan that where removal of a section of hedgerow is required for street access, the street width and gap in the hedgerow shall be kept to a minimum and determined by street typology (see street design cross section and typologies in Appendix 3) in order to protect and retain foraging routes for bats. Mature street planting should also be located to help fill the void between sections of hedgerow and create 'eco-hop' across each street as detailed in Section 7 of this Plan.

HH1 C1 C2

CH1 B3

Provision of routes for pedestrians and cyclists will encourage and facilitate pedestrian and cycling movements and allow for a reduction in emissions and car dependence, thereby improving human health (**SEO HH1 C1 C2**).

There is a Probable Conflict with status of SEOs, in that the removal of sections of the field boundaries to facilitate the creation of successful streets and spaces and to provide pedestrian/cyclist facilities is likely to have a negative impact on the existing biodiversity network (**SEO B3**), due to habitat fragmentation and the removal of sections of Burgage Hedgerows (**SEO CH1**). While a considerable number of measures have been introduced to mitigate these impacts, it is likely that there will be significant negative residual impacts.

Objective GI12

It is an objective of the Local Area 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

W1-W3 B3
L1

biodiversity network that will retain and develop existing flora and fauna						
<p>This will maintain the quality of the River Liffey and its tributaries the Griffeen and the Shinkeen, help prevent contamination of groundwater and reduce the risk of flooding (SEO W1-W3). Retention of on site features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (SEO L1)</p>						
<p>Objective GI13</p> <p>It is an objective of the Local Area Plan that a linked SUDS network shall be implemented fully across the Plan Lands and 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 large attenuation wetland area to form part of a neighbourhood park to the north of Main Street, which will collect the remaining surface water from the developed SUDS network to the south prior to it feeding the stream system to the north of the village.</p>	W1-W3					
<p>This will maintain the quality of the River Liffey and its tributaries the Griffeen and the Shinkeen, help prevent contamination of groundwater and reduce the risk of flooding (SEO W1-W3)</p>						
<p>Objective GI14</p> <p>It is an objective of the Local Area Plan that all development shall incorporate on site SUDS technologies detailed in the standards section of this Local Area Plan such as porous grass</p>	W1-W3 B3					

paviors, green roofs, rainwater recycling systems and soakaways						
This will maintain the quality of the River Liffey and its tributaries the Griffeen and the Shinkeen, help prevent contamination of groundwater and reduce the risk of flooding (SEO W1-W3) . The use of onsite SuDs technologies will help maintain and enhance the overall biodiversity network (SEO B3)						
Objective GI15 It is an objective of the Local Area Plan that existing natural swales and ditches shall be retained to form an integral part of the overall SUDS network.	W1-W3 B3					
The retention of existing natural swales and ditches will maintain the quality of the River Liffey and Griffeen and its tributaries; it will help contain contamination of the groundwater, enhance biodiversity networks and will lessen the potential likelihood of flood risk (SEO B3 W1-W3) .						
Objective GI16 It is an objective of the Local Area Plan that SUDS elements such as swales, detention and retention basins and other landscape based attenuation features be planted with suitable riparian vegetation and water tolerant tree planting that will clean and attenuate surface water flow. The planting of such species will be particularly required within parkland areas and along the east-west running SUDS elements in order to help intercept and direct waterflows.	B3 W1-W3 L1					
Retention of on site landscape and biodiversity features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (SEO L1) . This will maintain the quality of the River Liffey and its tributaries the Griffeen and the Shinkeen, help prevent contamination of groundwater and reduce the risk of flooding (SEO W1-W3)						

<p>Objective GI17</p> <p>It is an objective of the Local Area Plan that all swales utilised within the SUDS network shall be of an appropriate (shallow and wide) dimension to allow for ease of maintenance including mowing and be designed in the interest of health and safety.</p>	<p>W1-W3 HH1</p>					
<p>This will maintain the quality of the River Liffey and its tributaries the Griffeen and the Shinkeen, help prevent contamination of groundwater and reduce the risk of flooding (SEO W1-W3). This will also protect human health from hazards due to the shallow and wide design of the swales (SEO HH1)</p>						
<p>Objective GI18</p> <p>It is an objective of the Local Area Plan that all planning application for residential and/or commercial floorspace on sites in areas at risk of flooding shall be accompanied by a Flood Risk Assessment that is 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 shall depend on the type and scale of development and the sensitivity of the area.</p>	<p>W3 W1</p>					
<p>This policy will protect the Griffeen and Liffey River systems and assist in retaining floodwaters from affecting property in other locations; it will help contain contamination of the groundwater and will lessen the potential likelihood of flood risk (SEO W3).The prevention of flood risk will indirectly reduce the possibility of the pollution of surface water (SEO W1).</p>						

<p>Objective GI19</p> <p>It is an objective of the Local Area Plan that require that burgage and townland field boundaries and ditches are utilised wherever possible as SUDS elements as swales for conveying water; landscape features; and biodiversity-protecting elements.</p>	<p>W1-W3 B3</p>					
<p>This will maintain the quality of the River Liffey and its tributaries the Griffeen and the Shinkeen, help prevent contamination of groundwater and reduce the risk of flooding (SEO W1-W3).</p>						
<p>Objective GI20</p> <p>It is an objective of the Local Area Plan that Protected Structures and upstanding archaeological remains including their environs shall be protected, preserved and enhanced as part of any surrounding or adjoining development and incorporated into a heritage trail/network for the village and its hinterland.</p>	<p>CH1 CH2 L1</p>					
<p>This objective will protect the archaeological and architectural heritage of the area (SEO CH1CH2) and will enhance and protect the surrounding landscape features (SEO L1)</p>						
<p>Objective GI21</p> <p>It is an objective of the Local Area Plan that an Archaeological Assessment Report shall be submitted with all planning applications within the 'Zone of Archaeological Potential'. All such reports shall fully assess the archaeological</p>	<p>CH1 L1</p>					

<p>implications of the proposed development. Where archaeological features are discovered it shall be demonstrated how the design and layout of development protects, incorporates and enhances these features.</p>						
<p>This objective will protect the archaeological heritage of the area (SEO CH1) and will enhance and protect the surrounding landscape features (SEO L1)</p>						
<p>Objective GI22</p> <p>It is an objective of the Local Area Plan that outside the 'Zone of Archaeological Potential' all developments must be subject to archaeological monitoring (due to the possibility of the presence of subsurface archaeological features).</p>	<p>CH1</p>					
<p>This objective will protect the archaeological heritage of the area (SEO CH1)</p>						
<p>Objective GI23</p> <p>It is an objective of the Local Area Plan that where significant archaeological features/deposits are discovered during archaeological investigations, it shall be a priority to allow for preservation in situ. Where this is not possible, full excavation and recording shall be required.</p>	<p>CH1</p>					
<p>This objective will protect the archaeological heritage of the area (SEO CH1)</p>						

<p>Objective GI24</p> <p>It is an objective of the Local Area Plan that development within the vicinity of a recorded monument or zone of archaeological potential shall not seriously detract from the setting of the feature and shall be sited and designed appropriately. Views of the village Motte from Main Street and Hazelhatch Road shall be protected from surrounding development especially from the development of the derelict public house site (previously known as McEvoy's) at the north-east corner of the junction between Main Street and Hazelhatch Road.</p>	<p>CH1 CH2 L1</p>					
<p>This will enhance and protect the architectural and archaeological heritage of the area (SEO CH1 CH2) ; it will also serve to protect and enhance the surrounding landscape (SEO L1)</p>						
<p>Objective GI25</p> <p>It is an objective of the Local Area Plan that In order to protect potential archaeological remains, basement developments including basement parking will generally be avoided within the Village and its environs, especially within the Zone of Archaeological Potential</p>	<p>CH1</p>					
<p>This objective will protect the archaeological heritage of the area (SEO CH1)</p>						

	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>Objective GI26</p> <p>It is therefore an objective of this Local Area plan to ensure that works to Protected Structures and development within the curtilage and attendant grounds of Protected Structures shall comply with the Architectural Heritage Protection Guidelines for Planning Authorities (2011) including the conservation principles contained therein. Such development including changes of use shall be sensitive to the historic setting of the Village as a whole and should contribute to the sustainable re-use or continued use of Protected Structures. The re-use of Protected Structures for the purpose of heritage or tourism in Newcastle Village is preferential.</p>	CH1 CH2 L1					
<p>This will enhance and protect the architectural and archaeological heritage of the area (SEO CH1 CH2) ; it will also serve to protect and enhance the surrounding landscape features (SEO L1)</p>						
<p>Objective GI27</p> <p>It is therefore an objective of this Local Area Plan to ensure that all development proposals maximise the opportunities for enhancement of existing ecology and biodiversity and are accompanied by a full ecological assessment, carried out by a suitably qualified professional, that includes measures to enhance ecology and biodiversity and avoid</p>	B3 L1					

or minimise loss to local ecology and biodiversity.												
Maximising on site landscape and biodiversity features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (SEO L1) .												
Objective GI28	B3	B3										
It is an objective of the Local Area Plan to require the submission of a Bat Survey as part of every planning application for development (excluding house extensions) within the Plan Lands and require the implementation of appropriate mitigation measures that ensure for the protection of bats and their habitats.												
The requirement for the submission of a bat survey with planning applications would provide information in relation to the protected species in the plan lands, thereby helping to protect and enhance the existing biodiversity network in the area (SEO B3) ;												
There is probable conflict however impact on the protected species, due to the exclusion of planning applications for house extensions from the submission of a bat survey as the scale of such a development can vary greatly. (SEO B3)												
Objective GI29	B3 L1											
It is an objective of the Local Area Plan to require the planting of mature trees along both sides of streets located within the foraging routes and flight-paths of bats in a manner that creates links between retained and augmented hedgerows.												
The provision of mature trees will allow for effective operation of wildlife movements and habitat use and enhance the existing biodiversity network in the area (SEO B3) ; it will also protect and enhance the landscape (SEO L1)												

<p>Objective GI30</p> <p>It is an objective of the Local Area Plan to encourage the planting of species to reinforce the habitats of Bats within the vicinity of Newcastle.</p>	<p>B3 L1</p>					
<p>The provision of mature trees and additional planting will allow for effective operation of wildlife movements and habitat use and enhance the existing biodiversity network in the area (SEO B3) ; it will also protect and enhance the landscape (SEO L1)</p>						
<p>Objective GI31</p> <p>It is an objective of the Local Area Plan to create an open ended and integrated network of walking and cycle routes that permeate the Plan Lands and coincide with biodiversity corridors and SUDS features. These routes shall form heritage trails that use natural and built heritage features to link a necklace of parks, open spaces and landscaped squares.</p>	<p>HH1 C1 C2 CH1 CH2 L1</p>			<p>B3</p>		
<p>Provision of routes for pedestrians and cyclists will encourage and facilitate pedestrian and cycling movements and allow for a reduction in emissions and car dependence, thereby improving human health (SEO HH1 C1 C2). This will also serve to protect and enhance the archaeological/architectural heritage of the area (SEO CH1 CH2). It is uncertain of the impact the routes would have on the ecological networks along which they would be located (SEO B3). It will also protect and enhance the landscape features (SEO L1)</p>						
<p>Objective GI 32</p> <p>It is an objective of the Local Area Plan to ensure that the transition between the built</p>	<p>L1</p>					

<p>development and the open countryside is sensitively treated open spaces and low density housing set amongst heavily landscaped streets shall be provided along the undeveloped fringes of the Plan Lands. This will require the augmentation of existing hedgerows with planting of streets and spaces with mature and semi-mature native tree species prior to the occupation of dwellings.</p>						
<p>The provision of a transitional zone between low density development and the open countryside will protect the existing landscape and minimise the visual impact on scenic routes (SEO L1)</p>						
<p>Objective GI33</p> <p>It is an objective of the Local Area Plan to maintain the views to the countryside from the Village and from the countryside into the Village and in particular to preserve the views to the surrounding countryside, Athgoe Hill and Lyons Hill from the Hazelhatch Road as required in the South Dublin County Development Plan 2010-2016.</p>	<p>L1</p>					
<p>This objective will serve to protect the landscape features and scenic routes in the areas</p>						

Accessibility and Movement

	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>Objective AM1</p> <p>It is an objective of the Local Area Plan that All relevant development proposals especially street proposals shall implement and adhere to the street hierarchy detailed in see Table 5.3 and shall largely comply with the street designs detailed in Appendix 3</p>						
No impact on SEO's						
<p>Objective AM2</p> <p>It is an objective of the Local Area Plan that development proposals shall offer choices of routes and help dissipate vehicular traffic throughout the Plan Lands. This will include a design speed of 30km per hour for Access Streets.</p>	HH1 C1 C2					
An approach which takes into account the overall design of streets and their use by stakeholders should be more effective in slowing traffic and reducing car based emissions while utilising the street for residents through movement by pedestrians and cyclists						
<p>Objective AM3</p> <p>It is an objective of the Local Area Plan that all Neighbourhoods shall be afforded direct vehicular, pedestrian and cyclist access to Main Street.</p>	HH1 C1 C2					

Access routes and streets shall be safe, barrier free and overlooked by development.						
Provision of routes for pedestrians and cyclists will encourage and facilitate pedestrian and cycling movements and allow for a reduction in emissions and car dependence, thereby improving human health (SEO HH1 C1 C2)						
Objective AM4 It is an objective of the Local Area Plan that cycling and walking shall be encouraged within and through the Plan Lands by creating an open ended and integrated network of safe and accessible pedestrian and cycle routes that serve all streets and spaces. All existing and new Neighbourhoods shall be afforded direct pedestrian and cyclist access to Main Street and direct or indirect links to each other.	HH1 C1 C2					
Provision of routes for pedestrians and cyclists will encourage and facilitate pedestrian and cycling movements and allow for a reduction in emissions and car dependence, thereby improving human health (SEO HH1 C1 C2)						
Objective AM5 It is an objective of the Local Area Plan that pedestrian and cycle routes shall be provided on both sides of all street types with the exception of Access Streets, which shall comprise shared carriageways for pedestrians, cyclists and motor vehicles. Access Streets shall therefore be designed for speeds conducive to shared pedestrian, cycle and vehicular movements.	HH1 C1 C2					
Provision of routes for pedestrians and cyclists will encourage and facilitate pedestrian and cycling movements and allow for a reduction in emissions and car dependence, thereby improving human health (SEO HH1 C1 C2)						
Objective AM6 It is an objective of the Local Area Plan that signalised junctions shall be provided as opposed to roundabouts in order to encourage cyclist and	HH1 C1 C2					

pedestrian safety and movement. Roundabout junctions are prohibited.						
This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns, resulting in reduced car based movements and improved human health as signalised junctions are safer than roundabout junctions, particularly for cyclists.						
<p>Objective AM7</p> <p>It is an objective of the Local Area Plan that planning applications for residential, commercial and employment development are required to provide or integrate with direct, safe and attractive pedestrian and cyclist routes to public transport stops especially bus stops along Main Street.</p>	<p>HH1 C1 C2</p>					
This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns, resulting in reduced car based movements and improved human health						
<p>Objective AM8</p> <p>It is therefore an objective of the Local Area Plan to offer choices of routes and help to dissipate vehicular traffic throughout the Plan Lands by providing for multiple vehicular routes and connections to Main Street and the Link Streets in a manner that helps to dissipate traffic throughout the Plan lands. This will include a design speed of 30 - 40 kilometres per hour for Link Streets and 30km per hour for Access Streets.</p>	<p>HH1 C1 C2</p>					
An approach which takes into account the overall design of streets and their use by stakeholders should be more effective in slowing traffic and thereby reducing car based emissions while utilising the street for residents through movement by pedestrians and cyclists						

	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>Objective AM9</p> <p>It is an objective of the Local Area Plan to design streets for slow vehicular speeds from the outset in a manner that would limit the need to install retro-fitted traffic calming structures such as speed humps. Slower vehicular speeds shall be achieved through street design such as narrow carriageways, street enclosures and horizontal and vertical elements such as (inter alia) low traffic tables at junctions and/or pinch points.</p>	HH1 C1 C2					
An approach which takes into account the overall design of streets and their use by stakeholders should be more effective in slowing traffic while utilising the street for residents through movement by pedestrians and cyclists						
<p>Objective AM10</p> <p>It is an objective of the Local Area Plan that traffic calming mechanisms and contemporary solutions detailed in the Section 7 and Appendix 3 of this Local Area Plan will be carefully incorporated within development proposals at the design stage.</p>						
No impact on SEO's						

<p>Objective AM11</p> <p>It is an objective of the Local Area Plan to ensure that development within the Plan Lands is based on a grid layout. Therefore new developments will be highly connected and in a format that avails of every possibility of linking into the existing street network and will provide efficient connections to existing local facilities. The connected layout should align to desire lines and link the site to specific destinations, in particular to Main Street.</p>	<p>HH1 C1 C2</p>					
<p>This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns, thereby reducing car based emissions</p>						
<p>Objective AM12</p> <p>It is an objective of the Local Area Plan to assess all interfaces between proposed new development, existing housing development and undeveloped lands at planning application stage and to ensure that all proposed development integrates and addresses existing development and undeveloped land especially residential development and open spaces in a manner that creates the opportunity for more permeable layouts and encourages passive and active surveillance of streets and spaces.</p>	<p>HH1 C1 C2 S1 L1</p>					
<p>This objective will facilitate more sustainable development, encourage walking based movement patterns (SEO HH1 C1 C2) and retain and improve existing urban fabric (SEO S1); It will also enhance the existing landscape features(SEO L1)</p>						
<p>Objective AM13</p> <p>It is an objective of the Local Area Plan to create open ended routes through existing and new development in a manner that ensures greater permeability and convenient pedestrian access to community facilities, schools, open spaces, shopping facilities, local employment and public transport stops.</p>	<p>HH1 C1 C2 S1</p>					

This objective will facilitate more sustainable development, encourage walking based movement patterns (SEO HH1 C1 C2) and retain and improve existing urban fabric (SEO S1).						
	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
Objective AM14 It is an objective of the Local Area Plan to facilitate the upgrading of existing cul-de-sacs by opening them up to allow pedestrian through access where it significantly shortens trips to community facilities, schools, open spaces, shopping facilities, local employment or public transport stops for future and existing residents. This may be achieved through the setting up of a local community forum involving all stakeholders who may address matters as they arise.	HH1 C1 C2		B3 CH1			
This objective will facilitate more walking/cycling based movement patterns, resulting in reduced car based movements and improved human health. (SEO HH1 C1 C2). In opening up existing cul de sacs, there is a potential for conflict with Biodiversity and archaeological objectives although these conflicts are likely to be mitigated (SEO B3 CH1).						
Objective AM15 It is an objective of the Local Area Plan to require the opening of a vehicular and pedestrian through route where a permitted through routes has been closed off in an unauthorised manner. Temporary cul-de-sacs shall only be created between occupied housing and adjacent construction works. Temporary cul-de-sacs shall exclude turning circles, hammerhead junctions and masonry walls. Temporary measures shall be removed when they are no longer required to mitigate against construction works and before the full occupation of adjacent dwellings	HH1 C1 C2					

This objective will facilitate more sustainable development, encourage walking based movement patterns.

Land Use and Density

	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>Objective LUD1</p> <p>It is an objective of the Local Area Plan to concentrate new commercial and community development including retail floorspace around cultural, civic and retail nodes along Main Street in a manner that contributes to Main Street’s vitality and viability and its establishment as the ‘Village Core’.</p>	HH1 C1 C2		B3 W1-W3 CH1 CH2 L1			
<p>This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns (SEO HH1 C1 C2). There is potential for conflict for new development with Biodiversity, water, landscape and archaeological/architectural objectives although these conflicts are likely to be mitigated (SEO B3 W1-W3 CH1 CH2 L1)</p>						
<p>Objective LUD2</p> <p>It is an objective of the Local Area Plan that the preferred location for retail and service development along Main Street is around retail nodes situated close to existing businesses. Such development shall be commensurate to the local needs of Newcastle Village and shall comprise a medium sized supermarket (up to 1,500 sq.m net) and small</p>	HH1 C1 C2 B3 W1-W2		B3 W1-W3 CH1 CH2 L1			

scale flexible use commercial and retail units.						
<p>This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns (SEO HH1 C1C2). Concentrating development into a particular area will have a positive indirect impact on biodiversity and water as it will indirectly reduce the impact of development in other areas. (SEO B3 W1-W2). There is potential for conflict with Biodiversity, water, landscape and archaeological/architectural objectives although these conflicts are likely to be mitigated (SEO B3 W1-W3 CH1 CH2 L1)</p>						
<p>Objective LUD3</p> <p>It is an objective of the Local Area Plan that development of the site to the east of Saint Finian’s Community Hall shall provide for the extension of Saint Finian’s Hall and the provision of a village square with an element of parking. This space should be fronted by the extended community centre on its western side and commercial and residential units on its northern and eastern sides.</p>			C1 C2 HH1			
<p>Providing for additional car parking may facilitate car movements and dependency, thus increasing car based emissions, although this is likely to be mitigated (SEO HH1 C1 C2).</p>						
<p>Objective LUD4</p> <p>It is an objective of the Local Area Plan that development at the western end of Main Street contributes to the establishment of a cultural quarter and enhances the views and setting of upstanding monuments. Development in the cultural quarter shall incorporate built and natural heritage features wherever possible including archaeology features discovered during archaeological investigation.</p>	CH1 CH2 L1					
<p>This will enhance and protect the architectural and archaeological heritage of the area (SEO CH1 CH2) ; it will also serve to protect and enhance the surrounding landscape features (SEO L1)</p>						
<p>Objective LUD5</p> <p>It is an objective of the Local Area Plan that development of the former</p>	CH1 CH2 L1					

<p>public house site at the north-east corner of the junction between Main Street and Hazelhatch Road shall include a gateway feature that announces the approach into Newcastle and its historic/cultural quarter. This could include for the incorporation of elements from the former public house structure and any archaeological material found on site. Development of this site shall be sensitive to the setting to the Motte and should incorporate views of the Motte within the buildings overall design setting</p>						
<p>This will enhance and protect the architectural and archaeological heritage of the area (SEO CH1 CH2) ; it will also serve to protect and enhance the surrounding landscape features (SEO L1)</p>						
<p>Objective LUD6</p> <p>It is an objective of the Local Area Plan that the inclusion of tourist attractions and uses that explore Newcastle’s heritage and cultural value and incorporates built and natural heritage features shall be investigated as part of development proposals within the historical/cultural quarter.</p>	<p>CH1 CH2 L1 B3</p>			<p>C1 C2 HH1</p>		
<p>The sustainable development of Newcastle’s tourism assets will serve to protect and enhance the archaeological and architectural heritage of the area (SEO CH1 CH2). The use of the natural and built heritage as tourist attractions will enhance the surrounding landscape (SEO L1) and will also serve to protect existing biodiversity networks in the area (SEO B3). The provision of tourist attractions, however, may lead to increase in unsustainable car journeys, thereby increasing car based emissions (SEO HH1 C1 C2)</p>						
<p>Objective LUD7</p> <p>It is therefore an objective of this Local Area Plan that development within the Village Expansion area shall be sensitively consolidated within the Burgage plot field system in a manner that retains field boundaries and enhances and protects biodiversity. Where Burgage boundaries have been removed previously, these shall be reinstated as part of any development</p>	<p>B3 CH1 L1</p>					
<p>Retention of the existing burgage plots (SEOCH1) will serve to protect and enhance the landscape features (SEO L1) and will allow for effective operation of wildlife movements and habitat use (SEO B3)</p>						

<p>Objective LUD8</p> <p>It is an objective of the Local Area Plan that Residential development within the Settlement Edge shall consist of low density detached and semi-detached residential housing (15 – 20 dwellings per Hectare) on large garden plots. Such housing shall provide an appropriate and soft transition with the adjoining open countryside and shall be set amongst generously planted streets and open spaces that includes for semi-mature planting.</p>	<p>B3 L1 CH1</p>					
<p>Lower density housing will assist in maintaining the Burgage Plots (SEO CH1),the habitat networks and allow for effective operation of wildlife movements and habitats (SEO B3); the provision of planted streets and open spaces with semi-mature planting will also protect and enhance the landscape features (SEO L1)</p>						
<p>Objective LUD9</p> <p>It is an objective of the Local Area Plan that development of the Main Street and the Ballynakelly West Neighbourhoods (see Section 6) shall each include for the provision of a primary school site (two in total) that accord with the requirements of this Local Area Plan. The Expansion School Site shall therefore adjoin Saint Finian’s primary school with available access from Main Street and the New School Site shall be located adjacent to the Village Park and the Ballynakelly Development with available access from the Ballynakelly Development.</p>	<p>HH1 C1 C2</p>		<p>B3 W1- W3 CH1 CH2 L1</p>			
<p>This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns, thereby reducing car based emissions and improving human health (SEO HH1 C1 C2) There is potential for conflict with Biodiversity, water, landscape and archaeological/architectural objectives although these conflicts are likely to be mitigated (SEO B3 W1-W3 CH1 CH2 L1).</p>						
<p>Objective LUD 10</p> <p>It is an objective of the Local Area Plan that development of both school sites shall include for drop off and pick up facilities for pupils and parking for staff. Development of the Expansion School Site shall include for drop-off and parking facilities set amongst a school park along Main</p>			<p>HH1 C1 C2</p>			

Street.						
The provision of parking facilities at the school sites may result in an increase in car based journeys and associated emissions (SEO HH1 C1 C2); the limited provision of these facilities, however, in the form of pick up/drop off areas only will help to mitigate against potential conflict						
Objective LUD11 It is an objective of the Local Area Plan that the New School Site shall share recreational facilities with the adjacent planned Village Park.	HH1 C1 C2					
The provision of recreational facilities will increase local usage and reduce the number of car journeys to amenities outside the plan area, thereby reducing the amount of car based emissions (SEO HH1 C1 C2).						
	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
Objective LUD12 It is an objective of the Local Area Plan that community facilities, which shall include youth specific facilities, shall be provided at a rate of 3 sq.m per 10 dwellings. The provision of community floorspace at, or adjoining, the existing St, Finian’s Community Centre and/or the payment of development contributions towards the provision of community floorspace at this location will be sought as an alternative to the piecemeal location of small pockets of floorspace on individual sites.	HH1 C1 C2		B3 W1- W3 CH1 CH2 L1			

<p>This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns (SEO HH1 C1 C2). There is potential for conflict with Biodiversity, water, landscape and archaeological/architectural objectives although these conflicts are likely to be mitigated (SEO B3 W1-W3 CH1 CH2 L1).</p>						
<p>Objective LUD13 It is an objective of the Local Area Plan that development along Main Street (see Section 6) shall provide shall provide for community floorspace within or around the civic and historic/cultural nodes identified under this Plan using St Finian’s Community Hall as a centre of focus. This should include for the relocation of 130 sq.m. of community floorspace permitted as part of the Ballynakelly Development.</p>	<p>HH1 C1 C2 B3 W1-W2</p>		<p>B3 W1- W3 CH1 CH2 L1</p>			
<p>This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns (SEO HH1 C1C2). Concentrating development into a particular area will have a positive indirect impact on biodiversity and water as it will reduce the impact of development in other areas. (SEO B3 W1-W2). There is potential for conflict with Biodiversity, water, landscape and archaeological/architectural objectives although these conflicts are likely to be mitigated (SEO B3 W1-W3 CH1 CH2 L1)</p>						
<p>Objective LUD14 It is therefore an objective of the Local Area Plan to restrict apartments/duplexes only to small gateway/corner sites and to developments that include an element of commercial floorspace. Such developments shall be of a small scale and shall fulfil a clear aesthetic or way-finding function such as a gateway at a corner location. Apartments/duplexes will only be located within the Village Core and Village Expansion areas. 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 prior to the adoption of this Plan fails accords with this restriction on apartments and duplexes.</p>						
<p>No impact on SEO’s</p>						
<p>Objective LUD15 It is an objective of the Local Area Plan to encourage independent</p>	<p>HH1 C1 C2</p>					

housing units for the elderly to sites located adjacent to parkland facilities and within circa 250 metres walking distance of Main Street.						
Concentrating independent housing units to areas served by park facilities and in close proximity to the Main street will reduce vehicular traffic and encourage walking and cycling based movement (SEO HH1 C1 C2)						
Objective LUD16						
It is an objective of the Local Area Plan to ensure that at least 90% of dwellings in any residential scheme have two or more bedrooms with the exception of independent housing schemes for the elderly						
No impact on the SEO's						
	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
Objective LUD 17						
It is an objective of the Local Area Plan to encourage a mix of dwelling types and quality design that will help aid legibility and way-finding throughout the area.						
No impact on SEO's						
Objective LUD 18				B3 W1-		

<p>It is an objective of the Local Area Plan that the density of development across the Plan Lands shall accord with that identified for each character area under Table 5.3 of this Plan. The density of development 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 prior to the adoption of this Plan accords with this Local Area Plan's density strategy or the densities recommended for small towns and villages under 'Sustainable Residential Development in Urban Areas' (2009)</p>				W3 L1		
<p>Lower densities will assist in maintaining the habitat networks and streams in greenfield rural and mountain areas. The higher densities may have potential negative impact upon habitat networks, streams and hedgerows unless design and layout take such issues into account at the outset, therefore the overall impact on the neighbourhood on biodiversity, water and landscape is uncertain (SEO B3 L1 W1- W3).</p>						

Built Form Strategy

	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>Objective BF1</p> <p>It is an objective of this Local Area Plan that development shall present key building frontages to the street edge within the Village Core and Village Expansion areas in accordance with the requirements of this</p>	S1					

Local Area Plan. Landscape Frontages shall be presented to the street edge in the Settlement Edge. Active frontages should be promoted as much as possible especially along Main Street.						
This objective will retain and enhance the existing urban fabric (SEO S1)						
Objective BF2 It is an objective of this Local Area Plan that all streets are designed in accordance with the Street Hierarchy set out in the Accessibility and Movement Strategy of this Plan and the design and cross section details set out in Appendix 3 of this Plan.						
No impact on SEO's						
Objective BF3 It is an objective of this Local Area Plan that the materials, texture and colour of proposed carriageways shall be appropriate to their location within Newcastle. The width of carriageways shall be minimised by incorporating lanes needed to cater for projected vehicle flows only and by minimising the width of each lane in accordance with the context and function of the street.						
No impact on SEO's						
Objective BF4 It is an objective of this Local Area Plan that pedestrian facilities such as wide footpaths and well designed crossings will form part of all planning applications for development within the Plan Lands.	HH1 C1 C2					
This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns, resulting in reduced car based movements and improved human health						
Objective BF5 It is an objective of this Local Area Plan that utilities shall be laid in	B3 L1					

common utility ducts to reduce disturbance to streetscapes and surface treatments from ongoing utility works. This shall be a condition of all relevant permissions.						
This objective will retain and protect the existing biodiversity network (SEO B3) and will also serve to protect and enhance the landscape features (SEO L1)						
Objective BF6	L1 CH2					
It is an objective of this Local Area Plan that Streets will be designed to reflect the historic character and importance of Newcastle and to contribute to its setting and visual amenity						
This objective will protect the special interest and character of Newcastle's archaeological heritage (SEO CH2) and will also serve to protect the landscape features of the area (SEO L1)						
Objective BF7	CH1 CH2 S1					
It is an objective of this Local Area Plan to Require the submission of a design statement and rationale that demonstrates how the development incorporates elements that reflects the developments time and place. This should include for the use of local building materials and respond to this Plan's requirements with relation to urban structure, urban grain, density and land-use, buildings heights, green infrastructure and the historic setting of recorded monuments and protected structures.						
This approach which takes into account the overall design of the area will retain and improve the existing urban fabric (SEO S1) as well as enhancing the architectural and archaeological heritage of the area (SEO CH1 CH2) .						
Objective BF8			L1			
It is an objective of this Local Area Plan that new development shall be no more than two storeys in height with limited exceptional						

<p>circumstances for three and four storey developments that are justified at gateway locations within the Village Core and on approach roads into the Village Core, where there may also be possibility for a 4 storey landmark building.</p>						
<p>The provision of three to four storey developments may impact adversely on the landscape; the restriction, however, of these types of developments to certain gateway location is likely to mitigate against the probable conflict on the landscape (SEO L1)</p>						
<p>Objective BF9</p> <p>It is an objective of this Local Area Plan to promote innovative building design that demonstrates a high level of energy conservation, energy efficiency and use of renewable energy sources in accordance with national regulations and policy guidelines.</p>	<p>C1</p>					
<p>The promotion of innovative building design and the use of renewable energy sources will contribute towards reducing overall energy usage and positively impact on climate change.</p>						
<p>Objective BF10</p> <p>It is an objective of this Local Area Plan to prohibit basement developments in the interests of protecting Newcastle's archaeological heritage.</p>	<p>CH1</p>					
<p>This objective will protect the archaeological heritage of the area (SEO CH1)</p>						

	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>Objective BF11</p> <p>It is an objective of this Local Area Plan that gateways features/structures shall only be developed at the identified locations and shall be appropriate to the scale and character of surrounding development.</p>	L1					
The location of gateway features/structures at certain locations will protect and avoid significant adverse impacts on the landscape (SEO L1)						
<p>Objective BF12</p> <p>It is an objective of this Local Area Plan that Gateway features/structures shall incorporate elements, finishes and materials that reflect the developments time and place and shall be a maximum of three stories in height. Such features/structures shall perform a clear way finding function.</p>						
No impact on SEO's						
<p>Objective BF13</p> <p>It is an objective of this Local Area Plan that streets shall be designed to incorporate changes in materials and finishes to highlight important local</p>	SI CH1 CH2					

<p>features such as at the Civic, Cultural and Retail nodes and at all 'gateways' to the village. Proposals for materials to be used shall be included within all planning applications.</p>						
<p>This approach which takes into account the overall design of the area will retain and improve the existing urban fabric (SEO S1) as well as enhancing the architectural and archaeological heritage of the area (SEO CH1 CH2).</p>						
<p>Neighbourhoods</p>	<p>Likely to Improve status of SEOs</p>	<p>Probable Conflict with status of SEOs- Unlikely to be mitigated</p>	<p>Potential Conflict with status of SEOs- likely to be mitigated</p>	<p>Uncertain interaction with status of SEOs</p>	<p>Neutral Interaction with status of SEOs</p>	<p>No Likely interaction with status of SEOs</p>
<p>Objective N1</p> <p>It is an objective of the Local Area Plan to require planning applications for any building(s), street(s) or space(s) to be accompanied by a masterplan layout drawing that details how the proposed building(s), streets(s) or space(s) fits within the framework for the neighbourhood to which they relate in terms of accessibility and movement; integration of development; density and land use; green infrastructure and built form. These framework elements can be varied in terms of precise location and design provided that they conform to the principles and guidance set out in this Local Area Plan. Existing utilities should be accommodated between blocks and under streets.</p>	<p>HH1 C1 C2 B1-B3 W1-W2</p>		<p>B1-B3 W1 W3 L1</p>	<p>M1</p>		<p>M2</p>
<p>Walking/cycling based movement patterns are being encouraged, resulting in reduced car based movements and improved human health. (SEO HH1 C1 C2). Concentrating development into a particular area will have a positive indirect impact on biodiversity and water as it will reduce the impact of</p>						

development in other areas. (SEO B1-B3 W1-W2) The concentration of development would be positive in terms of treatment of wastewater but the existing capacity problems at Ringsend WwTp may give rise to significant negative impacts (SEO M1). The concentration of development into certain areas is not likely to have any significant impact on the quality of drinking water supplies (SEO M2)						
Objective N2 It is an objective of the Local Area Plan to ensure that each neighbourhood is developed with open ended and integrated pedestrian and cycle routes that link with Main Street and adjacent neighbourhoods.	HH1 C1 C2					
Provision of routes for pedestrians and cyclists will encourage and facilitate pedestrian and cycling movements and allow for a reduction in emissions and car dependence, thereby improving human health (SEO HH1 C1 C2)						
Neighbourhood 1: Main Street (East) Objective MSE1 It is an objective of the Local Area Plan that development along Main Street shall include for public realm improvements to include planting of indigenous trees, widening of footpaths and provision of robust street furniture.	B3 L1 HH1 C1 C2					
The planting of trees will help contribute to the overall biodiversity network and enhance the landscape features (SEO B3 L1); the widening of footpaths will encourage pedestrian/cycling movements, thereby reducing traffic based movements (SEO HH1 C1 C2)						
Objective MSE2 It is an objective of the Local Area Plan that development of a retail anchor store along Main Street shall include for a pedestrianised hard landscaped square close to the mid point along Main Street. Such a square shall include for formal planting, an artistic feature and park furniture to include for comfortable seating and sheltered bicycle parking. This square shall be absent of car parking and drop off facilities for cars	HH1 C1 C2					
This objective will facilitate more sustainable development, encourage walking based movement patterns, resulting in reduced car based movements						

and improved human health						
Objective MSE3	S1					
It is an objective of the Local Area Plan that A Main Street Improvement Plan should be agreed or produced as a separate advice document after adoption of this Local Area Plan to help guide and co-ordinate public realm improvements, infill development and the redevelopment of sites						
This will help retain and improve the existing urban fabric						

	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
Objective MSE4	HH1 C1 C2					
It is an objective of the Local Area Plan that development along Main Street shall include for relatively uniform traffic calming measures implemented at various locations along Main Street. These measures shall be in-keeping with the principles of place making and shall make use of urban design led methods such as on-street parking, narrowed carriageways, wide footpaths, cycle paths, street planting and furniture, shared surfaces, raised pedestrian crossings and raised traffic tables/junctions etc.						
This objective will facilitate more sustainable development, encourage walking based movement patterns, resulting in reduced car based movements and improved human health						

<p>Objective MSE5</p> <p>It is an objective of the Local Area Plan that development along Main Street shall allow and provide for connections to routes that are envisaged under the Accessibility Movement Strategy of this Plan including Link Streets and Green Links to existing and planned neighbourhoods.</p>	<p>HH1 C1 C2</p>					
<p>This objective will facilitate more sustainable development, encourage walking based movement patterns, resulting in reduced car based movements and improved human health</p>						
<p>Objective MSE6</p> <p>It is an objective of the Local Area Plan that Residential development along Main Street shall be subject to a maximum net residential density of 35 dwellings per hectare</p>				<p>B3 L1 W1- W3</p>		
<p>The higher densities may have potential negative impact upon habitat networks, streams and hedgerows unless design and layout take such issues into account at the outset, therefore the overall impact on the neighbourhood on biodiversity, water and landscape is uncertain (SEO B3 L1 W1- W3).</p>						
<p>Objective MSE7</p> <p>It is an objective of the Local Area Plan that the conversion of residential dwellings that face onto Main Street to village centre uses will be encouraged subject to their sensitive redevelopment and the protection of amenities of existing dwellings. Such redevelopment shall contribute to relatively uniform public realm improvements such as on-street parking, narrowed carriageways, wide footpaths, cycle paths, street planting and furniture, shared surfaces, raised pedestrian crossings and raised traffic tables/junctions etc.</p>	<p>S1 HH1 C1 C2</p>					

This objective will retain and improve existing urban fabric (**SEO S1**); the provision of commercial facilities will also reduce the need to travel elsewhere to access them, thereby reducing vehicular movements and car based emissions (**SEO HH1 C1 C2**)

	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>Objective MSE8</p> <p>It is an objective of the Local Area Plan that the redevelopment of the existing parade of shops on the northern side of Main Street shall include for the provision of a new connection or link street to lands to the north and shall provide for a strong built frontage with on-street parking onto Main Street and the new link street.</p>	HH1 C1 C2		B3 W1 W2 CH1 CH2 L1			
<p>This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns (SEO HH1 C1 C2). There is potential for conflict with Biodiversity, water, landscape and archaeological/architectural objectives although these conflicts are likely to be mitigated (SEO B3 W1 W2 CH1 CH2 L1).</p>						
<p>Objective MSE9</p> <p>It is an objective of the Local Area Plan that all infill development along Main Street and redevelopment (where possible) shall provide for direct</p>	S1 HH1 C1 C2					

frontage onto Main Street with ample footpath provision and on-street parking.						
This approach which takes into account the overall design of the area will retain and improve the existing urban fabric (SEO S1); it will also encourage walking/cycling based movement patterns, thereby reducing car based emissions and improving human health (SEO HH1 C1 C2)						
<p>Objective MSE10</p> <p>It is an objective of the Local Area Plan A landmark building (with element that reaches 12 metres in height) and a landscaped square (Bealtaine Square) shall be permissible at the south-east corner of a planned four way junction between the Link Streets to the north and south and Main Street</p>						
No impact on SEO's						
<p>Neighbourhood 1: Main Street (West)</p> <p>Objective MSW1</p> <p>It is an objective of the Local Area Plan that development of the site to immediately the east of Saint Finian's Community Hall shall include for the provision of a hard landscaped square paved with large paving slabs and planted with mature clear stemmed trees. This space shall be furnished with comfortable seating and sheltered bicycle parking and shall include an element of public parking in the form of porous grass paviers.</p>	<p>HH1 C1 C2 W2 W3</p>					
The provision of an amenity area and sheltered bicycle parking will encourage pedestrian/cycling movements, thereby reducing traffic movements and car based emissions (SEO HH1 C1C2); the provision of porous grass paviers as part of the overall SuDS network will help prevent contamination of groundwater and reduce the risk of flooding (SEO W2 W3).						

	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>Objective MSW2</p> <p>It is an objective of the Local Area Plan to protect and enhance the setting and views of the Motte and Village Green and environs from surrounding development especially the redevelopment of the adjacent public house at the north-east corner of the junction between Hazelhatch Road and Main Street</p>	CH1 CH2 S1					
<p>This approach which takes into account the overall design of the area will retain and improve the existing urban fabric (SEO S1) as well as enhancing the architectural and archaeological heritage of the area (SEO CH1 CH2).</p>						
<p>Objective MSW3</p> <p>It is an objective of the Local Area Plan that development along Main Street shall include for public realm improvements to include planting of indigenous trees, widening of footpaths and provision of robust street furniture.</p>	B3 HH1 C1 C2					
<p>The planting of trees will help contribute to the overall biodiversity network and enhance the landscape features (SEO B3 L1); the widening of footpaths will encourage pedestrian/cycling movements, thereby reducing traffic based movements (SEO HH1 C1 C2)</p>						

<p>Objective MSW4</p> <p>It is an objective of the Local Area Plan that a Main Street Improvement Plan be agreed or produced as a separate advice document after adoption of this Local Area Plan to help guide and co-ordinate public realm improvements, infill development and the redevelopment of sites.</p>						
<p>No impact on SEO's</p>						
<p>Objective MSW5</p> <p>It is an objective of the Local Area Plan that development along Main Street shall include for relatively uniform traffic calming measures implemented at various locations along Main Street. These measures shall be in-keeping with the principles of place making and shall make use of urban design led methods such as on-street parking, narrowed carriageways, wide footpaths, cycle paths, street planting and furniture, shared surfaces, raised pedestrian crossings and raised traffic tables/junctions etc.</p>	<p>HH1 C1 C2</p>					
<p>Provision of routes for pedestrians and cyclists will encourage and facilitate pedestrian and cycling movements and allow for a reduction in emissions and car dependence, thereby improving human health (SEO HH1 C1 C2)</p>						
<p>Objective MSW6</p> <p>It is an objective of the Local Area Plan that development along Main Street shall allow and provide for connections to routes that are envisaged under the Accessibility Movement Strategy of this Plan including Link Streets and Green Links to existing and planned neighbourhoods.</p>	<p>HH1 C1 C2</p>					

This objective will facilitate more sustainable development, encourage walking based movement patterns, resulting in reduced car based movements and improved human health

	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>Objective MSW7</p> <p>It is an objective of the Local Area Plan that a site for a new/extended primary school with playing fields, staff parking and drop off facilities shall be reserved with direct access on the southern side of Main Street.</p>	HH1 C1 C2		B3 W1-W3 CH1 CH2 L1			
<p>This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns and encourage use of public transport, thus reducing emissions and improving human health (SEO HH1 C1 C2). There is potential for conflict with biodiversity, water, landscape and archaeological/architectural objectives although these conflicts are likely to be mitigated (SEO B3 W1-W3 CH1 CH2 L1).</p>						
<p>Objective MSW8</p> <p>It is an objective of the Local Area Plan to encourage the development of Civic and Cultural uses along the western end of Main Street to aid in the</p>	CH1 CH2					

creation of a civic/cultural quarter centred on the school, church and heritage buildings.						
This objective will protect and enhance the architectural and archaeological heritage of the area						
<p>Objective MSW9</p> <p>It is an objective of the Local Area Plan that Community facilities provided as part of residential development (30 sq.m per 10 dwellings) shall be provided within or around the civic and cultural nodes identified under this Plan using St Finian’s Community Hall as a centre of focus.</p>	<p>HH1 C1 C2</p>		<p>B3 W1- W3 CH1 CH2 L1</p>			
This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns (SEO HH1 C1 C2). There is potential for conflict with Biodiversity, water, landscape and archaeological/architectural objectives although these conflicts are likely to be mitigated.						
<p>Objective MSW10</p> <p>It is an objective of the Local Area Plan that all infill development along Main Street and redevelopment (where possible) shall provide for direct frontage onto Main Street with ample footpath provision and on-street parking.</p>	<p>HH1 C1 C2</p>					
This objective will facilitate more sustainable development and encourage walking/cycling based movement patterns (SEO HH1 C1 C2)						

	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>Objective MSW11</p> <p>It is an objective of the Local Area Plan that a landmark feature building with an element that reaches 9 metres in height shall be permissible at the planned Market Square to the east of St. Finian’s Community Centre</p>						
No impact on SEO’s						
<p>Objective MSW12</p> <p>It is an objective of the Local Area Plan that the redevelopment of former public house site at the north-east corner of the junction between Hazelhatch Road and Main Street as a gateway building up to four storeys in height with a cultural/tourist element is permissible subject to protection of the views and setting of the Village Motte and Village Green.</p>	L1 CH1 CH2					
This objective will enhance the architectural and archaeological heritage of the area (SEO CH1 CH2); the protection of views will help enhance the landscape features (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
Neighbourhood 2: Sean Feirm						
Objective SF1 It is an objective of the Local Area Plan that development of the Sean Feirm Neighbourhood shall largely comprise detached and semi-detached dwellings on large garden plots that are set back from street edges by front gardens.						
No impact on SEO's						
Objective SF2 It is an objective of the Local Area Plan to provide for two parks including a soft landscaped pocket park located around the upstanding tower house with passive recreation facilities; and a local park with passive and active recreation facilities that forms part of the SUDS network through the incorporation of a water feature.	HH1 C1 C2 B3					
The provision of public parks will increase local usage and reduce the number of car journeys to amenities outside the plan area, thereby reducing the amount of car based emissions (SEO HH1 C1 C2). The provision of parks will also enhance the existing biodiversity network, allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (SEO L1). The provision of water feature will facilitate the SUDS approach and reduce potential flood risk (SEO W3)						
Objective SF3 It is an objective of the Local Area Plan to include for a tree lined	HH1 C1 C2 B3					

<p>boulevard (Green Link) that links both of the neighbourhood's parks with Athgoe Road and forms part of the SUDS network through the incorporation of a central swale.</p>	<p>L1 W3</p>						
<p>The provision of links to the public parks will increase local usage and reduce the number of car journeys to amenities outside the plan area, thereby reducing the amount of car based emissions (SEO HH1 C1 C2). The provision of the links to the parks will also enhance the existing biodiversity network, allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (SEO L1). The incorporation of a central swale will enhance the natural drainage, will facilitate the SUDS approach and reduce potential flood risk (SEO W3)</p>							
<p>Objective SF4 It is therefore an objective of this Local Area Plan to Maintain views of rural lands and Lyons Hill to the south-west from Hazelhatch Road as designated for protection and preservation under the South Dublin County Council Development Plan (2010 – 2016).</p>	<p>L1</p>						
<p>the protection of views will help enhance the landscape features (SEO L1)</p>							
<p>Objective SF5 It is therefore an objective of this Local Area Plan to Ensure that any proposals on lands adjoining the larger retention pond identified at the western end of the Newcastle South Townland under the Newcastle Parish Ordnance Survey Map, 1865 (see Fig. 4.3), shall seek to incorporate this feature and be accompanied by reports from suitably qualified persons on both the surface water management and historic significance of this feature.</p>	<p>W1-W3</p>						
<p>This objective will maintain the quality of the River Liffey and its tributaries the Griffeen and the Shinkeen; it will help contain contamination of the groundwater and will lessen the potential likelihood of flood risk (SEO W1-W3).</p>							
<p>Objective SF6 It is therefore an objective of this Local Area Plan that development of</p>	<p>HH1 C1 C2</p>						

<p>the Sean Feirm Neighbourhood shall include for a vehicular and pedestrian connection to Main Street and a vehicular and pedestrian connection to Athgoe Road that forms part of an east-west relief route between Athgoe Road and Ballynakelly.</p>						
<p>The provision of pedestrian/vehicular links will promote and encourage sustainable travel patterns, thereby reducing car based emissions</p>						
<p>Objective SF7 It is an objective of this Local Area Plan that Development of the Sean Feirm Neighbourhood shall include for access/tertiary streets that are finished with shared surfaces for pedestrians, cyclist and vehicles</p>	<p>HH1 C1 C2</p>					
<p>This will promote and encourage sustainable travel patterns, thereby reducing car based emissions</p>						
<p>Objective SF8 It is an objective of the Local Area Plan Development within the Sean Feirm Neighbourhood shall provide for residential uses only at a maximum density of circa 20 dwellings per hectare. The lands at the south-west corner of junction between Hazelhatch Road and Athgoe Road shall be retained in agricultural use.</p>	<p>B3 L1</p>					
<p>Lower densities will assist in maintaining habitat networks (SEO B3) and will help protect and enhance landscape features (SEO L1)</p>						

	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>Objective SF9</p> <p>It is an objective of the Local Area Plan that In order to provide an appropriate transition with the rural hinterland and ensure for the provision of low density housing as an alternative to rural housing, development of the Sean Feirm Neighbourhood shall only comprise detached and semi-detached houses.</p>	B3 L1					
Lower densities will assist in maintaining habitat networks (SEO B3) and will help protect and enhance landscape features in the transition zone to the rural area (SEO L1)						
<p>Objective SF10</p> <p>It is an objective of the Local Area Plan that residential development to the rear of existing properties located along Main Street shall be carried out in a manner that creates coherent streetscapes and connections between planned and existing streets. This shall be demonstrated as part of all relevant planning applications.</p>	S1					
This will help retain and enhance the existing urban fabric						
	Likely to Improve status of SEOs	Probable Conflict with status of SEOs-	Potential Conflict with status of SEOs-	Uncertain interaction with status of SEOs	Neutral Interaction with status of SEOs	No Likely interaction with status of SEOs

		Unlikely to be mitigated	likely to be mitigated		SEOs	
<p>Neighbourhood 3: Burgage North</p> <p>Objective BN1</p> <p>It is an objective of the Local Area Plan that all planning applications for development within the Burgage North Neighbourhood shall clearly identify how burgage plot hedgerows and ditches to these boundaries will be enhanced and incorporated in a similar but improved model to the Castlelyon development, Aylmer Heath development and the development permitted under SD07A/0246. All such applications shall include a comprehensive hedgerow survey and method statement (compiled by a suitably qualified person) for protection, incorporation and reinstatement of the historic boundaries before, during and after construction. This shall include for details on protecting any sections of hedgerow outside the application site that directly adjoin the application site.</p>	B3 L1					
<p>The retention of the biodiversity features, in particular the burgage plots, will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape features (SEO L1).</p>						
<p>Objective BN2</p> <p>It is an objective of the Local Area Plan that burgage boundaries be utilised wherever possible as SUDS elements in the form of swales for conveying water; landscape features; and biodiversity-protecting elements. This shall include for the use of the Burgage boundaries for the division of the planned local park into a series of linked gardens with</p>	B3 W1-W3 L1					

varying functions and a SUDS feature.						
The use of the burgage boundaries as part of the overall SUDS network will maintain the quality of the Rivers Liffey and Griffeen, help prevent contamination of groundwater and reduce the risk of flooding (SEO W1-W3) . Incorporation of biodiversity features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and the provision of linked gardens in the park will enhance and protect the landscape features (SEO L1) .						
Objective BN3 It is an objective of the Local Area Plan that the sensitive opening of limited sections of Burgage boundaries is permissible 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. Where this occurs, high quality design cues that signal and delineate the pre-existing plot line of the section of removed hedgerow boundary shall be utilised such as a change in materials with the use of high quality materials like cut stone and the use of lighting strips etc	HH1 C1 C2	B3 CH1				
Provision of routes for pedestrians and cyclists will encourage and facilitate pedestrian and cycling movements and allow for a reduction in emissions and car dependence, thereby improving human health (SEO HH1 C1 C2) . There is a Probable Conflict with status of SEOs, in that the removal of sections of the field boundaries to facilitate the creation of successful streets and spaces and to provide pedestrian/cyclist facilities is likely to have a negative impact on the existing biodiversity network (SEO B3) , due to habitat fragmentation and the removal of sections of Burgage Hedgerows (SEO CH1) . While a considerable number of measures have been introduced to mitigate these impacts, it is likely that there will be significant negative residual impacts.						
Objective BN4 It is an objective of the Local Area Plan that development of the Burgage North Neighbourhood shall include for a series of parks that incorporates existing burgage hedgerows and SUDS features. Each of these spaces shall fulfil a clear function. The larger local park shall be divided by the hedgerows in a manner that creates a series of linked gardens of varying	HH1 C1 C2 W1-W3 L1					

character and functions that includes for a formally planted garden with seating and SUDS water feature, a children’s play area and an informal active amenity space.						
The provision of public amenity areas will increase local usage and reduce the number of car journeys to amenities outside the plan area, thereby reducing the amount of car based emissions (SEO HH1 C1 C2) . The use of the burgage hedgerows and the parks as part of the overall SUDs network will maintain the quality of the Rivers Liffey and Griffeen, help prevent contamination of groundwater and reduce the risk of flooding (SEO W1-W3) . Incorporation of biodiversity features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and the provision of linked gardens in the park will enhance and protect the landscape features (SEO L1) .						
Objective BN5 It is an objective of the Local Area Plan to Development within the Burgage North Neighbourhood shall provide for and contribute to the creation of an open ended east-west streets between existing and new development. This route will eventually link Aylmer Road with Peamount Road. The creation of east-west cul-de-sacs or erection of barriers along the east-west streets shall not be permitted. Exceptional circumstances may include for the development of short home zones with shared surfaces that do not obstruct east-west streets	HH1 C1 C2					
The provision of pedestrian links will encourage cycling/walking movements, thereby reducing car based emissions						

	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
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<p>Objective BN6</p> <p>It is an objective of the Local Area Plan that development of the Burgage North Neighbourhood shall include for tertiary streets that are finished with shared surfaces for pedestrians, cyclist and vehicles.</p>	<p>HH1 C1 C2</p>					
<p>The provision of pedestrian/vehicular access will promote and encourage sustainable travel patterns, thereby reducing car based emissions</p>						
<p>Objective BN7</p> <p>It is an objective of the Local Area Plan that Development within the Burgage North Neighbourhood shall provide for residential uses only at a maximum density of circa 30-35 dwellings per hectare. The density of development 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 prior to the adoption of this Plan accords with the permissible density.</p>				<p>B3 L1 W1- W3</p>		
<p>The higher densities may have potential negative impact upon habitat networks, streams and hedgerows unless design and layout take such issues into account at the outset, therefore the overall impact on the neighbourhood on biodiversity, water and landscape is uncertain (SEO B3 L1 W1- W3).</p>						
<p>Objective BN8</p> <p>It is an objective of the Local Area Plan that Development of the Burgage North Neighbourhood shall largely comprise terraced houses with opportunities for detached and semi-detached housing only. The dwelling mix on sites that are subject to extant permissions should be amended accordingly. Extensions of duration of permission should only be granted where development granted prior to the adoption of this Plan accords with the permissible dwelling mix</p>						
<p>No impact on SEO's</p>						

	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>Neighbourhood 4: Burgage South</p> <p>Objective BS1</p> <p>It is therefore an objective of this Local Area Plan that all planning applications for development within the Burgage North Neighbourhood shall clearly identify how burgage plot hedgerows and ditches to these boundaries will be enhanced and incorporated in a similar but improved model to the Castelyon development, Aylmer Heath development and the development permitted under SD07A/0246. All such applications shall include a comprehensive hedgerow survey and method statement (compiled by a suitably qualified person) for protection, incorporation and reinstatement of the historic boundaries before, during and after construction. This shall include for details on protecting any sections of hedgerow outside the application site that directly adjoin the application site.</p>	B3 L1					
The retention of the biodiversity features, in particular the burgage plots, will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape features (SEO L1).						
<p>Objective BS2</p> <p>It is an objective of the Local Area Plan that Burgage boundaries be utilised wherever possible as SUDS elements in the form of swales for conveying water; landscape features; and biodiversity-protecting elements. This shall include for the use of the Burgage boundaries for</p>	B3 W1- W3 L1					

the division of the planned local park into a series of linked gardens with varying functions and a SUDS feature.						
The use of the burgage boundaries as part of the overall SUDS network will maintain the quality of the Rivers Liffey and Griffeen, help prevent contamination of groundwater and reduce the risk of flooding (SEO W1-W3) . Incorporation of biodiversity features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and the provision of linked gardens in the park will enhance and protect the landscape features (SEO L1) .						
<p>Objective BS3</p> <p>It is an objective of the Local Area Plan that the sensitive clearance of limited sections of Burgage boundaries is permissible 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. Where this occurs, high quality design cues that signal and delineate the pre-existing plot line of the section of removed hedgerow boundary shall be utilised such as a change in materials with the use of high quality materials like cut stone and the use of lighting strips etc.</p>	HH1 C1 C2	B3 CH1				
<p>Provision of routes for pedestrians and cyclists will encourage and facilitate pedestrian and cycling movements and allow for a reduction in emissions and car dependence, thereby improving human health (SEO HH1 C1 C2).</p> <p>There is a Probable Conflict with status of SEOs, in that the removal of sections of the field boundaries to facilitate the creation of successful streets and spaces and to provide pedestrian/cyclist facilities is likely to have a negative impact on the existing biodiversity network (SEO B3), due to habitat fragmentation and the removal of sections of Burgage Hedgerows (SEO CH1). While a considerable number of measures have been introduced to mitigate these impacts, it is likely that there will be significant negative residual impacts.</p>						
<p>Objective BS4</p> <p>It is an objective of the Local Area Plan that Development of the Burgage South Neighbourhood shall include for a series of parks that incorporates existing burgage hedgerows and SUDS features. Each of these spaces shall fulfil a clear function. The larger neighbourhood park</p>	HH1 C1 C2 W1- W3 B3 L1					

<p>shall be divided by the hedgerows in a manner that creates a series of linked open spaces of varying character and active and passive functions including walking, cycling, childrens' play, and informal sporting activities.</p>						
<p>The provision of public amenity areas will increase local usage and reduce the number of car journeys to amenities outside the plan area, thereby reducing the amount of car based emissions (SEO HH1 C1 C2). The use of the burgage hedgerows and the parks as part of the overall SUDs network will maintain the quality of the Rivers Liffey and Griffeen, help prevent contamination of groundwater and reduce the risk of flooding (SEO W1-W3). Incorporation of biodiversity features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and the provision of linked gardens in the park will enhance and protect the landscape features (SEO L1).</p>						

	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>Objective BS5</p> <p>It is an objective of the Local Area Plan that Development within the Burgage South Neighbourhood shall ensure that the neighbourhood acts as a hub for movement and provides for and contribute to the creation of an open ended east-west and north-south through streets and routes between the surrounding neighbourhoods of Taobh Chnoic, Sean Feirm, Ballynakelly West and Main Street.</p>	<p>HH1 C1 C2</p>					

Creation of open ended streets and through routes will encourage more sustainable modes of transport, such as pedestrian/cycling movements, thereby reducing car based emissions						
Objective BS6 It is an objective of the Local Area Plan that Development of the Burgage South Neighbourhood shall include for tertiary streets that are finished with shared surfaces for pedestrians, cyclist and vehicles. Landscaped parking courts are permissible along such streets where a need is demonstrated.	HH1 C1 C2					
The provision of pedestrian/vehicular access will promote and encourage sustainable travel patterns, thereby reducing car based emissions						
Objective BS7 It is an objective of the Local Area Plan that Development within the Burgage North Neighbourhood shall provide for residential uses including housing for the elderly at a maximum density of circa 30 dwellings per hectare. Local shop and/or service units of not more than 100 sq.m (net) each are permissible at street corners, junctions and adjacent to parklands	HH1 C1 C2			B3 L1 W1-W3		
Higher densities may have potential negative impact upon habitat networks, streams and hedgerows unless design and layout take such issues into account at the outset, therefore the overall impact on the neighbourhood on biodiversity, water and landscape is uncertain (SEO B3 L1 W1- W3). The provision of local shop/services will reduce the need for travel outside of the area to access these facilities (SEO HH1 C1 C2)						
Objective BS8 It is an objective of the Local Area Plan that Development of the Burgage South Neighbourhood shall largely comprise terraced houses with opportunities for detached and semi-detached housing and dwellings specifically designed for elderly needs						
No impact on SEO's						
Objective BS9	S1					

<p>It is an objective of the Local Area Plan that Residential development to the rear of existing properties located along Main Street (The Rise) shall be carried out in a manner that allows for the creation of a coherent and open ended streetscape. This shall be demonstrated as part of all relevant planning applications.</p>						
<p>This will help improve and enhance the existing urban fabric</p>						

	<p>Likely to Improve status of SEOs</p>	<p>Probable Conflict with status of SEOs- Unlikely to be mitigated</p>	<p>Potential Conflict with status of SEOs- likely to be mitigated</p>	<p>Uncertain interaction with status of SEOs</p>	<p>Neutral Interaction with status of SEOs</p>	<p>No Likely interaction with status of SEOs</p>
<p>Neighbourhood 5: Taobh Chnoic</p> <p>Objective TC1</p> <p>It is an objective of the Local Area Plan that development of the Taobh Chnoic Neighbourhood shall Largely comprise detached and semi-detached dwellings on large garden plots that are set back from street edges by front gardens.</p>	<p>L1</p>					
<p>Provision of large gardens will enhance existing landscape features (SEO L1) and help enhance existing biodiversity networks in the area (SEO B3)</p>						

<p>Objective TC2</p> <p>It is an objective of the Local Area Plan to Provide for a large countryside park along the southern fringe of the Plan lands that will act as the main primary open space for active recreation for Newcastle Village; a point of convergence for pedestrian and cycle paths that permeate the Plan Lands; and a landscaped buffer to the open countryside through the inclusion of Childrens’ Play Facilities, Multi Use Games Areas, a five-a-side all-weather pitch, pedestrian and cycle routes, existing hedgerows, heritage trails and woodland planting.</p>	<p>HH1 C1 C2 B3 L1</p>					
<p>The provision public parks and play facilities will increase local usage and reduce the number of car journeys to amenities outside the plan area, thereby reducing the amount of car based emissions (SEO HH1 C1 C2). The provision of the pedestrian and cycle links will also encourage more sustainable modes of transport. The provision of a landscape buffer and the inclusion of woodland planting and retaining existing hedgerows will also enhance the existing biodiversity network, allow for effective operation of wildlife movements and habitat use within the area (SEO B3); and will enhance and protect the landscape (SEO L1)</p>						
<p>Objective TC3</p> <p>It is an objective of the Local Area Plan to include for tree lined boulevards (Green Links) that incorporate SUDS elements in the form of swales and links the Countryside Park with adjacent neighbourhoods and pedestrian and cycle routes.</p>	<p>HH1 C1 C2 B3 L1 W3</p>					
<p>The provision of links to the public parks will increase local usage and reduce the number of car journeys to amenities outside the plan area, thereby reducing the amount of car based emissions (SEO HH1 C1 C2). The provision of the links to the parks will also enhance the existing biodiversity network, allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (SEO L1). The incorporation of a central swale will enhance the natural drainage, will facilitate the SUDS approach and reduce potential flood risk (SEO W3)</p>						

<p>Objective TC4 It is an objective of the Local Area Plan to Protect and incorporate the slope of the existing topography and exclude the use of intrusive engineered solutions such as cut and fill and/or the erection of retaining walls. This shall be demonstrated under planning applications by the inclusion of extensive north-south and east-west site sections.</p>	L1					
The likelihood of Impacts on the landscape will be reduced						

	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>Objective TC5 It is therefore an objective of this Local Area Plan that development of the Sean Feirm Neighbourhood shall include for vehicular, pedestrian and cycle connections with all adjoining neighbourhoods, which shall converge on the Countryside Park and form circuit routes. These routes shall connect the Countryside Park with Tower Park and Sean Feirm Park.</p>	HH1 C1C2					
This will encourage pedestrian and cycling movements, thereby reducing car based emissions						

<p>Objective TC6 It is therefore an objective of this Local Area Plan that development of the Sean Feirm Neighbourhood shall include for tertiary streets that are finished with shared surfaces for pedestrians, cyclist and vehicles around the developed perimeters of the Countryside Park and the designated school site.</p>	<p>HH1 C1 C2</p>					
<p>This will encourage pedestrian and cycling movements, thereby reducing car based emissions</p>						
<p>Objective TC7 It is an objective of the Local Area Plan Residential development within the Sean Neighbourhood shall be carried out at a maximum density of circa 20 dwellings per hectare.</p>	<p>B3 L1</p>					
<p>Lower densities in such locations will assist in maintaining the habitat networks (SEO B3) and enhance and protect the landscape features (SEO L1)</p>						
<p>Objective TC8 It is an objective of the Local Area Plan that a primary school site with playing fields, staff parking and pick up/drop off facilities shall be reserved close to the recently established population base at Ballynakelly and adjacent to the Countryside Park.</p>	<p>HH1 C1 C2</p>					

The provision of playing fields reduces the need to travel elsewhere to access these facilities, thereby reducing car based emissions (SEO HH1 C1C2)						
<p>Objective TC9</p> <p>It is an objective of the Local Area Plan in order to provide an appropriate transition with the rural hinterland including the Countryside Park and to ensure for the provision of low density housing as an alternative to rural housing, development of the Taobh Chnoic Neighbourhood shall only comprise detached and semi-detached houses</p>	B3					
The provision of a transitional zone between the low density housing and the rural hinterland will assist in maintaining the ecological networks (SEO B3) whilst protecting and enhancing the landscape (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
<p>Neighbourhood 6: Ballynakelly West</p> <p>Objective BW1</p> <p>It is an objective of this Local Area Plan that all planning applications for development within the Ballynakelly West Neighbourhood shall clearly identify how burgage plot hedgerows and ditches to these boundaries will be enhanced, reinstated</p>	B3 L1					

<p>(where removed) and incorporated in a similar but improved model to the Castelyon development, Aylmer Heath development and the development permitted under SD07A/0246. All such applications shall include a comprehensive hedgerow survey and method statement (compiled by a suitably qualified person) for protection, incorporation and reinstatement of the historic boundaries before, during and after construction. This shall include for details on protecting any sections of hedgerow outside the application site that directly adjoin the application site.</p>						
<p>The retention of the biodiversity features, in particular the burgage plots, will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape features (SEO L1).</p>						
<p>Objective BW2 It is an objective of the Local Area Plan to Burgage boundaries shall be utilised wherever possible as SUDS elements in the form of swales for conveying water; landscape features; and biodiversity-protecting elements.</p>	<p>B3 L1 W1-W3</p>					
<p>This will help enhance biodiversity features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (SEO L1). The use of the burgage boundaries as part of the SuDS network will maintain the quality of the River Liffey and Griffeen and its tributaries; it will help contain contamination of the groundwater and will lessen the potential likelihood of flood risk (SEO W1-W3).</p>						

	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>Objective BW3 It is an objective of the Local Area Plan that The sensitive clearance and non reinstatement of limited sections of Burgage boundaries is permissible 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. Where this occurs, high quality design cues that signal and delineate the pre-existing plot line of the section of removed hedgerow boundary shall be utilised such as a change in materials with the use of high quality materials like cut stone and the use of lighting strips etc.</p>	HH1 C1 C2	CH1 B3				
<p>Provision of routes for pedestrians and cyclists will encourage and facilitate pedestrian and cycling movements and allow for a reduction in emissions and car dependence, thereby improving human health (SEO HH1 C1 C2).</p> <p>There is a Probable Conflict with status of SEOs, in that the removal of sections of the field boundaries to facilitate the creation of successful streets and spaces and to provide pedestrian/cyclist facilities is likely to have a negative impact on the existing biodiversity network (SEO B3), due to habitat fragmentation and the removal of sections of Burgage Hedgerows (SEO CH1). While a considerable number of measures have been introduced to mitigate these impacts, it is likely that there will be significant negative residual impacts.</p>						

<p>Objective BW4 It is an objective of the Local Area Plan that Development of the Ballynakelly West Neighbourhood shall include for a series of parks that incorporates existing burgage hedgerows and SUDS features. A soft landscaped square shall be developed adjacent to the site of the permitted Local Centre development and at the junction between an existing link street and planned green link. The landscaped square shall include formal planting and a childrens' play facility.</p>	<p>B3 L1 W1- W3 HH1 C1 C2</p>					
<p>This will help enhance biodiversity features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (SEO L1). The use of the burgage boundaries and use of SUDs features within parks will maintain the quality of the River Liffey and Griffeen and its tributaries; it will help contain contamination of the groundwater and will lessen the potential likelihood of flood risk (SEO W1-W3). The provision of a childrens play facility will reduce the need to travel outside of the area to access the facilities (SEO HH1 C1 C2)</p>						
<p>Objective BW5 It is an objective of the Local Area Plan that Extensions of duration of permission should only be granted where development granted prior to the adoption of this Plan fails to adequately reinstate and incorporate Burgage plot delineations.</p>	<p>B3 L1 CH1</p>					
<p>This will help enhance biodiversity features will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (SEO L1). It will also retain and protect the archaeological heritage of the area (SEO Ch1)</p>						

<p>Objective BW6 It is an objective of the Local Area Plan that Development within the Burgage South Neighbourhood shall ensure that the neighbourhood acts as a hub for movement and provides for and contribute to the creation of an open ended east-west and north-south through streets and routes between the surrounding neighbourhoods of of Taobh Chnoic, Burgage South, Ballynakelly/Newcastle Manor and Main Street.</p>						
<p>No impact on SEO's</p>						

	<p>Likely to Improve status of SEOs</p>	<p>Probable Conflict with status of SEOs- Unlikely to be mitigated</p>	<p>Potential Conflict with status of SEOs- likely to be mitigated</p>	<p>Uncertain interaction with status of SEOs</p>	<p>Neutral Interaction with status of SEOs</p>	<p>No Likely interaction with status of SEOs</p>
<p>Objective BW7 It is an objective of the Local Area Plan that development of the Ballynakelly West Neighbourhood shall include for tertiary streets finished with shared surfaces for pedestrians, cyclist and vehicles. A shared surface street should also be provided along the southern</p>	<p>HH1 C1 C2</p>					

<p>boundary of the landscaped square and around its adjoining junctions as a means of extending this space.</p>						
<p>This encourages walking and cycling movements, thereby reducing traffic and car based emissions</p>						
<p>Objective BW8</p> <p>It is an objective of the Local Area Plan that Development within the Ballynakelly West Neighbourhood shall provide for residential uses at a maximum density of circa 30 dwellings per hectare. The density of development on sites that are subject to extant permissions should be amended accordingly where possible. Extensions of duration of permission should not be granted where development granted prior to the adoption of this Plan fails to accord with the maximum permissible density.</p>				<p>B3 L1 W1-W3</p>		
<p>Higher densities may have potential negative impact upon habitat networks, streams and hedgerows unless design and layout take such issues into account at the outset, therefore the overall impact on the neighbourhood on biodiversity, water and landscape is uncertain (SEO B3 L1 W1- W3).</p>						
<p>Objective BW9</p> <p>It is an objective of the Local Area Plan that Small scale local shopping/service units (no more than 100 sq.m net per unit) shall be permissible along the northern side of the landscaped square.</p>	<p>HH1 C1 C2</p>					
<p>The provision of these facilities will reduce the need to travel to access these amenities elsewhere</p>						

<p>Objective BW10</p> <p>It is an objective of the Local Area Plan to Development of the Burgage South Neighbourhood shall largely comprise terraced houses with opportunities for detached and semi-detached housing on corners. The dwelling mix 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 prior to the adoption of this Plan accords with the prescribed dwelling mix.</p>						
<p>No impact on SEO's</p>						
	<p>Likely to Improve status of SEOs</p>	<p>Probable Conflict with status of SEOs- Unlikely to be mitigated</p>	<p>Potential Conflict with status of SEOs- likely to be mitigated</p>	<p>Uncertain interaction with status of SEOs</p>	<p>Neutral Interaction with status of SEOs</p>	<p>No Likely interaction with status of SEOs</p>
<p>Neighbourhood 7: Aylmer</p> <p>Objective AR1</p> <p>It is objective of this Local Area Plan that development of the Aylmer Neighbourhood shall Provide a revised layout for the undeveloped element of the Aylmer Heath housing estate to include for the incorporation and enhancement of the intact Burgage plot hedgerow boundary between existing and planned housing and along the existing area of public open space. The revised layout shall also include a green link street and a pocket park that opens onto Aylmer</p>	<p>B3 L1 HH1 C1 C2</p>					

Road.						
The retention of the biodiversity features, in particular the burgage plots, will allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape features (SEO L1). The provision of a park will reduce the need to travel to amenities outside the area (SEO HH1 C1 C2)						
Objective AR2 It is therefore an objective of the Local Area Plan that development of the Aylmer Neighbourhood shall include for two vehicular access points onto the Aylmer Road to include a Green Link street as part of an east-west through route that will connect the neighbourhoods on the northern side of Main Street and Aylmer Road with Peamount Road.	HH1 C1 C2					
The provision of additional links and increased connectivity will encourage more sustainable transport modes						
Objective AR3 It is an objective of the Local Area Plan that the completion of the Aylmer Heath development shall only be permitted after removal of the unauthorised barrier between Aylmer Heath and Castlelyon and after the opening of the east-west street between these two estates	HH1 C1 C2					
The removal of the barrier will encourage walking/cycling based movement, thereby reducing car based emissions and improving human health						
Objective AR4 It is therefore an objective of this Local Area Plan that further development within the Aylmer Neighbourhood shall provide for residential uses				B3 L1 W1- W3		

only at a maximum density of circa 30 dwellings per hectare.						
Higher densities may have potential negative impact upon habitat networks, streams and hedgerows unless design and layout take such issues into account at the outset, therefore the overall impact on the neighbourhood on biodiversity, water and landscape is uncertain (SEO B3 L1 W1- W3) .						

	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
Objective AR5 It is an objective of this Local Area that in order to ensure compliance with the Settlement Strategy of this Local Area Plan, development of the Aylmer Neighbourhood shall largely comprise terraced houses with some opportunities for detached and semi-detached housing						
No impact on SEO's						
Objective AR6 It is an objective of the Local Area Plan that Residential development to the rear of existing properties located along Aylmer Road shall be carried out in a manner that allows for the creation of a coherent and open ended	S1					

streetscape. This shall be demonstrated as part of all relevant planning applications						
This will help retain and enhance the existing urban fabric						
Neighbourhood 8: Peamount						
Objective PN1 It is an objective of the Local Area Plan that development of Peamount Neighbourhood shall ensure that housing within the settlement edge comprises detached and semi-detached dwellings on large garden plots that are set back from street edges by front gardens.						
No impact on SEO's						
Objective PN2 It is an objective of the Local Area Plan to Provide for generous street planting and grass verges along Green Link Streets.	B3 L1					
The provision of street planting and grass verges will also enhance the existing biodiversity network, allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (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
Objective PN3 It is an objective of the Local Area Plan to Provide for a landscaped pocket park set amongst housing within the Settlement Edge to link with the SUDS network in the form of a waterfeature or flooding depression	B3 W3 L1					
The provision of parks will enhance the existing biodiversity network, allow for effective operation of wildlife movements and habitat use within the area (SEO B3) and will enhance and protect the landscape (SEO L1). The provision of water feature will facilitate the SUDS approach and reduce potential flood risk (SEO W3)						
Objective PN4 It is an objective of the Local Area Plan to Include for the permitted soft landscaped through route to the rear of Main Street and Saint Finian's Hall and upgrade such as a green link with the Village Core.	HH1 C1 C2					
This will encourage pedestrian and cycling movements, thereby reducing traffic movements and car based emissions						
Objective PN5	HH1 C1 C2					

<p>It is therefore an objective of the Local Area Plan that development of the Peamount Neighbourhood shall include for a through Green Link Street with Peamount Road as part of an east-west through route that will connect the neighbourhoods on the northern side of Main Street and Aylmer Road with Peamount Road.</p>						
<p>This will encourage pedestrian and cycling movements, thereby reducing traffic movements and car based emissions</p>						
<p>Objective PN6 It is an objective of the Local Area Plan to Include for the permitted through route to the rear of Main Street and Saint Finian’s Hall and upgrade such as a pedestrian and cyclist green link with the Village Core via the planned village square development.</p>	<p>HH1 C1 C2</p>					
<p>This will encourage pedestrian and cycling movements, thereby reducing traffic movements and car based emissions</p>						

	<p>Likely to Improve status of SEOs</p>	<p>Probable Conflict with status of SEOs- Unlikely to be mitigated</p>	<p>Potential Conflict with status of SEOs- likely to be mitigated</p>	<p>Uncertain interaction with status of SEOs</p>	<p>Neutral Interaction with status of SEOs</p>	<p>No Likely interaction with status of SEOs</p>
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<p>Objective PN7 It is an objective of the Local Area Plan to require the provision of a connection between the permitted residential development to the rear of Saint Finian's Hall with Newcastle Glebe in the form of an extended vehicular cul-de-sac. An extension of duration of permission should only be granted where it provides a direct link with Newcastle Glebe</p>	<p>HH1 C1 C2</p>					
<p>Provision of connections between existing developments will encourage pedestrian/cycling based movements</p>						
<p>Objective PN8 It is an objective of the Local Area Plan to include for tertiary streets that are finished with shared surfaces for pedestrians, cyclist and vehicles.</p>	<p>HH1 C1 C2</p>					
<p>This will encourage pedestrian and cycling movements, thereby reducing traffic movements and car based emissions</p>						
<p>Objective PN9 It is an objective of the Local Area Plan to Development within the Settlement Edge of the Peamount Neighbourhood shall provide for residential uses only at a maximum density of circa 20 dwellings per hectare.</p>	<p>B3 L1</p>					
<p>Lower densities will assist in maintaining habitat networks (SEO B3) and will help protect and enhance landscape features (SEO L1)</p>						

<p>Objective PN10 It is an objective of the Local Area Plan to Development within the Village Expansion area of the Peamount Neighbourhood shall provide for residential uses only at a maximum density of circa 35 dwellings per hectare. Extensions of duration of permission should only be granted where development granted prior to the adoption of this Plan accords with the maximum permissible density</p>				<p>B3 W1- W3 L1</p>		
<p>Higher densities may have potential negative impact upon habitat networks, streams and hedgerows unless design and layout take such issues into account at the outset, therefore the overall impact on the neighbourhood on biodiversity, water and landscape is uncertain (SEO B3 L1 W1- W3).</p>						

	<p>Likely to Improve status of SEOs</p>	<p>Probable Conflict with status of SEOs- Unlikely to be mitigate d</p>	<p>Potential Conflict with status of SEOs- likely to be mitigated</p>	<p>Uncertain interaction with status of SEOs</p>	<p>Neutral Interaction with status of SEOs</p>	<p>No Likely interaction with status of SEOs</p>
<p>Objective PN11 It is an objective of the Local Area Plan to Development of the settlement Edge area of the Peamount Neighbourhood shall comprise detached and semi-detached houses. In order to provide an appropriate transition with the rural hinterland including the Countryside Park and to ensure for the provision of low density housing as</p>						

an alternative to rural housing.						
No impact on SEO's						
<p>Objective PN12 It is an objective of the Local Area Plan to Development of the Village Expansion area of the Peamount Neighbourhood shall largely comprise terraced houses with opportunities for detached and semi-detached housing on corners. The dwelling mix 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 prior to the adoption of this Plan accords with the prescribed dwelling mix</p>						
No impact on SEO's						

	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
Neighbourhood 9: Ballynakelly Cottages	L1 B3					

<p>Objective BC1 It is an objective of the Local Area Plan that Backland development to the rear of houses in Ballynakelly Cottages shall protect and enhance the semi-rural and low density character of Ballynakelly Cottages and shall be in accordance with Development Plan policies and objectives on backland development</p>						
<p>Lower densities will assist in maintaining habitat networks (SEO B3) and will help protect and enhance landscape features (SEO L1)</p>						
<p>Objective BC2 It is therefore an objective of this Local Area Plan that backland development to the rear of houses in Ballynakelly Cottages shall take the form of detached single storey housing.</p>						
<p>No impact on SEO's</p>						
<p>Neighbourhood 10: Ballynakelly/Newcastle Manor Objective BNM1 It is an objective of the Local Area Plan that development of Ballynakelly Local Centre Development and its associated pocket park shall include for informal landscaping, seating and a Multi Use Games Area. This shall be provided for under any new application for the Local Centre or by agreement on compliance with conditions under the extant permission</p>	<p>HH1 C1 C2</p>					

The provision of these facilities will reduce the need for unsustainable travel modes to access these facilities elsewhere (SEO HH1 C1C2)						
Objective BNM2 It is an objective of the Local Area Plan to Development of the permitted Local Centre in Ballynakelly shall provide for crèche and retail floorspace in accordance with its extant permission. Only residential development shall take place on remaining infill sites in Ballynakelly.	HH1 C1 C2					
The provision of these facilities within the developments will reduce the need for unsustainable travel modes to access these facilities elsewhere (SEO HH1 C1C2)						

	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
Standards and Design Criteria Objective SC1 It is an objective of the Local Area Plan to Development within the Plan Lands shall adhere to the qualitative and quantitative standards and urban design criteria set out under this Plan.						

No impacts on SEO's						

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 Newcastle 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 Newcastle Local Area Plan.

Note: The wordings of measures contained hereafter constitute an undertaking - as per the most relevant

equivalent Irish Guidelines on the best practice⁴⁷.

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

9.3.1 Biodiversity, Flora and Fauna

The strategy of the Local Area Plan is to update the framework and objectives of the 2003 Plan in a manner that fully incorporates existing historical features and the village's rich biodiversity including burgage hedgerows. The Strategy is laid out under four headings, with one such heading being Green Infrastructure. The Green Infrastructure Strategy will direct the protection and enhancement of the natural and built heritage; the conservation and enhancement of biodiversity; the provision of accessible parks, open spaces and recreational facilities; the sustainable management of water incorporating SUDS features; and the maintenance of sensitive landscapes.

The Plan Lands will be linked by a Green Infrastructure network that will connect a series of neighbourhoods and connect into existing developments within the plan lands.

⁴⁷ The most commonly encountered and significant problem in Environmental Impact Statements is the complete or partial omission of any clear, legally enforceable commitment to undertake the mitigation measures proposed in response to a predicted impact.

EPA (2003) *Advice notes on Current Practice (In the Preparation in of Environmental Impact Statements)* Wexford: EPA

It is an objective of the proposed Local Area Plan to:

- 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. (Objective GI12)
- Ensure that all extensive development proposals maximise the opportunities for enhancement of existing ecology and biodiversity and are accompanied by a full ecological assessment, carried out by a suitably qualified professional, that includes measures to enhance ecology and biodiversity and avoid or minimise loss to local ecology and biodiversity. (Objective GI27)

9.3.2 Sustainable Management of Water

The necessity of using SuDS as a means of dealing with surface water drainage was introduced by the SEA Team at the early Newcastle LAP workshops and the concept is evident throughout the proposed Local Area Plan. The strategy of the proposed LAP incorporates the following objective:

- The utilisation and incorporation of existing hedgerows, streams and natural swales with open parkland retention areas as part of an overall SUDS (Sustainable Urban Drainage System) framework.

The sustainable management of water is detailed in a number of objectives including the following:

- 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. (Objective GI12)

- 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 and 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 large attenuation wetland area to form part of a neighbourhood park to the north of Main Street, which will collect the remaining surface water from the developed SUDS network to the south prior to it feeding the stream system to the north of the village. (Objective GI13)
- That all development shall incorporate on site SUDS technologies detailed in the standards section (Section 7) of this Local Area Plan such as porous grass paviers, green roofs, rainwater recycling systems and soakaways. (Objective GI14)
- That SUDS elements such as swales, detention and retention basins and other landscape based attenuation features be planted with suitable riparian vegetation and water tolerant tree planting that will clean and attenuate surface water flow. The planting of such species will be particularly required within parkland areas and along the east-west running SUDS elements in order to help intercept and direct waterflows. (Objective GI16)
- That all swales utilised within the SUDS network shall be of an appropriate (shallow and wide) dimension to allow for ease of maintenance including mowing and be designed in the interest of health and safety where practical. (Objective GI17)

9.3.3 Groundwater Vulnerability and Protection

It is an objective of the proposed Local Area Plan that development proposals in the vicinity of the high vulnerability area shall be accompanied by sufficient detail to protect existing groundwater sources from pollution during construction and development phases. The detail shall be in accordance with the requirements of the 'South Dublin Groundwater Protection Scheme' (Geological Survey of Ireland, 2011) (Objective GI19).

9.3.4 Flood Risk Management

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, the ability to meet the requirements of the WFD or need to protect biodiversity.

It is an objective of the proposed Local Area Plan that

- All planning application for residential and/or commercial floorspace on sites in areas at risk of flooding shall be accompanied by a Flood Risk Assessment that is 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 shall depend on the type and scale of development and the sensitivity of the area. (Objective GI18)

In assessing development proposals in areas identified at risk of flooding, South Dublin County Council will adopt a risk-based sequential and balanced approach, while at the same time allowing consideration of appropriate and necessary development, including the application of the Justification Test in accordance with Policies WD13 (Risk of Flooding) and WD14 (Identified Flood

Risk Areas) of the South Dublin County Council Development Plan.

9.3.5 Sensitive Landscapes

In the time since the adoption of the 2003 Newcastle Local Area Plan and the undertaking of the Historic Area Assessment in 2011, the landscape and associated features of the plan lands have been reviewed and it has been identified that lands located on the western end of Newcastle village are of a sensitive and scenic nature and should be maintained in its existing agricultural use for a number of reasons.

In the 2003 Local Area Plan, the natural boundary of the Village with the hinterland was altered and extended as a result of the proposed new roads layout at the junction of the Athgoe Rd, Hazelhatch Road and Main St junction. The site created within the new road and the Athgoe/Hazelhatch Roads was subsequently rezoned for residential use in the subsequent County Development Plan 2004 – 2010. The link road as described above is no longer required as the function of Main St as the main route through the Village and as the principal core of activity has been restored; consequently, the rationale for extending the Village into the rural hinterland, no longer exists. There area also protected views at this location, as required in the South Dublin County Development Plan 2010-2016.

The reasons for retaining the lands in its existing agricultural use include:

- The need to maintain the Landscape and these particular views to the countryside and the need to maintain the relationship between the Historic Area and its surrounding setting, as identified in the Historical Area Assessment of Newcastle-Lyons 2011
- The establishment of a Historic/Cultural Quarter around the cluster of upstanding medieval monuments; these lands are located

within the proposed Historic/Cultural Quarter

The proposed Local Area Plan envisages the use of this land remaining in agricultural use and therefore recommends that a Variation of the County Development Plan 2010-2016 be initiated to change the zoning from Objective A1 "To provide for new residential communities in accordance with approved Area Plans" to Objective B "To protect and improve Rural amenity and to provide for the development of Agriculture" and to amend the 6 year Roads Objective for the Newcastle LAP 2003 accordingly.

9.3.6 Protection of Archaeological and Architectural Heritage

A number of objectives within the proposed Local Area Plan are mitigation measures for the protection of the archaeological and architectural heritage including the following:

It is therefore an objective of this Local Area Plan that

- Protected Structures and upstanding archaeological remains including their environs shall be protected, preserved and enhanced as part of any surrounding or adjoining development and incorporated into a heritage trail/network for the village and its hinterland. (Objective GI20)
- An Archaeological Assessment Report shall be submitted with all planning applications within the 'Zone of Archaeological Potential'. All such reports shall fully assess the archaeological implications of the proposed development. Where archaeological features are discovered it shall be demonstrated how the design and layout of development protects, incorporate and enhances these features. (Objective GI21)

- Development within the vicinity of an upstanding monument(s) shall enhance the setting of the feature(s) and shall be sited and designed appropriately. Views of the Motte from Main Street and Hazelhatch Road shall be protected from sensitive surrounding development. Development of the derelict public house site (previously known as McEvoy's) at the north-east corner of the junction between Main Street and Hazelhatch Road should be especially designed to enhance and protect the view of the Motte. (Objective GI24)

9.3.7 Air and Noise

Green roofs provide a multitude of benefits, including some significant climate change-related advantages such as improved air quality. Section 7.2.24 of the proposed Local Area Plan details measures relating to the incorporation of green roofs into building design.

Softer methods of reducing the impact of traffic noise on residential amenity shall be implemented rather than measures that detract from the quality of streetscapes such as noise barriers and wide building setbacks. Section 7.2.6 of the proposed Local Area Plan details measures that can be implemented to achieve these aims, including

- Reducing speed limits along streets;
- Dispersal of traffic;
- Use of noise absorbing construction materials on carriageway surfaces and in the construction of buildings that adjoin streets;
- Provision of additional tree planting and other landscaping along and between streets;
- Distribution of uses across sites in a manner that places less sensitive uses such as commercial uses closer to busy streets and shields residential uses.

9.3.8 Transportation and Climatic Factors

It is an objective of the Proposed Local Area Plan to ensure that:

- Create open ended routes through existing and new development in a manner that ensures greater permeability and convenient pedestrian access to community facilities, schools, open spaces, shopping facilities, local employment and public transport stops. (Objective AM13)

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 of 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
Biodiversity, Flora and Fauna	<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 corridors⁴⁸ 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 & Development Management Process in SDCC</p> <p>Designated ecological sites mapping, Development Management Process in SDCC Council & Consultation with the National Parks and Wildlife Service</p> <p>Primary ecological corridors mapping, CORINE mapping and Development Management Process in SDCC</p>
Population and Human Health	<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>

⁴⁸ 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.

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
Soil	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
Water	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.

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
Water (cont.)	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
Air and Climatic Factors	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
Material Assets	<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>
Cultural Heritage	<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
Landscape	<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>	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	Development Management Process in South Dublin County Council; Complaints from statutory consultees

Table 10.1 Selected Indicators, Targets and Monitoring Sources

Appendix I

NON TECHNICAL SUMMARY

ENVIRONMENTAL REPORT

OF THE

**DRAFT NEWCASTLE LOCAL AREA PLAN
2012-2018**

STRATEGIC ENVIRONMENTAL ASSESSMENT

South Dublin County Council

County Hall

Tallaght

Dublin 24



JUNE 2012

Non Technical Summary

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- 1.6 Strategic Environmental Objectives**
- 1.7 Description of Alternative Plan Scenarios**
- 1.8 Evaluation of Alternative Plan Scenarios**
- 1.9 Mitigation**
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- 1.11 Conclusion**

1.0 Non Technical Summary

1.1 Introduction

This is the Non Technical Summary of the Environmental Report of the Draft Newcastle Local Area Plan 2012-2018.

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, South Dublin County Council is of the opinion that development in the Newcastle 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 provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of growth in South Dublin County Council. This report should be read in conjunction with the Newcastle 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 Newcastle that can be absorbed into the landscape without causing adverse harm to the environment.

1.2 Strategic Environmental Assessment Methodology

The Council gave public notice on the 16th January 2012 of the intention to prepare a new Local Area Plan for Newcastle area. The Planning Department issued formal written notification to the Environmental Authorities 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 were received from the Environmental Protection Agency and the Department of Arts, Heritage and the Gaeltacht. Some of the issues in the submissions were identified as the use of Sustainable Urban Drainage Systems (SUDS) in the LAP lands as primary strategies in the plan; a commitment to implementing the recommendations of the Eastern River Basin District Management Plan and associated Programme of Measures and the need to maintain Biodiversity Network, in particular along existing burgage hedgerows and the need to comply with the Habitats Directive. These submissions were taken into consideration during the preparation of the Newcastle Local Area Plan and the Environmental Report.

1.2 Vision and Goals of the Newcastle Local Area Plan

The core policy aim of this Local Area Plan is to promote a more consolidated and connected village which retains much of its existing character. This will entail the following;

- Facilitate a layout that integrates new development with the existing village and surrounding development;

- Provide a framework for development that is sensitive to the historic and semi-rural context of the village and ensures for the sustainable drainage of water;
- Promote high quality design for streets, spaces and buildings that responds to the different character areas and settings of the villages;
- Provide for a choice of dwelling types and sizes that cater for varying age groups;
- Reinforce and invigorate Main Street through the encouragement of infill mixed use development and public spaces;
- Require the provision of community facilities including an expansion site for the existing primary school that is development ready and a site for the provision of an additional primary school;
- Ensure for the provision of a network and hierarchy of public spaces of varying sizes and uses;
- Preserve, incorporate, enhance and respond to the setting of existing archaeological and historic features including Burgage plots and tower house sites;
- Provide a network of convenient walking and cycling routes whilst reducing the need for car trips;
- Ensure that development is phased in a manner that provides for community and parkland development either prior to or in tandem with development.

1.4 Relationship of the Plan with other Relevant Plans and Programmes

The Draft Newcastle 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 Newcastle 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 Newcastle LAP lands are located on the periphery of the consolidated urban expansion area. For an area that would be somewhat remote to the main urban agglomeration, it has experienced significant expansion and growth between 2002 and 2011, with the 2011 population (3749 persons) recording an increase in population level of 42.5% from the 2006 level of 2631 persons and an increase of 59.2% from the 2002 total population of 2355 persons (Census 2002, 2006 and 2011⁴⁹).

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. 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

⁴⁹ Census 2011- Preliminary Results

to be addressed in the preparation of the Newcastle Local Area Plan and in the accompanying Environmental Report.

There are no designated biodiversity areas affected by the proposed Local Area Plan which have a recognised National, European Union or International protection status. However, Article 10 of the Habitats Directive recognises the importance of ecological networks as corridors and stepping stones for the movement of wildlife. The Newcastle Plan lands are all located within the catchment area of the River Shinkeen and the River Griffeen.

There remain large amounts of zoned undeveloped land (46.5Ha.) in Newcastle of which 12.5Ha. has permission for residential development that has either not commenced or has ceased construction

These lands consist largely of medium to large grassland plots which form part of an overall field system and burgage plots which has remained largely intact in parts since the turn of the 13th Century and are located in the northern and southern quadrants of the plan lands. Extensive residential development has occurred in the south-eastern part of the plan lands in recent years and a large part of this area remains as an open construction area from which the topsoil has been removed.

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 significant bat population (protected species under the Wildlife Acts) in and around Newcastle.

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 Newcastle 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.

In terms of "issues of sensitivity", the northern and southern parts of the village (some of which have since become rezoned and developed in recent years) and the environs of Newcastle have been identified as being "*within an area of considerable development pressure.*" A Heritage Plan for South Dublin was completed in 2010 and some, though not all, of the information gaps caused by the absence of a detailed Landscape Character Assessment have been addressed in the Heritage Plan.

1.5.4 Geology and Soil

The underlying bedrock of the LAP lands is predominantly Dinantian Upper Impure Limestone. The bedrock to the south of Newcastle is Dinantian Lower Impure Limestone and Silurian Metasediments and Volcanics

No sites of geological interest are listed for protection under the proposed Newcastle Local Area Plan area although one such site is located approximately 0.7km outside of the plan lands to the northwest.

South Dublin County Council granted planning permission (SD10A/0283) in Rathcoole, just outside the Newcastle LAP area to the east, for the development and operation of the first geothermal electricity generation plant in Ireland. The site is located adjoining the Blackrock-Rathcoole Fault line.

There are no Contaminated Sites are within the Newcastle LAP area.

1.5.5 Agriculture and Forestry

Farmland in the Newcastle LAP area can be categorised as “Urban fringe farmland” subject to urban development pressures due to proximity to Dublin Metropolitan area.

Lands surrounding the plan lands to the southwest, north and northwest remain in active agricultural used (stocked grassland and tillage. There is no forestry in the LAP area.

1.5.6 Water

The Newcastle Local Area Plan lands are all located within the Rivers Griffeen and Shinkeen (Liffey Lower) catchment area.

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 Griffeen Lower is ‘Bad’ status and will not reach ‘Good’ water status until 2027. The overall status of the Liffey Lower is moderate. It is an overall objective to restore the status of the river to ‘good’ by 2027 also.

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 which the entire plan lands are located is rated as “Locally Important Aquifer – Bedrock which is Moderately Productive only in Local Zones”. To the south of the plan lands, the aquifer is described as “Poor Aquifer – Bedrock which is Generally Unproductive”.

The groundwater vulnerability within the proposed LAP lands varies from high to extreme vulnerability in the centre of the plans lands and extending to the northwest; the south-eastern quadrant of the plan lands have been identified as moderate vulnerability.

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

1.5.6.4 Surface Water

The Newcastle LAP area is predominantly within the Shinkeen Stream catchment with the eastern part of the LAP area being within the Griffeen River catchment: both water-bodies are tributaries of the River Liffey.

The Shinkeen Stream and its tributaries form just to the north and north-west of Newcastle Village and outside the boundaries of the LAP. The Newcastle LAP lands slope down gradually from South (108m) to North (84m) with the higher lands of Athgoe Hill (177m) just within one kilometer to the south-west.

The Griffeen rises in Saggart Hill (395m OD), 3 km to the south of Rathcoole and

Northwest of Brittas. It is fed by nearby streams which rise near Athgoe in Lyons Hill (197 mOD) and Athgoe Hill (177 mOD) just Southwest of Newcastle. It flows from there northwards through comparatively flat lands west of Baldonnel Aerodrome from Commons Little to the Grand Canal and on into the Liffey at Lucan.

The recent residential development at the eastern end of Newcastle resulted in the culverting of a section of one of the tributaries of the Griffeen. Provision for dealing with the surface water within these developments included the construction of a number of underground retention tanks.

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 PFRA maps have identified a number of areas in and around the plan lands which would be areas of potential flood risk, both fluvial and pluvial (Figure X above). To the northeast of the plan lands, along the Alymer Road, fluvial data identifies a 1% Annual Exceedance Probability (AEP) 100year event occurring in this area, running in a northeast to southwest direction, within the River Griffeen upper catchment area: a marginal section of the plan lands is within this area. The pluvial data records identifies a 1% AEP 100year event occurring on a smaller scale in a number of locations along the Main Street within the plan lands. Flood events have been recorded by the OPW as occurring on the Alymer Road to the northeast of the plan lands and also along Main Street in the village (adjoining the one section of open stream), which occurred in November 2000⁵⁰. It has also highlighted some reoccurring flooding that has occurred in these areas.

⁵⁰ Source: OPW website- www.floodmaps.ie

Detailed predictive information concerning floodplains for the Newcastle LAP area will only become available following the completion of Catchment Flood Risk Assessment Management Studies (CFRAMS) for the River Liffey in 2015.

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 winds which sweep in are from the mountains and the south-west. Located at the base Athgoe Hill, which adjoins the foothills of the Dublin Mountains, the Newcastle 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_x) and particle matter (PM₁₀), 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 year⁵¹. The PM₁₀ limit, however, has been breached three times to date in 2011. The daily limit for PM₁₀ is 50 ug/m³. 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.

The Noise levels in the LAP area is likely to increase short-term during the construction

⁵¹Source: EPA Website.
www.epa.ie/whatwedo/monitoring/air/data

period 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 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 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 Newcastle 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 Newcastle 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 Newcastle. 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

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. The plan lands are served by relatively limited public transport options; the Dublin-Kildare Rail Line passes through Hazelhatch Station which is located approximately 3 kilometres from Newcastle Village and operates on a frequent daily basis. One bus route (no. 68) operated by Dublin Bus runs from Newcastle to Dublin city centre daily. Dualway Bus (a local bus service) operates between Newcastle, Rathcoole, Saggart, Tallaght, and more recently into the city centre. The nearest Luas stop to Newcastle is located at Saggart, approximately 4.5 kilometres to the south of the plan lands

There are a number of buses that serve the LAP lands; the frequency of these bus services is considered to be predominantly low to medium. There is only one public bus service which serves the LAP lands and one private company (Dualway); the frequency of these bus services in conjunction with the Main-Rail Line service is considered to be predominantly low. There are no Quality Bus Corridors (QBC's) located at present within the plan lands.

1.5.10.2 Roads

The plan lands are situated to the south of the N4 (National Primary), to the north of the N7 (National Primary) and to the west of the M50 motorway. The R120 Rathcoole-Newcastle- Lucan Regional Route and the

R405 Newcastle- Celbridge -Maynooth Regional Route both pass through the village – the R120 connects to the N7 to the south and the N4 to the north and the R405 connects to the M4 to the northwest. With respect to major roads, the completion of the Outer Ring Road linking Lucan with Tallaght is significant.

There is an identified lack of cycle ways and connecting footpaths located throughout the village. The lack of connectivity reduces accessibility in terms of walking and cycling, increasing the amount of car journeys which have to be taken for trips to school, shops, etc.

1.5.11 Cultural Heritage

Newcastle is designated as an Area of Archaeological Potential and is the largest such designation within the County (DU020-003). There are a number of Protected Structures located within the plan lands, with some of these Protected Structures also listed as Recorded Monuments (RM).

It is noted in a recent Draft Historic Area Assessment of Newcastle (2011) that a significant number of excavations uncovered various activities associated with the Bronze Age in Newcastle including in Newcastle South, Ballynakelly and Rathcreedan townlands⁵² -These excavations occurred as a consequence of development to the south-east of the village. A circular enclosure was excavated to the south of the main street in Newcastle South. It was radiocarbon dated to the middle Bronze Age (1,269 – 1,413 BC) which was supported by the ceramics retrieved from the ditch fill.

Newcastle is an example of an Anglo-Norman manorial centre founded at the turn of the 13th century. The layout of the original medieval village and field systems has largely remained intact since the 13th century, despite the fact that the existing

⁵² Planning Register Reference SD05A/0344 with Excavation file 06E1137 and Planning Register Reference SD06A/0659 with Excavation File 07E0245 relate to these discoveries

buildings fronting the Main Street are mainly 20th century structures. Although changes had occurred to the land-holding system during the later medieval and early modern periods many of the former burgage plots remain visible as topographical features on the ground, or are identifiable through LiDAR or in aerial photographs.

1.5.12 Climatic Factors

The main issue facing South Dublin in relation to the development of the Newcastle 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

- Flood Risk information is confined mainly to the OPW's Preliminary Flood Risk Assessment (PFRA)

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 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 and disturbance to the bat population in the area.

The intensity of development throughout the plan lands would lead to a reduction in the extent of burgage plots that would remain intact, thus negatively impacting on the archaeological heritage of the area and the LAP's historical landscape character.

The use of Sustainable Urban Drainage Systems (SuDS) in Newcastle would not be prevalent; the use of underground attenuation tanks, if continued, could potentially 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 Newcastle Local Area Plan must be consistent with these objectives and the Plan must be capable of implementing these objectives at the local level.

SEO Code	SEO¹
B1	To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites
B2	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
B3	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
HH1	To protect human health from hazards or nuisances arising from traffic and incompatible landuses
S1	To maximise the sustainable re-use of brownfield lands and the existing built environment
W1	To maintain and improve, where possible, the quality of the River Liffey and Griffeen, its tributaries and surface water
W2	To prevent pollution and contamination of ground water
W3	To prevent development on lands which pose - or are likely to pose in the future - a significant flood risk
C1	To minimise increases in travel related greenhouse emissions to air
C2	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
M1	To serve new development under the LAP with appropriate waste water treatment
M2	To maintain and improve the quality of drinking water supplies
CH1	To protect the archaeological heritage of South Dublin with regard to entries to the Record of Monuments and Places - including the Newcastle Area of Archaeological Potential - and the context of the above within the surrounding landscape where relevant
CH2	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
L1	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 ²

¹ 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.

² This SEO is taken from the 2010-2016 County Development Plan's Environmental Report; while it is noted that the plan lands are not located directly adjacent to the Dublin Mountain Area, they are adjoining the foothills i.e. Athgoe Hill. It is considered that the standardisation of this SEO will aid in the monitoring of the LAP within the existing SEA Monitoring System.

1.7 Description of Alternatives

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

The scenarios provide alternative visions of how the future development of Newcastle might occur. They reflect a range of development pressures and responses that reflect current practice. The scenarios chosen were;

Scenario 1- Extend the lifespan of the 2003 Newcastle Local Area Plan

Scenario 2- Market Led Growth

Scenario 3- Consolidation of Village Expansion/Development of Character Areas

1.7.1 Scenario 1 – Extend the lifespan of the 2003 Newcastle Local Area Plan

This scenario involves the continuance to implement the 2003 Local Area Plan for Newcastle.

Under this scenario, the total amount of zoned land for development remains unchanged.

Higher residential densities would be prevalent throughout the plan lands. Commercial development would be partially focused on the Main Street, with an expanded mixed use Village Core extending to the south (rear) of the Main Street. A new principal access road would be located to the rear of the Main Street, running in an east to west direction, connecting the Rathcoole Road to the Hazelhatch Road.

The predominance of higher density residential development throughout the plan lands would lead to a reduction in the extent of burgage plots that would remain intact. The removal of existing hedgerows would

also impact on the biodiversity network in the area. Higher density development would also have an impact on the archaeological and architectural heritage and landscape character of the area.

Under this scenario, the necessity for the use of Sustainable Urban Drainage Systems (SuDS) in Newcastle might be less apparent. The use of underground attenuation tanks, if continued, could impact on water quality and flood risk.

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 alternative the increased population numbers might be sufficient to improve the level of service.

1.7.2 Scenario 2 – Market Led Growth

This scenario would involve allowing growth to follow the demands of the development industry as previously expressed through rezoning submissions to the Development Plan process, regardless of conformity with planning guidelines, infrastructure capacity or environmental constraints.

The demand for rezoning has focussed largely on areas of the plan lands that are presently un-serviced and which are located on the outer settlement edges of the plan lands. Lands to the west of the Plan lands at Commons Little act as a green belt between two development areas i.e. the village and Greenogue Industrial Estate. Rezoning these lands to facilitate residential/commercial development would extend the village into the commercial centre of Greenogue and provide for a more urbanised settlement.

Lands to the southeast of the plan lands at Ballynakelly/Greenogue would be rezoned from agricultural lands to residential development; further extending the village settlement into the rural area.

The substantial untapped development capacity of the existing Plan lands has not been considered in this approach, with a drive to rezone further lands, prior to the development of the current substantial greenfield residential land bank. This scenario would also lead to an increased demand on existing water/wastewater services, with little or no provision of community infrastructure to accommodate the existing and future population.

1.7.3 Scenario 3 – Consolidation of Village Expansion/Development of Character Areas

Under this scenario, the commercial heart of the village would be concentrated along the Main Street and away from the backland location of a link road running in an east to west direction. The scenario would create a transition from the Main Street to the outer settlement edges with lower densities and also from the higher densities at the eastern edge to the lower densities in the west.

The concept of Green Infrastructure would also be prevalent throughout this scenario as a guiding theme for development. Green Infrastructure refers to the construction of a green network to ensure 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

Furthermore, under this scenario, the built heritage of Newcastle which includes extensive Protected Structures and Recorded Monuments and the Historic Landscape would be protected and utilised in such a manner as to enhance the overall historic character of the village.

Cycle routes would be provided along the primary roads, with pedestrian routes provided throughout all the plan lands linking through the parks, enabling recreation whilst providing a pleasant

environment for the existing and future populations.

1.8 Evaluation of Alternative Plan Scenarios

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.

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: Burgage Hedgerows
- Sensitive Landscape Character at west end of Village
- SuDS as means of surface water disposal
- Groundwater Vulnerability

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 Newcastle Local Area Plan 2012-2018 contains the full detail and maps of the information summarised above.