Strategic Environmental Assessment

BALDOYLE - STAPOLIN Local Area Plan

Environmental Report

June 2013

Comhairle Contae Fhine Gall
Fingal County Council

LAP

ENVIRONMENTAL REPORT
OF THE
Baldoyle-Stapolin LOCAL AREA PLAN
2013-2019

STRATEGIC ENVIRONMENTAL ASSESSMENT

Fingal County Council
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Table of Contents

Tables

Figures

Section 1 SEA Introduction and Background

1.1 Introduction

Fingal County Council is currently preparing a Local Area Plan for Baldoyle-Stapolin 2013-2019. This Local Area Plan (LAP) is a land use plan and overall strategy for the development of Baldoyle-Stapolin over the period 2013-2019. The successful implementation of the Plan will have a positive impact on Baldoyle-Stapolin ensuring that it develops in a sustainable manner and will also complement the implementation of the Fingal County Development Plan 2011-2017.

This document is the Strategic Environmental Assessment (SEA) Environmental Report of the Draft Baldoyle-Stapolin Local Area Plan (LAP) 2013-2019. The purpose of this Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of development and growth within the Plan area.

SEA is a key process that promotes sustainable development and highlights significant environmental issues within the planning regime. The purpose of SEA is to formally and systematically evaluate the likely significant effects of implementing a plan or programme, in this instance the Draft LAP for Baldoyle-Stapolin. SEA is an iterative process and has informed and guided the preparation of the objectives and development alternatives for the Baldoyle-Stapolin Local Area Plan with the aim of achieving sustainable development in the area without causing adverse harm to the environment.

This Environmental Report is not the SEA, rather it documents the SEA process and is the key consultation document in the SEA process facilitating interested parties to comment on the environmental issues associated with the Draft LAP. The purpose of this Environmental Report is to identify:

1. The existing environmental issues in the Baldoyle-Stapolin Draft LAP area;
2. The likely significant effects on the environment when the Draft 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 SEA has been carried out in order to comply with the provisions of the European SEA Directive and national SEA Regulations and also to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of growth in the Baldoyle-Stapolin LAP area. This report should be read in conjunction with the Draft Baldoyle-Stapolin LAP. It should be noted that the Appropriate Assessment of the Baldoyle-Stapolin LAP, although also carried out in parallel with the preparation of the Draft Local Area Plan and the SEA, is prepared as a separate document.

1.2 SEA Definition

SEA is a formal process that is carried out in parallel with the preparation of the LAP. SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a proposed plan, or other strategic action, in order to ensure that these

effects are appropriately addressed at the earliest possible stage of decision-making on a par with economic and social considerations. It is a valuable tool that influences decision-making at each stage in the plan process, to improve the environmental sustainability of the plan and to raise awareness of the potential environmental consequences of its implementation so that these consequences may be mitigated or avoided altogether before the decisions are made.

It also gives the public and other interested parties an opportunity to comment and to be kept informed on decisions that may impact on the environment.

1.3 Legislative Context

The European Community Strategic Environmental Assessment (SEA) Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment was issued in July 2001. This introduced the requirement that SEA be carried out on plans and programmes, including those of land use planning.

Article 1 of the SEA Directive 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 and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment'*.

The SEA Directive was transposed into Irish Law in 2004 coming into effect on the 21st July 2004, through the following Regulations:

- European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, S.I. No. 435 of 2004, and the
- Planning and Development (Strategic Environmental Assessment) Regulations 2004, S.I. No. 436 of 2004.

DoCELG SEA Circular PSSP/6 2011 gave notice that these were amended by:

- European Communities (Environmental Assessment of Certain Plans and Programmes)(Amendment) Regulations, 2011, S.I. No. 200 of 2011; and
- European Communities (Strategic Environmental Assessment) (Amendment) Regulations, 2011, S.I. No. 201 of 2011.

The SEA of the Draft Baldoyle-Stapolin Local Area Plan 2013-2019 will also have regard to other relevant SEA documentation such as;

- *Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment – Guidelines for Regional Authorities and Planning Authorities,* published by the Department of the Environment, Heritage and Local Government (2004) and,
- *Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland – Synthesis Report,* published by the EPA (2003).

It should also be noted that the EPA *SEA Process Draft Checklist* (2008) and EPA *SEA Pack* (2012) have been considered in the preparation of this Report. These documents

together with the above legislation have been used to guide this environmental assessment process.

1.4 Implications for the Council and the Elected Members

The above legislation requires, certain plans and programmes, which are prepared by Fingal 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 Draft Development 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 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 Draft Baldoyle-Stapolin Local Area Plan has been undertaken. The SEA process has been carried out alongside the preparation of the Draft Plan. The findings of the SEA were communicated to the Plan making team in 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:

Table 2.1 SEA Methodology

Action	Comments
1. Screening	Screening is the process for deciding whether a particular plan or programme, other than those for which SEA is mandatory, would be likely to have significant environmental effects, and thus would warrant SEA. Article 14B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (as amended), requires SEA to be carried out in respect of local area plans with a population or target population over 5,000 persons, or where the area covered by the plan is greater than 50 square kilometres, or where the local area plan is being prepared for a town and its wider environs. Where the population is less than 5,000 SEA must be carried out where it is considered that the plan would be likely to have significant effects on the environment. In the case of the Baldoyle-Stapolin LAP Fingal County Council determined that, when completed, development in the Baldoyle-Stapolin LAP area was likely to potentially have a significant environmental impact and consequently included an Environmental Report as part of the production of the LAP.
2. Scoping Issues Paper	A Scoping Issues Paper was prepared containing baseline environmental data which was sent to the Environment Authorities.
3. Consultation with the Environmental Authorities	Submissions received from the Environmental Authorities.
4. Scoping Report	Submissions received from Environmental Authorities were incorporated into the Environmental Report.

5. Preparation of Environmental Report and Draft Local Area Plan	SEA team established to create policy consistent documents and to examine the effects on the environment of implementing the objectives and policies.
- **Environmental Objectives Established**	- Objectives created in Draft Baldoyle-Stapolin Local Area Plan assessed in Environmental Report and alternative Development Scenarios for the Local Area Plan examined.
- **Assessment of Alternative Scenarios**	- Favoured scenario chosen.
- **Mitigation Measures Detailed**	- Mitigation measures discussed and chosen.
- **Monitoring Measures Detailed**	- Monitoring incorporated into existing methods.
6. SEA Statement	At the end of the process, a statement will be issued by the Council summarising: - 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 Draft 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.
7. Monitoring the Baldoyle-Stapolin Local Area Plan	Monitoring significant environmental effects over the lifetime of the Baldoyle-Stapolin Local Area Plan

2.2 Scoping

Scoping is the procedure whereby the range of environmental issues and the level of detail to be included in the Environmental Report are decided upon in conjunction with the prescribed environmental authorities after preliminary data collection. The scoping exercise was undertaken February/March 2012 and the Scoping Report was circulated

to statutory consultees and interested parties for their input on 6th February 2012 for a four week consultation period (until 9th March 2011). Scoping helps to focus the SEA on important issues such as those relating to existing and potential environmental issues and problems, therefore minimising the waste of resources on unnecessary data collection. This scoping facilitated the selection of issues relevant to the environmental components which are specified under the SEA Directive and Regulations, namely; biodiversity, flora and fauna, population and human health, soil, water, air and climatic factors, material assets, cultural heritage including architectural and archaeological heritage, and landscape.

An SEA Scoping Issues Paper was issued to the designated Environmental Authorities and sought to:

- identify the significant environmental issues to be taken into consideration in the making of the new Plan
- form a basis for consultation with the statutory bodies as designated under the terms of Article 13A (4) of the Planning and Development Regulations 2001 (as inserted by article 7 of S.I. No. 436 of 2004 and as amended by S.I. 201 of 2011) namely:
    - Environmental Protection Agency (EPA);
    - Department of Environment, Community and Local Government (DECLG);
    - Department of Communications, Energy and Natural Resources (DCENR);
    - Dept of Agriculture, Food and the Marine (DAFM);
    - Department of Arts, Heritage and the Gaeltacht (DAHG);
    - Adjoining Planning Authorities.
- identify and consult on the environmental objectives, which will be used to ensure the integration of the environment into the preparation of the Baldoyle-Stapolin LAP and which will also be used to identify the likely significant effects on the environment;
- identify the baseline information and data gaps and
- identify reasonable alternative strategies of achieving the strategic goals of the Plan.

The SEA Scoping Issues Paper sets out a description of the Baldoyle-Stapolin 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).

The Planning Authority formally consulted the designated Environmental Authorities during the 'Scoping' exercise and during the preparation of the Environmental Report. Submissions were received from the Environmental Protection Agency (EPA).

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

- It should be ensured that the adjacent designated sites are protected, including in particular Baldoyle Bay (SAC/SPA/pNHA), Irelands Eye (SAC/SPA/pNHA), Howth Head (SAC/pNHA), Howth Head Coast (SPA), North Dublin Bay (SAC/pNHA).

- There is a need to ensure compliance with the Water Framework Directive and in this context, the Eastern River Basin Management Plan and associated Programme of Measures should be incorporated into the Plan to ensure the protection / improvement of water quality in the Mayne River and entering Baldoyle Bay (SPA & NHA).
- It should be ensured that a preliminary flood risk assessment is carried out in accordance with the Flood Risk Management Guidelines 2009 (OPW/DoEHLG). Zoning and development of lands within the Plan area should take into account the risk of flooding. In this regard consideration should be given to incorporating any recommendations which may be forthcoming, in future versions of the Plan when upon completion of the CFRAMS.
- The Pollution Reduction Programme and associated Characterisation Report for the Malahide Designated Shellfish Area should be taken into account in the Policies and Objectives of the Plan.
- There is a need for the LAP to contain policies/objectives to ensure the provision of adequate and appropriate critical service infrastructure in advance of permission for development being granted.
- There is a need to incorporate green infrastructure in the development of the Plan area, in accordance with the policies/objectives of the County Development Plan.
- The potential for cumulative/in – combination effects resulting from this Plan and other relevant on-going Plans and Programmes within and adjacent to the Plan area should also be assessed. In particular the potential of cumulative/in-combination effects arising from the potential development arising from LAPs being prepared for lands at Portmarnock South (to the north of the subject site) and for lands at the North Fringe/Clongriffin, to the west of the site, in the administrative area of Dublin City Council.

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 Baldoyle-Stapolin LAP thus minimising the potential for significant negative environmental effects arising from implementation of the Plan.

2.3 Environmental Baseline Data

The baseline data assists in assessing the current state of the environment, facilitating the identification, evaluation and subsequent monitoring of the effects of the Plan. Thus, this information creates a platform whereby existing problems relevant to the Plan area can be quantified (where possible) or qualified thereby ensuring that the implementation of the Plan does not exacerbate these problems.

Baseline data has been collected based on the various broad environmental topics described in the SEA Directive and Regulations, i.e. population, biodiversity, fauna, flora, soil and geology, water, air, climate factors, material assets, cultural heritage including architectural and archaeological heritage and landscape.

The Directive and Regulations requires that information be focused upon relevant aspects of the environmental characteristics of the area likely to be significantly affected by the Plan and the likely change, both in positive and negative terms, where applicable. The baseline data was collated from currently available, relevant data sources.

2.4 Strategic Environmental Objectives

The principal component of the SEA involves a broad environmental assessment of the objectives and policies of the Draft Local Area Plan. A methodology that utilises the concept of expert judgment, public participation, and matrices, both to assess the environmental impact and to present the conclusions has been employed in this SEA. Key to assessing the objectives of the Plan is setting a specific set of Strategic Environmental Objectives for each of the environmental parameters listed in the SEA Directive and Regulations.

The making of the new Baldoyle-Stapolin 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 Baldoyle-Stapolin area. These Strategic Environmental Objectives (SEOs) are outlined in Chapter 5.

2.5 Alternatives

Article 5 of the SEA Directive specifies that the Environmental Report should consider 'reasonable alternatives taking into account the objectives and geographical scope of the plan or programme'.

The Strategic Environmental Assessment Regulations 2004 (S.I. No. 436 of 2004) (as amended) also require the Environmental Report to include 'an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information (Schedule 2B)'.

The issue of alternatives is a critical function of the SEA process and is necessary to evaluate the likely environmental consequences of a range of alternative development strategies for the LAP area within the constraints imposed by environmental conditions.

Taking into account the objectives and the geographical scope of the Development Plan, alternatives were formulated through consultation the Baldoyle-Stapolin LAP Team and a number of Departments in Fingal County Council. Alternative strategies are considered within Sections 6 and 7 of this document.

The Local Area Plan deals only with the lands illustrated on the various zoning maps in the Plan. The entire Plan area is however covered by the objectives and policies of the Fingal Development Plan 2011-2017 and the mitigation and monitoring measures proposed in the accompanying SEA. The Fingal Development Plan 2011-2017 is the 'parent' document to which the Draft Baldoyle-Stapolin LAP 2013-2019 is made in accordance with and all of its policies, including its environmental protection policies, apply to the LAP area also. The same applies to the associated SEA and AA reports.

2.6 The SEA Environmental Report

In the Environmental Report, which will be placed on public display alongside the Draft Baldoyle-Stapolin 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 within the Baldoyle-Stapolin area. 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 Baldoyle-Stapolin 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 Baldoyle-Stapolin LAP is positioned, or, if certain matters have already been assessed by a different level of the hierarchy then additional assessment is not needed.

The structure of this Environmental Report (from hence referred to as “the Report”), which is the result of the Strategic Environmental Assessment, is in accordance with the SEA Directive and Regulations S.I. No. 436 of 2004 (as amended) which provides a broad basis for the content of an Environmental Report. In accordance with the Directive and Regulations this Environmental Report provides details on the following information:

- An outline of the content and main objectives of the Draft Baldoyle-Stapolin Local Area Plan 2013-2019 and the relationship between this and other relevant plans or programmes;
- The environmental characteristics of the area affected by the plan;
- Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC (Directive for the Conservation of Wild Birds) and 92/43/EEC (Conservation of Natural Habitats and of Wild Fauna and Flora);
- The environmental protection objectives, established at International, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation;
- The likely significant effects on the environment, including issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage and landscape;
- The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan;
- An outline of the alternatives considered, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;

- A description of the measures envisaged concerning monitoring in accordance with Article 10;
- A Non-Technical summary of the information provided under the above headings.

2.7 The SEA Statement

Following adoption of the Plan an SEA Statement must be prepared. The SEA Statement will give a summary of how environmental considerations and the Environmental Report were factored into the Plan, how submissions and consultations were taken into account and the reasons for choosing the Plan as adopted in light of other reasonable alternatives considered. It will also outline a list of monitoring measures to be carried out during the plan period. The purpose of the SEA Statement is to provide accountability, by informing the public of how environmental effects were considered in the decision making process.

2.8 Difficulties Encountered

This section outlines the technical and/or other difficulties encountered during the SEA review process; areas where data was not readily available and/or in an appropriate format are also highlighted and where possible recommendations are made in the relevant Chapter or Section.

The availability of information in relation to various environmental parameters also posed some issues including;

- A comprehensive and analytical GIS database is currently being addressed and it is envisaged that this will be refined throughout the Plan making process and future monitoring stages.

- Furthermore, it should be noted that the strict timelines applied due to legislative requirements are constraining in terms of quality assessment including, for example, on-site investigations and assessments, data collation and GIS analysis.

2.9 Planning Authority Team

A Multi-disciplinary SEA team comprising members from various sections of Fingal County Council has been established in order to examine the significant environmental impacts which may result from the implementation of the Baldoyle-Stapolin Local Area Plan. The SEA Report and the Draft Baldoyle-Stapolin LAP 2013-2019 were prepared by the Planning and Strategic Infrastructure Department of the Council. This will enhance the identification of environmental issues.

Section 3 Context for Baldoyle-Stapolin Draft Local Area Plan

3.1 Introduction

Section 18 to 20 of the Planning and Development Act 2000 (as amended) allow 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 a Development Plan.

The lands within the LAP were identified on the basis of their zoning objective in the Fingal Development Plan 2011-2017:

- c. 42 hectares of land zoned Objective RA – 'Provide for new residential communities in accordance with approved local area plans and subject to the provision of the necessary social and physical infrastructure'. This area includes the existing residential communities of Myrtle and Red Arches.
- c. 81 hectares of land zoned Objective HA – 'Protect and enhance high amenity areas'.

The plan lands are located in the Metropolitan Area of Dublin, on the southern boundary of Fingal, where it meets the administrative area of Dublin City along the Dublin – Belfast railway. To the west of the railway lies the developing mixed use area of Clongriffin within Dublin City Council's wider North Fringe Area encompassing Northern Cross/Clare Hall to Clongriffin. This, along with Stapolin, is one of Dublin's larger new development areas and, when completed, will have approximately 10,000 new homes as well as new retail and commercial areas. Dublin City Council has prepared a Local Area Plan for the North Fringe Area which will replace the North Fringe Action Area Plan 2000.

The High Amenity (HA) lands are designated as an ecological buffer zone in the Fingal Development Plan and also include a section of the larger surrounding EU designated Special Areas of Conservation and Special Protection Area at Baldoyle Bay. These High Amenity lands will form the large regional park to serve the development when completed.

This Draft LAP has been prepared by the Council to provide a statutory framework for the future growth, development and improvement of Baldoyle-Stapolin that is consistent with the policies and objectives contained in *the Fingal Development Plan 2011-2017* including its *Core Strategy/Settlement Strategy* and which addresses the needs and requirements of the local community, service providers and other stakeholders. Taken in conjunction with the Regional Planning Guidelines and other relevant Regional and National Plans the LAP will provide a comprehensive planning framework for the area. The purpose of the Local Area Plan is to guide future development within the Baldoyle-Stapolin lands, in a sustainable and equitable manner and to inform members of the public, the local community, stakeholders, developers and the Planning Authority regarding the overall vision and all relevant policies and objectives for the development

of the area, including provisions in relation to land use management, community facilities and amenities, transport and infrastructure, urban design, heritage and the environment.

The Plan period is 6 years, from date of adoption by the Council, unless the timeframe is extended by resolution in accordance with Section 12 (d) to (f) of the Planning and Development (Amendment) Act 2010.

3.2 Structure and Content

The Local Area Plan will be underpinned by the principles of sustainable development, climate change adaptation, social inclusion and high quality design. These four strands will permeate the Local Area Plan at every level and will be considered when framing each policy.

Sustainable Development – the concept of sustainable development can be defined as 'development that meets the needs of today without compromising the ability of future generations to meet their own needs'. An important element of the sustainable development thread in the Baldoyle Stapolin Local Area Plan 2013 – 2019 is the Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA).

These assessments are required under legislation and seek to provide for a high level of protection of the environment. The Local Area Plan will adopt the principle of sustainable development by promoting and encouraging the integration of economic, environmental, social and cultural issues into local policies and programmes.

Climate Change – CO2 emissions from the combustion of fossil fuels is recognised as the greatest contributor to climate change. The effects of climate change include rising sea levels, flooding and drought. The National Climate Change Strategy 2007-2012 has set a target to cut emissions by at least 20% by 2020. The main areas where this can be achieved are energy, planning, transport, waste management and biodiversity.

Social Inclusion – Social inclusion affects the well being of individuals, families, social groups and communities. Creating a more socially inclusive society by alleviating social exclusion, poverty and deprivation is a major challenge. Steps towards achieving a more socially inclusive society include the provision of community infrastructure and improving access to information and resources. The Local Area Plan will seek to increase social inclusion at both preparation and operational stages of the development plan.

High Quality Design – Good design adds quality to the places we live, work and enjoy. Ensuring high quality design adds value to our towns, villages and countryside and improves our quality of life. The Local Area Plan will promote high quality design by encouraging its integration into every aspect of the plan.

The Draft Baldoyle-Stapolin LAP consists of a written statement and maps in a single document and includes strategies and objectives for the proper planning and sustainable development of the area, land use proposals, specific objectives and development management guidelines. It is also accompanied by extensive appendices containing a Strategic Environmental Assessment, Appropriate Assessment, Studies and Reports.

The Draft LAP is divided into six (6) sections and Appendices 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: Context
This section considers the Baldoyle-Stapolin area, its historical context up to the present day, issues facing the area and the need for change.

Section 3: Vision, Themes and Objectives
This section describes the vision of a rejuvenated and vibrant Baldoyle-Stapolin in the future which would be integrated fully with its surroundings.

Section 4: Themed Objectives
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 5: Urban Design Guide
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 6: Sequencing and Phasing
This section of the plan is concerned with the implementation of the Local Area Plan and the timescale over which development will occur.

3.3 Vision and Goals of LAP

The Vision for the Baldoyle-Stapolin LAP is to create a place to live that is appealing, distinctive and sustainable, with minimal impact on the surrounding environment and the coast. It is envisaged that Baldoyle-Stapolin will develop as a sustainable community comprised of new homes, community, leisure and educational facilities based around an identifiable and accessible new local centre which will form the heart of the area. With a range of different sizes and types of homes, as well as integrated amenities and excellent public transport, this will be a fledgling neighbourhood with a varied social mix and will embody the principles of sustainability, sustainable communities and inclusiveness.

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

Development Themes
This Local Area Plan and overall Vision for Baldoyle is underpinned by four inter-linked thematic objectives. They form the basis for the policies in this document, and they should guide any accompanying detailed design plans and the preparation and determination of planning applications.

1. Sustainable Development - the creation of an urban area with buildings and surrounding areas constructed to high standards of sustainable design, accessible good quality public transport, green spaces and corridors and strong inclusive communities.
2. High Quality Places for All - the development of interesting, exciting and stimulating buildings and public spaces, which make the most of natural features and are well connected to surrounding areas.
3. A New Heart for Baldoyle-Stapolin- the development of a new mixed use local centre and public realm in which people want to live, work and invest.
4. Homes for the Future – the creation of well designed sustainable adaptable homes and neighbourhoods, which cater for a wide range of households.

An opportunity is presented to develop a modern sustainable urban form of development that will be well connected to the city centre through public transport links and uniquely located close to the amenities of the coast. Strong emphasis was placed on the desire to see residential development occur in tandem with the provision of the necessary community and physical infrastructure.

3.4 Alternatives

Section 6 of this report identifies, describes and evaluates different alternative scenarios for the future development of the Plan area, taking into account the Strategic Environmental Objectives which are identified in Section 5.

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.

3.5 Interactions with Relevant Plans and Programmes

3.5.1 Introduction

The Draft Baldoyle-Stapolin Local Area Plan sits within a hierarchy of land use forward planning strategic actions 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 which are summarised in Table 3.1 below:

Table 3.1 Relevant Plans and Programmes

Plan / Programme	Summary of Key Objectives
EU Level	
SEA Directive (2001/42/EC)	Under the SEA Directive the plan requires an SEA. The plan must take into account protection of the environment and the integration of the plan into the sustainable planning of the country as a whole
Kyoto Protocol	Objectives seek to alleviate the impacts of climate change and reduce global emissions of Green House Gases (GHGs). The development plan has regard to the objectives and targets of Kyoto and aim to reduce GHG emissions from the management of residential and commercial development. Harnessing energy from natural resources could be considered to reduce overall GHG emissions
Energy End-Use Efficiency and Energy Services Directive (2006/32/EC)	Aims to make the end use of energy more economic and efficient
The European Landscape Convention (Florence 2000)	Aims to promote landscape protection, management and planning and to organise European co-operation on landscape issues
EU Directive 96/62/EC (Air Quality Directive)	Objective to improve air quality by controlling the level of certain pollutants and monitoring their concentrations
EU Water Framework Directive (2000/60/EC)	Aimed at improving the water environment, requiring member governments to take a holistic approach to managing their waters. Member states must aim to achieve good status in all waters by 2015 and must ensure that status does not deteriorate in any waters
European Environment and Health Action Plan 2004 – 2010	Designed to give the EU the scientifically grounded information needed to help member states reduce the adverse health impacts of certain environmental factors and to endorse better cooperation between actors in the environment, health and research fields
EU Groundwater Directive 2006/118/EC	Developed in response to Article 17 of the Water Framework Directive
EU Floods Directive 2007/60/	Aim is to reduce and manage the risk that floods pose to human health, the environment, cultural heritage and economic activity

Plan / Programme	Summary of Key Objectives
EU Directive 2002/49/EC	To define a common approach intended to avoid, prevent or reduce, on a prioritised basis, the harmful effects, including annoyance, due to exposure to environmental noise
Environmental Liability Directive2004/35/CE	Establishes a framework for environmental liability based on the "polluter pays" principle with a view to preventing and remedying environmental damage
Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora	The aim of the directive is to contribute towards ensuring bio-diversity through the conservation of natural habitats and of species of wild flora and fauna in the EU; Protects over 1000 animals and plant species and over 200 habitat types of European importance; Sites designated as Candidate Special Areas of Conservation (cSACs); Provides for an ecological network of protected sites known as Natura 2000
Directive 2009/147/EC of the European Parliament and of The Council on the Conservation of Wild Birds	Amended EU Birds Directive 79/409/EEC; related to the conservation of all species of naturally occurring birds in the wild state in the European territory of the Member States. It covers the protection, management and control of these species and lays down rules for their exploitation; it applies to birds, their eggs, nests and habitats. Sites designated as Special Protection Areas (SPAs)
Convention of Biological Diversity	3 main objectives: (i) The conservation of biological diversity, (ii) the sustainable use of the components of biological diversity, and (iii) the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources
EU Drinking Water Directive 98/83/EC	Objective to protect the health of consumers in the EU and to make sure the water is wholesome and clean
EU Urban Waste Water Treatment Directive (91/271/EEC)	Aimed at protecting the environment from the adverse effects of urban wastewater discharges and discharges from certain industrial sectors
Soil Framework Directive (proposed)	Member states to adopt a systematic approach to identifying and combating soil degradation

Plan / Programme	Summary of Key Objectives
EU Drinking Water Directive 98/83/EC	To protect the health of the consumers in the European Union and to make sure the water is wholesome and clean
Bathing Water Directive 2006/7/EC	Repeals Bathing Water Directive 76/160/EEC on 31st December 2014
91/271/EEC as amended by Directive 98/15/EEC Urban Wastewater Treatment	To protect the environment from the adverse effects of discharges of urban wastewater by the provision of wastewater collecting systems and treatment plants for urban centre
European Commission White Paper on Adapting to climate change: Towards a European Framework for Action (COM (2009) 147)	Sets out a framework to reduce the EU's vulnerability to the impact of climate change
E**uropean Environmental Agency "10 Message" Publications**	A Series of publications released by the European Environment Agency (EEA) which provide a short assessment of European Biodiversity and associated climate change impacts on a range of ecosystems
EU Air Quality Directive 2008	Sets binding standards for Air Particles
Directive on Ambient Air Quality and Cleaner Air for Europe (Directive 2008/50/EC	Provides standards for fine particle PM2.5 pollution in the European Union
Pesticides Framework Directive (proposed)	To control the storage, use and disposal of pesticides to minimise risk to health and environment from their usage and to include measures which relate to soil management strategies in land use planning
National Level	
Water Services Act 2007 (As amended)	Focuses on management of water in the pipe as opposed to river water quality etc
National Climate Change Strategy 2007 – 2012	Sets out measures for Ireland's reduction in emissions
National Development Plan 2007 – 2013	€184 mil infrastructural investment plan to build a prosperous country for Ireland's Population

Plan / Programme	Summary of Key Objectives
Actions for Biodiversity 2011-2016 Ireland's National Biodiversity Plan	Objective to promote the conservation and sustainable use of biodiversity
National Energy Efficiency Action Plan 2009 - 2020	Sets out the government's actions to achieve 20% energy efficiency saving
Sustainable Residential Development in Urban Areas – Guidelines for Planning Authorities 2009	Objective to produce high quality sustainable development which includes the integration of schools, community facilities, employment, transport and amenities in a timely and cost effective manner
Urban Design Manual – A Best Practice Approach	Companion document on best practice implementation of Sustainable Residential Development in Urban Areas
The Planning System and Flood Risk Management – Guidelines for Planning Authorities 2009	Aims to integrate flood risk management into the planning process
Preventing and Recycling Waste: Delivering Change (2002)	Aims to achieve an integrated approach to waste management based on the internationally accepted hierarchy of options with waste prevention favoured
Framework and Principles for the Protection of the Archaeological Heritage (1999)	Outlines the State's general principles in relation to the management and protection of archaeological heritage
European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 S.I. 435 of 2004 (as amended) **and** **Planning and Development (Strategic Environmental Assessment) Regulations 2004 S.I. 436 of 2004 (as amended)**	Transposes EU Directive 2001/42/EC into Irish Law
Architectural Heritage Protection Guidelines for Planning Authorities (2004)	Practical Guide for planning authorities to deal with the provisions of Part IV of the Planning and Development Act
Wildlife Act 1976 **and** **Wildlife (Amendment) Act 2000** **European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011).**	Main Objectives of 1976 Act: To provide for the protection of flora and fauna, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims

Plan / Programme	Summary of Key Objectives
378 of 2005	Main Objective of the 2000 (Amendment) Act: To give statutory protection to NHAs, geological and geomorphological sites, enhance the conservation of species and habitats, enhance hunting controls, inclusion of most species for protection, regulation of commercial shoot operators, ensure compliance with international agreements, increase fine levels for contravention of Wildlife Acts, strengthen the provisions relating to the cutting of hedgerows, strengthen the protective regime for SACs and to give statutory recognition to the Minister's responsibilities in regard to promoting the conservation of biological diversity Transposes EU Habitats Directive 92/43/EEC into Irish law
European Communities (Drinking Water) (No.2) Regulations 2007 S.I. 278 of 2007	Transposes EU Water Framework Directive (2000/60/EC) and EU Drinking Water Directive 98/83/EC into Irish Law
European Communities (Water Policy) Regulations 2009 S.I. 272 of 2009	Gives effect to the measures needed to achieve the environmental objectives established for the bodies of surface water by Directive 2006/60/EC
Quality of Bathing Water Regulations, 1992 S.I. 155 of 1992	Transposes EU Bathing Water Directive 76/160/EEC into Irish Law
Urban Wastewater Treatment (Amendment) Regulations 2010 S.I. 48 of 2010)	Gives effect to Directive 2000/60/EC and to Directive 91/271/EEC
European Communities (Water Policy) Regulations 2003 S.I. 722 of 2003	Transposes the Water Framework Directive into Irish Law
European Communities Quality of Shellfish Waters (Amendment) Regulation 2009 S.I. 55 of 2009 & Malahide Shellfish Waters Pollution Reduction Programme for Programmes as per SI No. 268 of 2006	To give effect to in the State to Directive 79/923/EEC of 30th October 1979 on the quality required of shellfish waters
European Communities (Assessment and Management of Flood Risk) Regulations 2010 S.I. 122 of 2010	Transposes EU Floods Directive 2007/60/EC into Irish Law
Environmental Noise Regulations 2006 S.I. 140 of 2006	Transposes EU Directive 2002/49/EC into Irish Law

Plan / Programme	Summary of Key Objectives
Ambient Air Quality and Assessment and Management Regulations, 1999 S.I. 33 of 1999	Transposes EU Directive 96/62/EC (Air Quality Directive) into Irish Law
National Renewable Energy Action Plan (NREAP)	The National Renewable Energy Action Plan (NREAP) sets out the Government's strategic approach and concrete measures to deliver on Ireland's 16% target under Directive 2009/28/EC
Regional Level	
Retail Strategy for the Greater Dublin Area (GDA) 2008 - 2016	Aims to set out a co-ordinated, sustainable approach to the assessment and provision of retail within the Greater Dublin Area
Greater Dublin Strategic Drainage Study	Identifies the policies, strategies and projects for developing a sustainable drainage system for the Greater Dublin Region; Identifies the need for the North Dublin Wastewater Treatment Plan and the Orbital Sewer, improvements in the drainage capacity and the need to upgrade existing treatment plants to their ultimate capacity
Dublin Coastal Flooding Protection Project	Aims to address and assess the risk from tidal flooding around the coastline
Eastern River Basin District Management Plan 2009 – 2015 and Associated Programmes of Measures	Describes the actions that are proposed to ensure the necessary protection of waters in the Eastern River Basin District
Catchment-Wide Flood Risk Assessments	Requirement of the EU Floods Directive
Greater Dublin Strategic Drainage Study (GDSDS) 2005	Objective to identify the policies, strategies and projects for developing a sustainable drainage system for the Greater Dublin Area
Water Supply Project Dublin Region	Study determining a new major water source to meet projected demand in the long term
Regional Planning Guidelines for the Greater Dublin Area 2010 - 2022	Aims to direct the future growth of the Greater Dublin Area over the medium to long term involving sustainable planning and through the protection of environmentally sensitive or important locations
Waste Management Plan for the Dublin Region 2005 – 2010	Provides a framework for minimising waste, encouraging recycling and ensuring the avoidance of environmental pollution. Policy also includes diversion from landfill in

Plan / Programme	Summary of Key Objectives
	accordance with targets set out in the European Union Landfill Directive
DTO Strategy 2000 – 2016 A Platform for Change	Integrated, multi-modal transportation strategy for the Greater Dublin Area
2030 Vision- Greater Dublin Area Draft Transport Strategy 2011-2030	To identify areas of accessibility within the Dublin Region and the most appropriate locations for intensification of development
County Wide Level	
Fingal Development Plan 2011-2017	The Development Plan sets out the spatial framework for the county within the context of National and regional plans
Fingal Heritage Plan 2011-2017	Highlights diversity and variety of Fingal's heritage and its value to the whole community and this is an integral part of the Plan. The Plan identifies objectives and actions to achieve those objectives as well as providing a mechanism to measure
Fingal Biodiversity Action Plan 2010-2015	The Fingal Biodiversity Action Plan puts forward an ambitious programme of a 100 actions to protect the sites, habitats, plants and animals that can be found in the County
Fingal Litter Plan 2012-2015-	The primary purpose of this Plan is to describe the activities and resources which will be put in place by Fingal County Council for the management of litter over the period 2012 to 2015.
Fingal Sludge Management Plan 2002 (currently being reviewed)	Makes proposals for dealing with sludge arising in Fingal from a number of sources including Agriculture, Industry, Water Treatment and Wastewater Treatment.
Dublin Agglomeration Noise Action Plan relating to the Assessment and Management of Environmental Noise 2008 – 2013	For the Dublin Agglomeration distinct noise maps have been produced for all roads, and all railway lines including the Luas (light rail) for all four local authorities in the Agglomeration. These maps cover the long term average periods for night time (Lnight) and 24 hours (Lden).

3.5.8 Fingal Development Plan 2011-2017

The Planning and Development Act 2000 (as amended) requires the Draft LAP to be consistent with the Fingal Development Plan 2011-2017 which outlines the planning and development framework for Fingal Development Plan 2011-2017. In the case of any conflict between the two Plans, the County Plan takes precedence. Among the key aims of the Development Plan are the following:

- Plan for and support the sustainable development of Fingal as an integrated network of vibrant socially and economically successful settlements, strategic green belts and open countryside, supporting and contributing to the economic development of the County and of the Dublin City Region.
- Provide for the future well being of the residents of the County by:
  - promoting the growth of economic activity and increasing employment opportunities
  - protecting and improving the quality of the built and natural environments
  - ensuring the provision of necessary infrastructure and community facilities.
- Incorporate sustainable development, climate change, social inclusion and high quality design as fundamental values underpinning every aspect of the Development Plan.
- Foster the development of socially and economically balanced sustainable communities.

Fingal Development Plan 2011-2017 sets out its strategic policy for the next 6 years. One of the policies, which specifically relates to Baldoyle, is as follows:

> Consolidate the development and protect the unique identities of the settlements of Howth, Sutton, Baldoyle, Portmarnock, Malahide, Donabate, Lusk, Rush and Skerries.

In terms of Fingal's settlement hierarchy (in compliance with Regional Planning Guidelines), Baldoyle is identified as an area within the Metropolitan Area requiring consolidation.

The Development Plan identifies Baldoyle as a suburb within the Metropolitan Area, which has a well-established identity and community. It has a range of urban services such as schools, retail facilities, medical and community facilities to meet the needs of the existing and expanding populations. Baldoyle core is designated as an ACA and Baldoyle Estuary is designated as a Special Area of Conservation (SAC) and a Special Protection Area (SPA). Unlike other established settlements in the area it also provides a significant, dedicated employment base in the form of the Baldoyle Industrial Estate and lands around the rail line.

Development Strategy

The Development Strategy identified for the town is as follows:
Improve, strengthen and consolidate the role of the existing centre while promoting the provision of a range of facilities to support the existing and new populations making full use of sustainable transport practices.

The following Objectives are identified for Baldoyle

Objective BALDOYLE 1
Ensure the viability of the visual break on lands between Baldoyle and Portmarnock urban areas by locating appropriate outdoor sport and recreation opportunities which respect the character, sensitivity and natural heritage designations of the existing landscape subject to Appropriate Assessment Screening and full Appropriate Assessment if required.

Objective BALDOYLE 2
Prepare an Urban Centre Strategy for Baldoyle.

Zoning Objectives and Local Objectives

The Baldoyle-Stapolin Local Area Plan lands comprise of lands with the following zoning objectives in the Fingal Development Plan:

- c. 35 hectares of land zoned Objective RA – 'Provide for new residential communities in accordance with approved local area plans and subject to the provision of the necessary social and physical infrastructure'. This area includes the existing residential communities of Myrtle and Red Arches.
- c. 81 hectares of land zoned Objective HA – 'Protect and enhance high amenity areas'.

The area zoned for residential development in the Fingal County Development Plan 2011-2017 contain the following Local Objective within its boundaries:

> Objective 459 Ensure that the visual impact of any development on the green belt will be minimised by its siting, design and planting.

There is also an objective to provide a 'Local Centre' on the western section of the residentially zoned lands, adjacent to the railway line, and an objective to provide for a 'School' on the centre of the site. There is also an objective to Protect and Preserve trees, woodlands and hedgerows at the centre of the site.

The area designated as Public Open Space for this residential area lies adjacent and to the east of the subject site and is zoned 'HA' – "Protect and improve high amenity areas" in the Fingal Development Plan and is subject to the following local objectives:

Objective 467	Develop the Racecourse Park.
Objective 469	Provide for a public park and sensitively designed retirement village subject to screening for assessment under the Habitats Directive.
Objective 471	Within the 250/270 acres (102/109 hectares) of open space to provide for (a) a millennium park of at least 100 acres (40.74 hectares) with 22 acres (8.96 hectares) of playing pitches, natural areas to ensure conservation, cycle/walkways towards Portmarnock, landscape walkways suitable for wheelchairs with

benches called after jumps/fences of the old racecourse and dry land for pitches, the public park to be provided in phase 1 of the development (b) a golf course (c) parkland in tandem with housing development in the area.

Both the 'High Amenity 'HA'' and the 'Residentially 'RA' zoned lands are bisected by a road which runs in an east – west direction and will link, once completed, the Coast Road and the new railway station at Clongriffin.

Finally, the northern half of the residentially zoned (RA) lands and the entire area of the 'High Amenity' lands to the east are covered by a 'Sensitive Landscape' Designation.

In addition to the objectives of the Development Plan relating to zoning, the Draft LAP must be consistent with, inter alia, the policies and objectives of the Development Plan together with other forward planning guidelines and objectives which are identified in Section 5 Strategic Environmental Objectives.

3.5.9 Immediately Adjoining Developments

In addition to the aforementioned Plans and Strategies it is important to note that a new LAP's is being prepared for residentially zoned (RA) lands at Portmarnock, which lies c. 800 metres to the north of the subject site and an LAP has recently been adopted for the for a large mixed use area to the west of the subject site, at Clongriffin-Belmayne, within Dublin City Council's administrative area.

The Portmarnock LAP (86ha) lands are located between Station Road and Mayne Road in Portmarnock, to the east of the railway line. The lands are primarily zoned:

- Objective RA (41ha) in the Fingal Development Plan – *provide for new residential communities in accordance with approved local area plans and subject to the provision of the necessary social and physical infrastructure*.
- Objective OS (32ha), the objective of which is to *preserve and provide for open space and recreational amenities*.

Additional pockets of land in proximity to the RA and OS zoned lands will be considered fully in the context of the LAP, namely the HA zoned area (*protect and enhance high amenity areas*), RS lands (*provide for residential development and protect and improve residential amenity*) and RC lands (*provide for small scale infill development serving local needs while maintaining the rural nature of the cluster*).

The existing Portmarnock LAP (2006) provided for approximately 1,400 new residential units on the Plan lands which, depending on the occupancy rate, could accommodate up to 4,000 persons. It is envisaged that the number of units proposed under the new LAP for this area will remain in and around this figure, with no significant increase or reduction likely. Given the scale of the proposed development on these lands and their proximity to the Baldoyle-Stapolin LAP lands it is considered essential that the cumulative effect of the development of these lands be assessed in the course of the preparation of an SEA for the area. The Portmarnock LAP is under review and a separate scoping document is being sent to the prescribed authorities.

In addition to the Portmarnock LAP lands, the Baldoyle- Stapolin LAP lands adjoin, and are functionally related to, the developing mixed use area of Clongriffin within Dublin City Council's wider North Fringe Area encompassing Northern Cross/Clare Hall to Clongriffin

to the west. This area, along with Stapolin, is one of Dublin's larger new development areas and, when completed, will have approximately 10,000 new homes as well as new retail and commercial areas. Dublin City Council has prepared a Local Area Plan for the North Fringe Area which replaces the North Fringe Action Area Plan 2000. The local authorities, i.e. Fingal and Dublin City, have, insofar as is possible, liaised in relation to the key proposal in each of the plans. As with Portmarnock it is considered essential that the cumulative effect of the development of these lands be assessed in the course of the preparation of an SEA for the area.

3.6 Strategic Environmental 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 5. The Draft LAP must be consistent with these objectives and implement them at the local level in Baldoyle-Stapolin. Examples of Environmental Protection Objectives include the aim of the EU Habitats Directive - which is to contribute towards ensuring biodiversity 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 which is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater which, among other things, prevents deterioration in the status of all water bodies and protects, enhances and restores all waters with the aim of achieving good status by 2015.

Section 4 Baldoyle-Stapolin Baseline Environment

4.1 Introduction

The environmental baseline within the Baldoyle-Stapolin LAP lands is described in this section. This baseline together with the Strategic Environmental Objectives, which are outlined in Section 5, is used in order to identify, describe and evaluate the likely significant environmental effects of implementing the Draft Local Area Plan and in order to determine appropriate monitoring measures. The location of the Baldoyle-Stapolin Local Area Plan lands is shown in Figure 4.1 LAP Context 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) (as amended):

- **Biodiversity, Flora and Fauna**
- **Population and Human Health**
- **Landscape**
- **Soil**
- **Water Quality**
- **Air**
- **Climatic Factors**
- **Material and Cultural Assets**

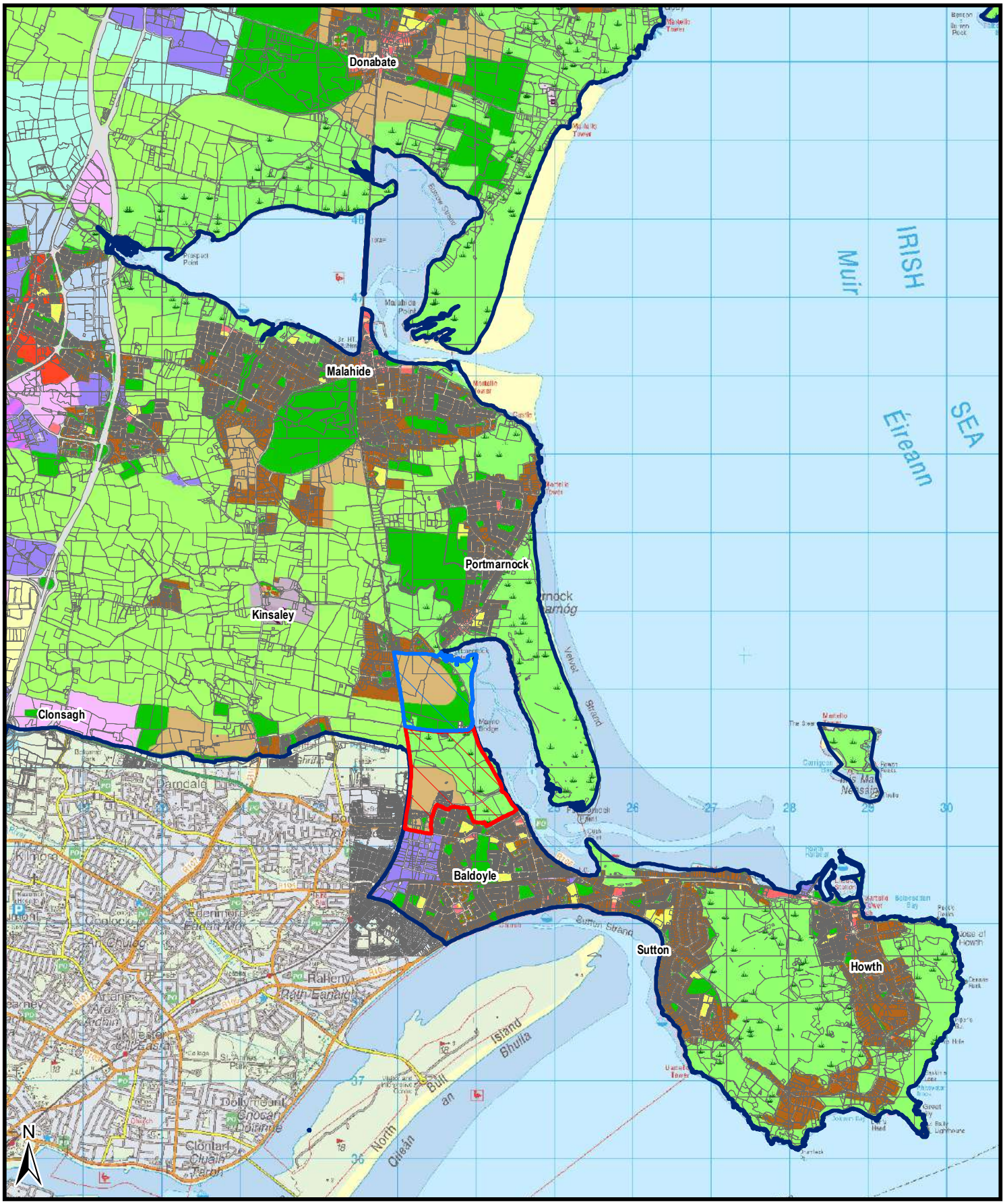
The interaction between environmental topics will be considered in the Environmental Report as the Plan progresses. GIS mapping is used to assist this process. Sources of baseline data includes information from statutory agencies, internal departments within the Council, the internet, local publications, planning applications and Environmental Impact Statements major developments in the area. Further legislative and contextual information on the environmental topics can be found in the Environmental Report of the Fingal Development Plan 2011 – 2017.

4.2 Biodiversity, Flora and Fauna

4.2.1 Introduction

'Biological diversity', or biodiversity, means 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 part; this includes diversity within species, between species and of ecosystems' (The United Nations Convention on Biodiversity, 1992).

In general terms, biodiversity refers to different habitats such as woodlands, wetlands, grasslands and estuarine habitats, and the range of flora and fauna species they support, such as plants, mammals, birds, insects, fish, microbes, mosses and fungi, and their interrelationships such as food chains and cohabitation. It also refers to the genetic diversity within species which is vital for healthy populations of individual species to survive. Of equal importance, biodiversity refers to those features of the landscape, which by virtue of their linear and continuous structure (such as hedgerows or streams)



LAP Context Map

Figure 4.1

Legend

- Portmarnock South Local Area Plan Lands
- Baldoyle Stapolin Local Area Plan Lands
- County Boundary

or their function as stepping stones (such as ponds or small woods) are essential for the migration, dispersal and genetic exchange of wild species. A wide range of economic and social benefits and services result from the protection of biodiversity, for example, biodiversity forms the basis of our landscapes, provides for food and clean water supplies, opportunities for waste disposal, nutrient recycling, flood storage and regulation, and much more.

There are a variety of valuable habitats and species distributed throughout the Draft Plan area which support a wide range of rare or threatened flora and fauna species. Some of these habitats and species are of International or National importance and others are locally important. Annexed habitats and species also occur outside of these designated sites, as well as many more common, but extremely important habitats and species. Rare and protected habitats and species cannot survive independently of their surroundings. The ordinary features of our landscape can be of high natural value in their own right, as well as providing the vital links and corridors to allow the movement of plants and animals between protected sites. They are a critical component of a functioning ecological network. Protecting and conserving these habitats is critically important, not just to the residents of the County but also in a National and International context. Considering the expanse of this section the following relevant data sources were consulted including the NPWS, National Biodiversity Data Centre, various in-house expertise including parks, roads and water sections of Fingal County Council, Conservation and Biodiversity Officers in the County and all associated studies.

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 Baldoyle-Stapolin Local Area Plan and in the accompanying Environmental Report.

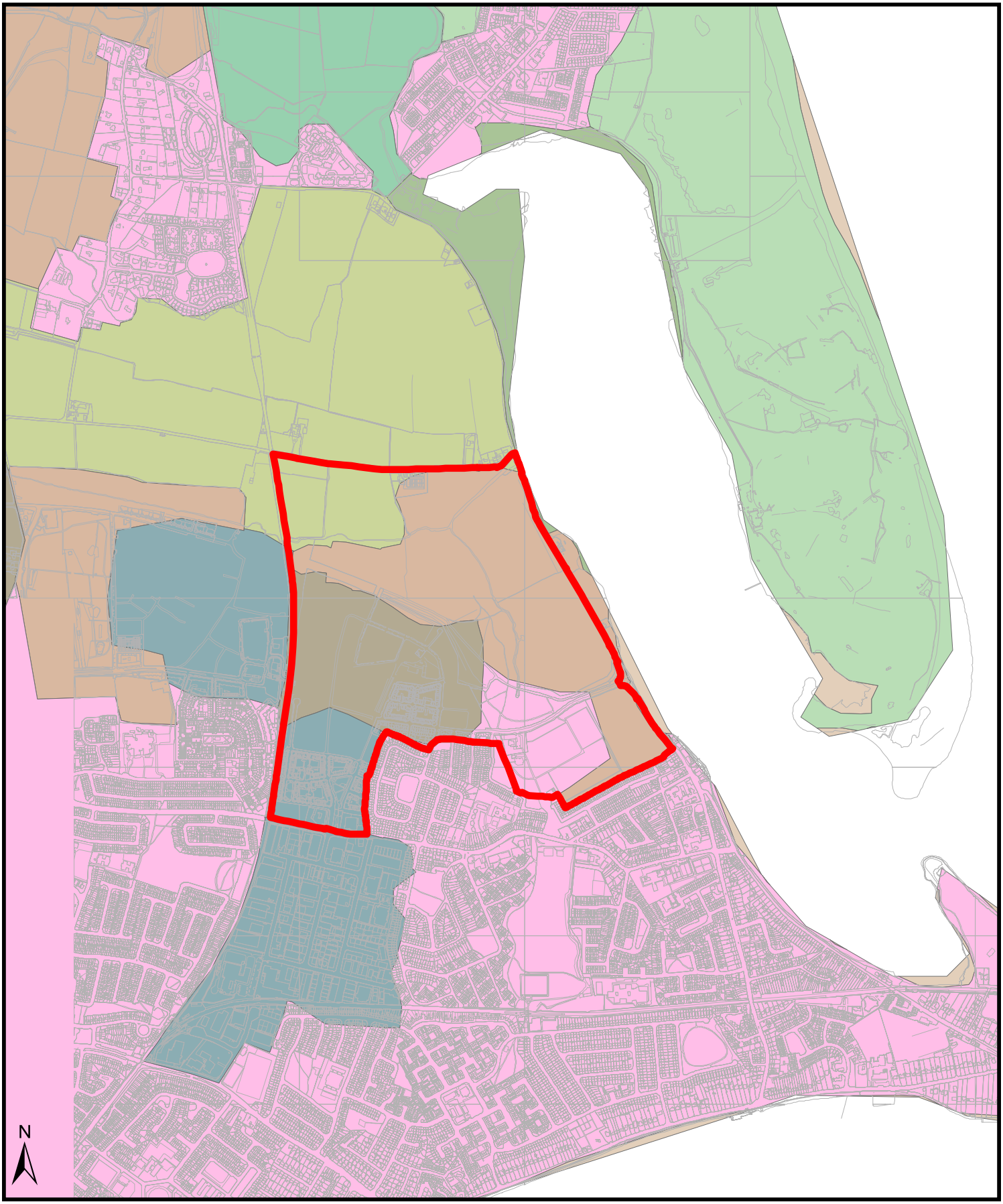
4.2.2 Corrine Land Cover

The Corine 2006 land cover mapping which classifies land cover under various headings indicates that land cover within the Baldoyle Stapolin LAP area comprises mainly industrial and commercial units to the southern portion of the site, a construction site in the mid portion with the remainder of the lands comprising a mixture of intertidal flats and non-irrigated arable lands. This is shown on Figure 4.2 Corine Landcover Map.

4.2.3 Designations

An established legal basis exists to protect, conserve and enhance biodiversity. Areas of International importance for habitats and species are mainly protected as Special Areas of Conservation (SACs) while Special Protection Areas (SPAs) are internationally important for the species and populations of birds they support. These are collectively known as Natura 2000 sites. Areas of National importance are designated as Natural Heritage Areas (NHAs) or proposed Natural Heritage Areas (pNHAs). The predominant legal instruments relating to the protection of rare or threatened habitats is the EU Birds and Habitats Directives and the Wildlife Acts 1976-2000 which provides for the designation and protection of sites that support annexed habitats and species by requiring, among other things, their favourable conservation status to be maintained or restored.

The Draft Baldoyle-Stapolin Local Area Plan area contains or is located adjacent to a number of significant natural heritage area including Natura 2000 sites, proposed



Corine Land Cover

Figure 4.2

Legend

- Draft Baldoyle Stapolin LAP Outline
- Discontinuous Urban Fabric
- Industrial & Commercial Units
- Construction Sites
- Land principally occupied by agriculture with significant areas of natural vegetation
- Beaches, dunes, sand
- Sea & Ocean
- Sports and leisure Facilities
- Non-irrigated arable land
- Pasture
- Salt Marshes
- Intertidal flats

Natural Heritage Areas, extensive green infrastructure, and wildlife corridors, however, sites and species benefiting from statutory protection do not alone represent the full extent of the natural heritage of the Plan area. Additional biodiversity occurs in the ordinary landscapes, including woodlands, hedgerows, earthbanks, grassy verges, ditches, rivers, streams, drains, lakes, bogs, fens, heaths, unimproved grasslands and wetlands, as well as the plant and animal species that occur in these wild spaces.

4.2.4 Natura 2000

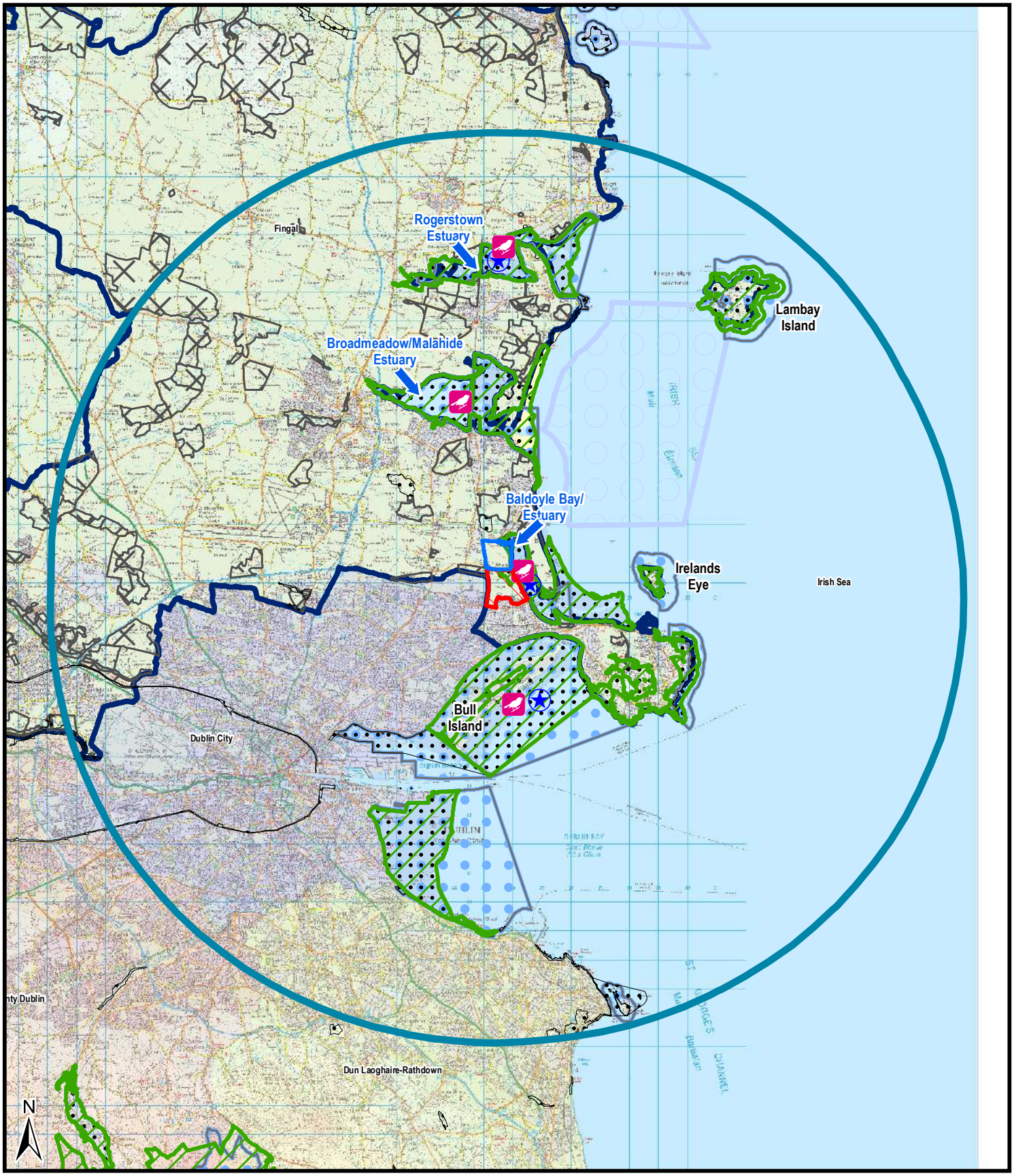
The EU Habitats Directive, (92/43/EEC - on the Conservation of Natural Habitats and of Wild Fauna and Flora) and the Birds Directive (79/409/EEC - on the Conservation of Wild Birds) provides the legislative framework for the protection of habitats and species throughout Europe through the establishment of a network of designated conservation areas known as the Natura 2000 network.

The Natura 2000 network includes sites designated as Special Areas of Conservation (SACs), under the EU Habitats Directive, Special Protection Areas (SPAs) designated under the EU Birds Directive and Ramsar wetlands. In general terms, these sites are considered to be of exceptional importance in terms of rare, endangered or vulnerable habitats and species within the European Community. Natura 2000 sites also include candidate and proposed sites. These are sites of international importance for nature conservation and form part of Ireland's contribution to the Natura 2000 network within the EU. Information about these sites, including their locations, site synopses, and qualifying or conservation interests, is available from www.npws.ie.

The following table identifies Natura 2000 sites within a 15km zone of influence of the draft LAP functional area. This is also shown in Figure 4.3 Designated Sites

Table 4.1: Natura 2000 sites within 15km of the subject site

Candidate Special Areas of Conservation (cSAC's)	Special Protection Areas (cSPA's)
Baldoyle Bay	North Bull Island
Howth Head	Rogerstown Estuary
Lambay Island	Baldoyle Bay
Malahide Estuary	Malahide Estuary
North Dublin Bay	Lambay Island
Rogerstown Estuary	Howth Head Coast
Ireland's Eye	Ireland's Eye
Rockabill to Dalkey Islands	Dalkey Island
Howth Head	South Dublin Bay and River Tolka Estuary



Designated Sites

Figure 4.3

Legend

- **Portmarnock South Local Area Plan Lands**
- **Baldoyle Stapolin Local Area Plan Lands**
- Special Areas of Conservation SAC
- Special Protection Area SPA
- Natural Heritage Area pNHA/NHA*
  *Note: Skerries Islands are the only NHA Designation in Fingal
- Designated Shellfish Waters
- Nature Development Area
- **County Boundary**
- 15km Buffer Line
- Ramsar Conservation Wetland
- Statutory Nature Reserve

Baldoyle Bay is the closest Natura 2000 site to the proposed Baldoyle-Stapolin LAP area, located adjoining and partially within the plan lands. Baldoyle Bay is covered by a number of national and international conservation designations due to the important habitats, species of birds, animals and plants that occur within the site. Primarily it is a Special Area of Conservation (SAC) and a Special Protection Area (SPA) for birds.

In terms of the Baldoyle Bay SPA, the main reason for the designation is the presence of internationally important numbers of Pale-bellied Brent Geese (*Branta bernicla hrota*). The geese are present from October to April, with overall counts indicating that numbers are increasing. Feeding takes place in the inner estuary and outer bay: green algae (mostly *Enteromorpha* spp. and *Ulva lactuca*) growing on the intertidal flats dominates the diet until mid-winter, after which the geese switch to grazing grass in adjacent fields and golf courses.

In addition to hosting several Annex I bird species, Baldoyle Bay is also an important coastal site for wintering waterfowl. The estuary complex provides good habitat for a range of species. A number of migratory bird species attain nationally important status including Bar-tailed Godwit (*Limosa lapponica*) and Golden Plover (*Pluvialis apricaria*) (both Annex I species under the E.U. Directive); Shelduck (*Tadorna tadorna*), Pintail (*Anas acuta*), Ringed Plover (*Charadrius hiaticula*) and Grey Plover (*Pluvialis squatarola*). Additional species such as Dunlin (*Calidris alpina*), Oystercatcher (*Haematopus ostralegus*), Black-tailed Godwit (*Limosa limosa*) and Redshank (*Tringa totanus*) attained nationally important status for some of this period. There are fairly extensive intertidal flats used by feeding waders and dabbling duck and geese. At high tide, the salt marshes and sandy beaches provide suitable roost sites.

In addition to being an SAC and SPA Baldoyle Bay is also a Ramsar site recognised as being a wetland of international importance.

The following is an outline of Habitats and Species within the Baldoyle Bay cSAC and SPA as set out by the NPWS:

Table 4.2: Outline of Conservation Objectives for Baldoyle Bay cSAC and SPA

Annex I Habitat Type	Habitat Code
Mudflats and Sandflats not covered by seawater at low tide	1140
Atlantic Salt Meadows	1330
Mediterranean Salt Meadows	1410
Salicornia and other annuals colonising mud and sand	1310
Spartina Sward	1320

Table 4.3: Baldoyle Bay, SPA Special Conservation Interests

Bird species listed	Habitat
Bird species listed in Annex I of the EU birds Directive	Golden Plover Bar-tailed Godwit Grey Plover Ringed Plover Shelduck Light-bellied Brent Goose

Wetlands and Waterbirds	In establishing their Special Protection Area network, Member States are explicitly required under Article 4 of the Directive to pay attention to the protection of wetlands. To this end the wetland habitat that is contained within this Special Protection Area and the waterbirds that utilise this resource are therefore listed as a special conservation interest for this site. This special conservation interest is listed as "Wetland and Waterbirds".
Other important species of flora and fauna listed in Natura 2000 form	Meadow Barley (*Hordeum Secalinum)* Borerr's Salt Marsh grass (*Puccinellia fasciculata)*

At this time, specific conservation management plans are unavailable for Natura 2000 Sites occurring within the Baldoyle-Stapolin Plan area; however, a list of draft generic Conservation Objectives are available from the website of the National Parks and Wildlife Service (www.npws.ie). These include:

- To maintain the favourable conservation status of the Qualifying Interests of the SAC, or the Special Conservation Interests of the SPA.
- To maintain the extent, species richness and biodiversity of the entire site.
- To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

The Qualifying Interests of an SAC refers to the habitats and species for which the site is protected. The Special Conservation Interests of an SPA refers to the habitats and species (usually wetlands and birds) for which the site is designated.

The favourable conservation status of a habitat is achieved when:
- its natural range, and area it covers within that range, is stable or increasing,
- and the ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:
- population data on the species concerned indicate that it is maintaining itself,
- the natural range of the species is neither being reduced or likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The approach and focus of the accompanying Habitats Directive Assessment has been to influence the Draft Baldoyle-Stapolin Local Area Plan settlement statements in order to adequately protect the Natura 2000 site network. The requirements of the Habitats

Directive Assessment must be incorporated into the Draft Baldoyle-Stapolin Local Area Plan 2012 – 2018.

Other Natura 2000 sites in the vicinity include Irelands Eye SAC/SPA, Howth Head SAC, Howth Head Coast SPA, North Dublin Bay SAC, North Bull Island (SPA). The estuaries are important bird sites, providing both feeding and roosting areas for a range of wintering wildfowl. The estuaries hold internationally important numbers of light-bellied Brent Geese and Black-tailed Godwit and nationally important populations of at least another twelve species. Many of the wetland birds of the Baldoyle Estuary commute between these four estuaries. This shows that birds can move to an alternative estuarine site if there is disturbance in one of the above sites. However, the habitat quality and carrying capacity of each estuary must be protected to maintain the overall population of bird species that rely on these sites for feeding, roosting and breeding.

4.2.5 Natural Heritage Areas (NHAs), proposed Natural Heritage Areas (pNHAs) and other sites of National Importance

The basic designation for wildlife at a national level is the Natural Heritage Area (NHA). This is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. These sites were established under the Wildlife (Amendment) Act, 2000, but their statutory protection derives from the Wildlife Acts, 1976–2000. Under the Wildlife Amendment Act (2000), Natural Heritage Areas are legally protected from damage from the date they are formally proposed for designation. There are 630 pNHAs which were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated. They have been identified through various sources, including early inventories, in areas of biodiversity importance or conservation interest. As such their potential importance is recognised and acknowledged through proper planning and sustainable development. NHAs and pNHA's within the county represent a significant biodiversity resource and again, the range of habitats and species found in these sites vary considerably.

Table 4.4: NHA's and pNHA's within 15km of the subject site

Proposed Natural Heritage Areas, Nature Reserves and Wildfowl Sanctuaries within 15km of Baldoyle-Stapolin LAP		
Proposed Natural Heritage Areas	**Nature Reserves and Wildfowl Sanctuaries**	**Ramsar Sites**
Baldoyle Bay	Baldoyle Estuary Nature Reserve and Wildfowl Sanctuary	Baldoyle Bay
Howth Head	North Bull Island Nature Reserve	Rogerstown Estuary
Lambay Island	Rogerstown Estuary Wildfowl Sanctuary	North Bull Island
Malahide Estuary		Sandymount Strand/River Tolka Estuary
North Dublin Bay		
Rogerstown Estuary		
Ireland's Eye		
Sluice River Marsh		
Royal Canal		
Liffey Valley		

Grand Canal		
Feltrim Hill		
Santry Demsene		
South Dublin Bay		
Booterstown Marsh		
Portraine Shore		
Dalkey Coastal Zone and Killiney Hill		
Dolphins, Dublin Dock		

Statutory Nature Reserves and Refuges for Fauna and Flora, established under the Wildlife Acts 1976 and 2000 are sites where nature conservation is the primary objective and takes precedence over all other activities. Baldoyle Bay is designated as both a Statutory Nature Reserve and a Refuge for Fauna and Flora. Baldoyle Bay, Bull Island, Malahide Esturary and Rogerstown Estuary are Ramsar sites. The objective of a Ramsar site is the conservation of wetlands for wildfowl. While Ireland ratified the Ramsar Convention in 1985 there is no legal backing for Ramsar sites unless they are also Nature Reserves or SPAs and as such are protected by the Wildlife Acts 1976 and 2000 or the Birds or Habitats Directives.

4.2.6 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 and the Royal Canal. While the majority of the River Mayne, with the exception of the Mayne River Marsh, is not subject to environmental designation, it is none-the-less an important biodiversity corridor and particularly so as it flows into the designated estuary at Baldoyle Bay

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

4.2.6.1 Local Area Plan Lands

As part of the Appropriate Assessment for the Proposed Coastal Pathway Portmarnock-Baldoyle at Baldoyle Bay cSAC and SPA an ecological assessment was carried out by Hans Visser, Biodiversity Officer, Fingal County Council and Dr Roger Goodwillie along the eastern perimeter of the LAP lands. Details of existing Flora and Fauna are also available from the Environmental Impact Assessments that have been submitted with various planning applications the site. Based on these sources it can be concluded that the overall site consists of a mix of farmland interspersed with hedges to demarcate field boundaries. In addition to the existing residential units that have been constructed on the southernmost and eastern section of the residentially zoned area of the plan lands, certain preliminary works have been carried out on the remaining sections of residentially zoned lands in association with permitted development for drainage and access. These areas are now a mixture of stubble field, bare trackways and piles of topsoil in storage from elsewhere.

With regard to Fossitt (2000) these habitats would be classified as spoil and bare ground (ED2) or recolonising bare ground (ED3). There are also fields that were previously planted with wheat up until 2004 but the stubble has now been replaced naturally by a grassy community corresponding to dry meadows and grassy verges (GS2). Lengths of hedgerow (WL1) are also found around the edges as are treelines (WL2) at certain locations. Sections of the site, for instance to the northeast of the old house are more permanent grasslands where small trees are established in dry calcareous and neutral grasslands (GS1).

An area of brackish march occurs along the Mayne River at the northeastern corner of the site. This brackish marsh is a result of tidal water entering the Mayne River and forms part of the designated SAC due to the presence of two protected plants namely; Borrer's saltmarch grass *Pucinellia fasciculate* and meadow barley *Hordeum scalinum*. However, neither of these species has been seen recently despite repeated searches as the tidal influence has declined over the last couple of years after the upgrading of the Mayne River at the estuary.

Fauna

In terms of the Baldoyle Bay SPA, the main reason for the designation is the presence of internationally important numbers of Pale-bellied Brent Geese (*Branta bernicla hrota*). A bird study, which can be found in the accompanying Natura Impact Report, was undertaken from December to February 2011-2012 by BirdWatch Ireland covering the lands in question and surrounding areas. The overall aim was to produce a baseline dataset on the bird species of the lands surrounding the estuary and establish how important these lands are for the birds for Baldoyle estuary (Pierce and Dillion, 2012)[1]. Objectives included the collection of baseline data on all wintering birds species using such lands and to highlight the presence of any species of conservation concern.

The report notes land-use within the study lands was varied with western fields in stubble in December and re-ploughed in January and southern/eastern fields comprising mainly of rough ungrazed grassland with large areas of saltmarsh, gorse and scrub. The report notes no evidence found of any grazing Light-bellied Brent Geese at the southern

[1] Wintering Bird Survey of the lands surrounding the Baldoyle Estuary, December to February 2011 – 2012 (Pierce and Dillion, 2012)

edge where the lands had been disturbed and allowed to lie fallow. In summary the survey found 10 individuals of Light-bellied Brent Geese feeding in the northern area of the site on the 3 February 2012. The south-eastern "leg" of the LAP lands had larger number of 700 on the 9 December 2011, 10 on the 7 January 2012 and 400 on the 27 January 2012.

In addition to hosting several Annex I bird species, Baldoyle Bay is also an important coastal site for wintering waterfowl. The estuary complex provides good habitat for a range of species. A number of migratory bird species attain nationally important status including Bar-tailed Godwit (*Limosa lapponica*) and Golden Plover (*Pluvialis apricaria*) (both Annex I species under the E.U. Directive); Shelduck (*Tadorna tadorna*), Pintail (*Anas acuta*), Ringed Plover (*Charadrius hiaticula*) and Grey Plover (*Pluvialis squatarola*). Additional species such as Dunlin (*Calidris alpina*), Oystercatcher (*Haematopus ostralegus*), Black-tailed Godwit (*Limosa limosa*) and Redshank (*Tringa totanus*) attained nationally important status for some of this period. There are fairly extensive intertidal flats used by feeding waders and dabbling duck and geese. At high tide, the salt marshes and sandy beaches provide suitable roost sites.

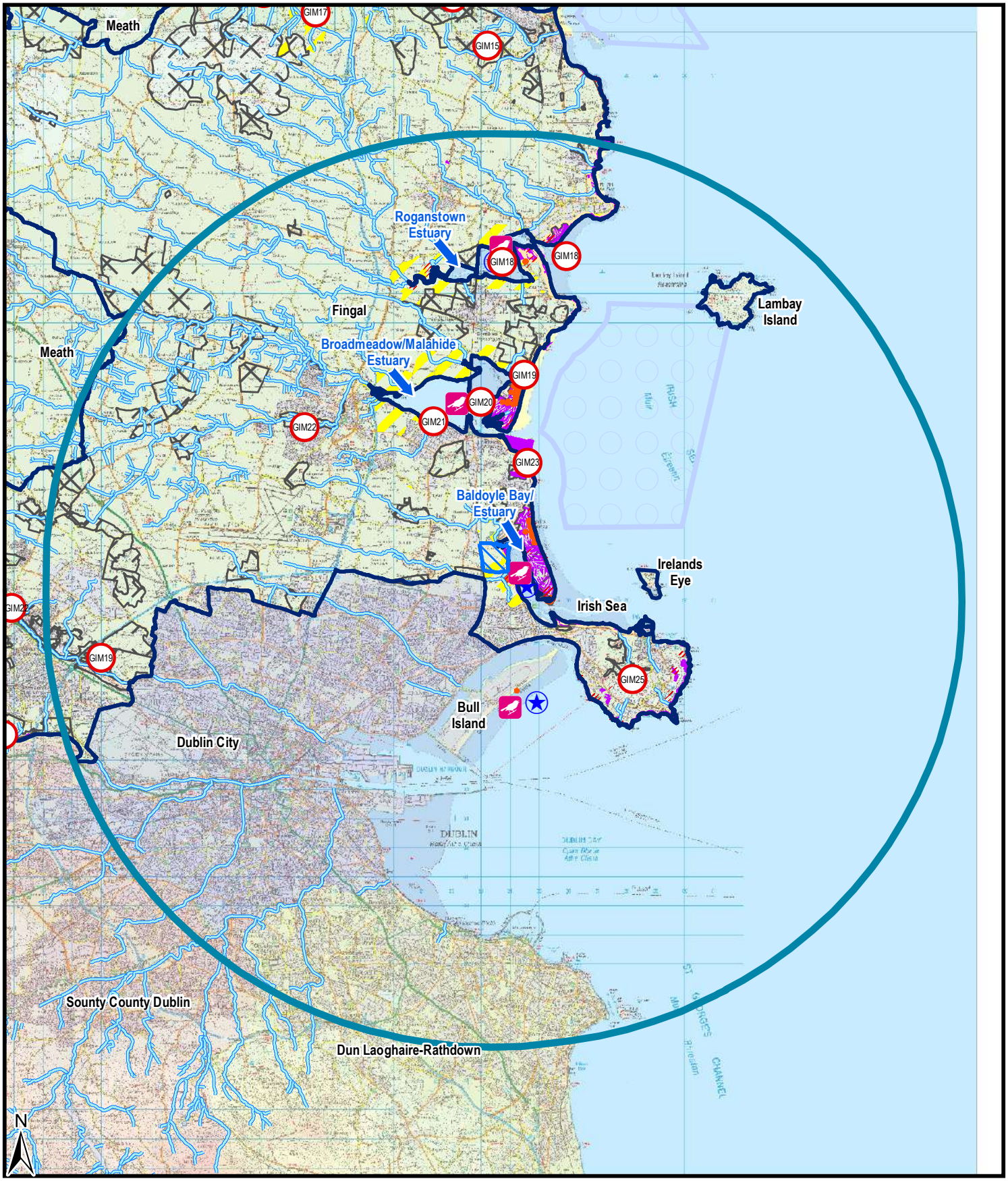
In terms of the subject site itself, the southeastern section, which has been largely developed as open space/playing pitches for the plan lands, is recognised as being an important feeding ground for the Pale-bellied Brent Geese. Elsewhere on the site there is evidence of brown rat and fox. It is expected that there are also pygmy shrew. Badgers signs have not been encountered and it is unlikely that they have occurred recently. The same applies to bats: an EIS completed for a recent planning application on the plan lands indicates that suitable habitat and potential breeding sites are now limited around the remains of Stapolin House (located in the southeastern section of the plan lands) and it is unlikely that there are significant numbers in the immediate area.

The bird species noted are mainly associated with the open fields and hedgerows which they require for cover and nesting. Large species seen on site were woodpigeons, feral pigeons, jackdaw, magpie, pheasant, dunnock with black headed gulls flying over head and probably using the site at times. Meadow pipit, stonechat skylark, goldfinch and the occasional whitethroat were flushed from the fields while surveys also identified the presence of linnet, greenfinch house sparrow, robin, blackbird and wren in hedgerows along the perimeters of the site.

At the Mayne River redshank, curlew, wigeon, mallard (2) and dunlin are the most frequent species, sometimes with black-tailed godwits, shelduck, wigeon or teal or individual little egret or greenshank. On a visit in January (2009) an egret was fishing close to the road bridge and there was also a kingfisher that flew over the estuary from the Mayne River before returning upstream.

Butterflies encountered were holly blue, meadow brown, small white green-veined white and small tortoiseshell.

The primary ecological corridors in the Baldoyle-Stapolin Local Area Plan lands are shown on Figure 4.4 Green Infrastructure Map



Green Infrastructure

Figure 4.4

Legend

- Portmarnock South Local Area Plan Lands
- Baldoyle Stapolin Local Area Plan Lands
- County Boundary
- Area within 100m of Coastline Vunerable to Erosion
- Annex I Habitat
- Ecological Buffer Zone
- Nature Development Area
- 15km Buffer Line
- River
- Ecological Corridors along Rivers
- Ramsar Conservation Wetland
- Statutory Nature Reserve
- Flora Protection Order (1999) Site
- Fingal Rare Flora Site
- GIM15 Green Infrastructure Objectives

4.2.7 Aquatic Biodiversity- Flora and Fauna

EU Shellfish Waters Directive (2006/113/EC)

The aim of the Shellfish Waters Directive is to protect or improve shellfish waters in order to support shellfish life and growth. It is designed to protect the aquatic habitat of bivalve and gastropod molluscs, which include oysters, mussels, cockles, scallops and clams.

The designated shellfish area at Malahide Bay, which is close to the plan lands, is 36.3 km^2 in area and extends from Lambay Island to Portmarnock. Balbriggan/Skerries shellfish area is situated in adjacent tidal waters. While these areas are outside the functional area of the Plan lands they lie directly adjacent (northeast) of the plan area. The contributing catchment is 376.66 km^2 in area and drains a number of rivers including the Mayne and the Sluice which are either within or adjacent to the plan lands.

On foot of the legislation the Malahide Pollution Reduction Programme came into effect from the 22nd of December 2009.

Local Aquatic Systems

The Mayne River, which runs through the site, is a non-salmonid river; however Inland Fisheries Ireland has indicated that it is currently assessing the viability of a salmonid reintroduction programme. The system is non-salmonid as a result of blockages to fish passage in the lower reaches in combination with local water quality issues. An impassable feature at the coast (non-return tidal flap) is a key issue impacting on fish transition in this system.

The Sluice which runs to the north and drains into Baldoyle Bay represents a regionally important salmonid system. The Sluice supports a resident population of Brown trout and a migratory population of Sea trout (both Salmo trutta) among other fish species.

4.2.8 Invasive Species

Invasive alien species are defined as plants or animals which did not originally occur in Ireland before human colonisation and which are expanding their numbers and distribution so as to cause a competitive threat to such native fauna and flora. Invasive alien species are rated globally as the second biggest threat to biodiversity after habitat loss. In Ireland the scale of impacts is immense not just on biodiversity but also on agriculture, forestry, fisheries, water quality, tourism, infrastructure, etc.

A number of invasive are present in Baldoyle including Japanese Knotweed and Giant Hogweed. Fingal County Council is aware of their distribution within the area and is actively controlling the Giant Hogweed. Japanese knotweed has not been tackled yet due to lack of funding. It is an action of the Fingal Biodiversity Plan to control these species on a river catchment basis (Action 41).

4.2.9 Integration of Strategic Environmental Assessment and Habitats Directive Assessment

The Local Authority is required to prepare an Appropriate Assessment (AA) on the likely impacts of the Plan's implementation within or adjacent to Natura 2000 sites. AA is a focused and detailed practical appraisal of the possible impacts that the adoption of the Plan, in this case the Baldoyle-Stapolin Local Area Plan 2012-2018 may have on the integrity of identified Natura 2000 sites within and adjoining the administrative boundaries of the Plan area. It details proposed measures which will be implemented to

ensure that the long term conservation status of these sites is not adversely impacted upon and includes details of activities which may affect the conservation status of the designated sites. The Natura Imapct Report is provided as a separate document entitled 'Natura Impact Report – Appropriate Assessment of the Draft Baldoyle-Stapolin Local Area Plan 2013-2018'.

Articles 6(3) and (4) of the Habitats Directive sets out the decision-making tests that will be applied to plans or projects that may impact on a Natura 2000 site. Article 6(3) is primarily concerned with safeguarding Natura 2000 sites from implementing plans and projects that will negatively impact on their qualifying features in an unsustainable manner and provides a set of strict mechanisms to allow for only plans and projects to proceed through the assistance of conservation objectives in the event that they will not adversely impact on the integrity of a Natura 2000 site. However, should the Plan result in having an adverse effect on a Natura 2000 site without putting in place mitigation measures, Article 6(4) states that amelioration measures must be put in place which will compensate for direct risk or damage likely to occur so as to ensure that the integrity of Natura 2000 sites are not compromised.

The Directive presumes against plans and projects that adversely affects the integrity of a Natura 2000 site from being allowed to proceed except in exceptional circumstances, i.e. where:

1. No reasonable alternatives exist, and
2. There are IROPI - Imperative Reasons of Overriding Public Interest (in the case of all Annex I habitats and Annex II species). In the case of priority habitats, the only IROPI that may be raised are matters of Human Health and Public Safety.

The Planning Authority acknowledge the importance of such designated sites and therefore will require any proposals for development on, or adjacent to, a Natura 2000 site to be accompanied by a Habitats Directive Assessment. It is an objective of the Council to require all planning applications for development within, adjacent to, or likely to impact on Natura 2000 sites, to carry out a Habitats Directive Assessment in accordance with the Habitats Directive (1992), including the following:

- Developments likely to give rise to downstream impacts on water sensitive Natura 2000 sites (including coastal sites).
- Developments likely to give rise to cumulative impacts on Natura 2000 sites, i.e. taking into account impacts from existing development and possible future development.
- Developments likely to give rise to in combination impacts on Natura 2000 sites, i.e. developments requiring master plans, ancillary developments.
- Developments likely to fragment destroy or encroach on Natura 2000 sites and their buffer zones.
- Developments likely to disrupt the flight paths, movements, feeding and breeding areas of annexed species.

4.2.10 Biodiversity: Existing Problems and Environmental Considerations

The Fingal coastline is an area of high landscape quality, natural heritage and amenity value. The coast is increasingly important for a range of recreational activities (e.g. sailing) and for its amenities (e.g. beaches). The unprecedented population and economic growth over the past number of years has put pressure on habitats and

species within Fingal due to urban expansion, housing and building in general, tourism and recreation and infrastructure provision. As the population of the region increases, the demands made on the coastline, its habitats and waters will grow. It is important that the coastal zone, together with its associated ecological networks, is managed and developed in a way that protects and enhances its natural heritage and landscape.

For the Baldoyle-Stapolin LAP the following issues are of concern in terms of biodiversity in the area and it should be noted that many of these issues have also been identified in the Habitats Directive Assessment that is being carried out in tandem with the SEA:

- Loss of habitat within the SAC due to the presence of alteration of Tidal Influences. The tidal influence has declined over the last few years following upgrading works on the tidal valves at the outlet of the Mayne River at the estuary as part of flood control measures (Fingal Co. Co., 2009). Two plant species legally protected under the Flora (Protection) Order, 1999, were previously recorded within this salt marsh habitat: Borrer's Saltmarsh-grass *Puccinellia fasciculata* and Meadow Barley *Hordeum secalinum*. However repeated searches have not recorded these two species recently (Fingal Co. Co., 2009).
- The threat of pollution is a potential threat to flora and fauna within the LAP lands and the surrounding area. Baldoyle Bay is an estuarine system. According to the Natura 2000 Data Form, the site receives pollution from a number of sources, mainly the inflowing rivers (Mayne and Sluice) but also an unsatisfactory sewage network. The River Mayne has a Q-value of 3 which is classed as Poor under the EC Water Framework Directive. An investigative monitoring report on the Mayne was undertaken in March/April of 2012 (DCC, 2012). The results shows that water quality within the river for Ammonia, Phosphorus and Biochemical Oxygen Demand (BOD) did not meet the requirement of the "good" status required under the Water Framework Directive. The current "Poor" status and any further depreciation of water quality are considered a potential threat to habitats downstream and their supporting species.
- Any changes in local water catchments leading to changes in water quality could affect condition of the habitats. The LAP could result in an alteration of baseline conditions which may impact upon the qualifying interests of the cSAC included within LAP lands. A potential alteration in the surface water, ground water, pollution, flooding regime, flood defence, recreational uses, increase in population and a potential alteration of erosion rates all have potential alone or in combination all have potential to result in changes to baseline conditions on which qualifying interests depend.
- Loss and/or alteration of habitat due to development pressures along the Mayne River.
- Loss and or alteration of coastal habitat including open grassland/salt marsh habitats along the River Mayne. These are known feeding grounds for Brent Geese. Increased population and activity within the area may further reduce attractiveness of area through increased disturbance levels
- Disturbance to wildlife and habitats, and particularly birds due to increased recreational pressure. Increased development pressures and an increase in population associated with the Baldoyle and Portmarnock LAPs may impact upon the designated sites. Baldoyle and Portmarnock are set to grow with several thousand people under the proposed LAPs. Other large scale housing

developments are underway further inland at Balgriffin and along the Mayne River in the Dublin City area.
- Need to establish a Biodiversity Network, along the hedgerows (in particular along historic hedgerows) streams, springs and ditches. Include, at a minimum all hedgerows or stream sections of moderate value
- The spread of invasive alien species is a particularly important threat to local biodiversity as they compete for space and food.
- The Site Synopsis for Baldoyle Bay SPA identified the main threat to the birds as disturbance and dumping, as it is located in a densely populated area. In particular, the dumping of spoil onto then foreshore presents a threat to the value of the site.

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

In the absence of a Local Area Plan, development within the area would have no long term guidance and each planning application on these zoned lands would be treated individually. Consequently long term impact or holistic impacts on ecological habitats within the area are unlikely to be fully assessed with the result that fragmentation and loss of habitats would occur. The opportunity to create a robust biodiversity network within the LAP lands would be lost and would result in a reduction in ecological continuity within and between these and other habitats.

Pressures on natural resources would continue, though the rare or threatened habitats, protected under EU and national legislation would continue to be afforded protection under the Fingal Development Plan 2011-2017. The local authority does however have control over activities which may adversely impact the sites both directly and indirectly. Certain activities such as surface water runoff due to urbanisation, and the development of an ecological network etc. are all factors which influence the Local Area Plan process.

The Fingal Development Plan 2011-2017 is the overriding document controlling, directing and managing development within the County. It contains specific policies in relation to the natural environment and therefore in the absence of the Baldoyle-Stapolin Local Area Plan 2013-2019 considerable protection to habitats/wildlife will continue through the implementation of the Fingal Development Plan 2011-2017.

Fingal has a diverse natural heritage and as such there are many plans and guidance documents at European, National and Local level, which aim to guide development in order to ensure that this natural heritage is protected. However, in the absence of the Baldoyle-Stapolin LAP 2013-2019 there would not be a localized framework within which to regulate, aid and/or control development.

In the absence of the Plan pressures on biodiversity, flora and fauna would occur and possibly escalate even though designated habitats and species are protected under EU and National legislation. Loss, disturbance, deterioration and fragmentation of biodiversity, flora and fauna are the greatest threats for biodiversity as well as. The Baldoyle-Stapolin LAP provides an opportunity to integrate the ecological protection measures required by habitat directive with planning and development management of vulnerable areas.

4.3 Population & Human Health

4.3.1 Introduction

The Electoral Division covering the Plan lands is Baldoyle ED. It includes all lands within an area along the rail line from Howth Junction to Sutton Station, north to Mayne road and follows the Mayne River to the Belfast rail line. From 1996-2006 there was a steady decrease in population in this ED. This was most likely because this is largely a settled area with older households and was borne out by the fact that the proportion of the population aged between 55 and 64 in the area tripled in the past 20 years. Data from the 2011 Census however shows an increase in population of 928 persons (15.6%). A significant portion of this increase is most likely attributable to the recent residential development on the Baldoyle-Stapolin LAP lands. The reasons for this population increase in will have to be further examined as further details of the Census are released during this year.

Table 4.5: Population Change 1991-2011

Baldoyle ED	1991	1996	2002	2006	2011
Population	6272	6,731	6,374	5,942	6,870
% Change	-1%	7%	- 5%	-7%	15.6%

Source: CSO

In terms of household size, the average occupancy rate i.e. persons per household or pph, in the Dublin Region has been decreasing and this trend is set to continue, Table 4.6 below indicates this decrease.

Table 4.6: Average occupancy Rates (persons per household)

	Actual				Projected	
Area	2002	2006	2010	2011	2016	2022
Dublin City	2.74	2.50	2.39	2.43	2.26	2.02
DLR	2.99	2.77	2.61	2.67	2.42	2.17
Fingal	3.23	2.95	2.81	2.92	2.58	2.32
South Dublin	3.25	3.03	2.83	2.93	2.65	2.38
Dublin Region	**2.96**	**2.82**	**2.58**	**2.65**		

Source: 2002, 2006, 2011 Census & RPGs 2010-2022

The decrease is influenced by a number of factors including the general increase in divorce/separation, people living longer, availability of credit for first time buyers and the growing trend among young adults to live alone and have children at a later age. The family life cycle has an impact on household size in certain locations at certain times, for instance, many of the more mature areas e.g. Malahide West, Portmarnock North have more 'empty nests' as the younger family members leave to set up their own homes. In other areas e.g. Lusk, there are a higher number of younger families with a corresponding increase in the persons per household. Culture can also play a role in family size and therefore, household size. The overall implication of decreasing household size is that more houses will be needed for the same number of people. It is

important that residential developments cater for the different demographics through mixed tenure and mixed house type.

Current Situation
The 2001 Baldoyle Action Area Plan provided for approximately 2,600 homes on the Plan lands which it was envisaged would equate to a population of 7,600. As of June 2012 c. 584 units are completed and occupied with 49 units completed and vacant and a further 205 units under construction. Planning permission exists for 1,289 residential units which have not yet started. The majority of the permissions which have not started are apartment developments. At this time, only one sector of the original plan lands does not have planning permission.

Development on the site is now almost at a standstill. While the new railway station that was planned to serve the development has been constructed, and is operational, the delivery of many of the original key design elements such as the commercial area adjacent to the railway station, the civic area and the main boulevards have not been delivered due to the current economic climate and financial limitations on both the public and private sectors. Vacant sites bounded by hoarding now separate the development from the larger, as of yet, undeveloped site.

4.3.2 Population Issues: Existing Problems / Environmental Considerations
Fingal is experiencing two main issues in relation to population; that of depopulation in older established areas, and population growth in Greenfield areas, on the edges of existing settlement.

The Baldoyle-Stapolin LAP lands are located within the Metropolitan area of Dublin and there is already both good public transport and considerable community infrastructure in place which can be supplemented and augmented within the plan lands. Analysis of the existing housing indicated the need to provide a variety of dwelling type and mix of tenure to reflect needs of population. There is also a need to facilitate the development of a mixed use neighbourhood at sustainable densities that encourages the efficient use of urban land in the plan area. Other potential problems include issues with the availability of adequate infrastructure e.g. transport drainage, water wastewater infrastructure and capacity of the existing electricity network to serve the proposed increase in population.

4.3.3 Human Health
Human Beings clearly comprise one of the most important elements of the “environment” and any potential impact on the status of humans by a plan of programme must be comprehensively addressed. The principal concern in this respect is that human beings experience no significant diminution in any aspect or aspects of “quality of life” as a consequence of the implementation of the Draft LAP.

Human health data for the Plan area is not easily available. Specific information on health of the population is not readily available at the local level. The Department of Health have published key trend statistics for 2011 at the national level. These trends are can be applied to the population at the local level, namely that the principal cause are (i) diseases of the circulatory system, (ii) cancer and (iii) external causes of injury and poisoning (transport accidents, suicide).

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. Accordingly, the topic of human beings and their quality of life are addressed in this Environmental Report by means of an appraisal of the baseline of each environmental component of the Plan on the other environment parameters, of which human beings and their quality of life are an integral part. Where appropriate, mitigation measures to reduce/avoid adverse impacts are identified and incorporated into this Report and the Plan.

4.3.4 Human Health Issues: Existing Problems / Environmental Considerations

For the Baldoyle-Stapolin LAP the following issues are of concern in terms of human health 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 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 4.6.3 to 4.6.5) a significant future source of drinking water is required.
- Increases in population can impact on biodiversity, water quality, landscape and cultural heritage and which would impact on human health.
- Waste generation, old landfills and illegal dumping can impact on human health and biodiversity.
- Flooding due to heavy rainfall may impact on human health, on structures and the safety of water supply and water quality in the area.
- Possible transboundary impacts with future development in the adjoining local authority area of Dublin City Council and also within other areas of Fingal (cumulative impacts).

4.3.5 Evolution of Population and Human Health in the Absence of a Local Area Plan

In the absence of the Baldoyle-Stapolin LAP there would not be a localised framework within which to regulate or determine an appropriate phasing of development within the zoned lands. A lack of controlled development could lead to the development on these lands that did not keep pace with the provision of economic, social or environmental infrastructure. Planning for appropriate community & social facilities, educational facilities and infrastructure aided by demographic studies which is a key element of the Draft Plan may not be undertaken. Therefore, the target population increase will not be provided for by an adequate level of service provision. This would place undue pressure on existing service provisions and infrastructural facilities, which could in turn affect the natural environment in which the population lives leading to human health and quality of life issues. In the absence of an agreed target population and appropriate zoning of settlement land all of the environmental parameters would be adversely affected to varying degrees.

In the absence of an agreed target population and appropriate development framework for the lands all of the environmental parameters would be adversely affected to varying degrees. In the absence of the Plan, the predicted population increase will not be provided for by an adequate level of service provisions and the environmental consequences would be both deleterious and undesirable.

It should be noted however that, considerable environmental protection would remain due to the implementation of the Fingal Development Plan 2011-2017 and its policies and objectives relating to the environment.

4.4 Landscapes

4.4.1 Landscape

'Landscape' means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors (European Landscape Convention, 2002). It is this definition that is incorporated into Section 4(c) of the Planning and Development (Amendment) Act 2010. The Heritage Act (1995) defines landscape as including 'areas, sites, vistas and features of significant scenic, archaeological, geological, historical, ecological or other scientific interest'. The landscape is made up of a range of unique characteristics including land form, which results from geological and geomorphological history, and land cover, which includes vegetation, water, human settlements, in combination with associated human values which are a result of historical, cultural, religious and other understandings and interactions with landform and landcover. As well as being an important part of people's lives - giving individuals and communities a sense of identity and belonging, and bestowing a sense of place on our surroundings - the landscape is the context in which all change takes place.

The importance of landscape and visual amenity and the role of planning in its protection are recognised in the Planning and Development Act 2000 (as amended), which requires that development plans include objectives for the preservation of the character of the landscape, including the preservation of views and prospects and the amenities of places and features of natural beauty or interest. The *Regional Planning Guidelines for the Greater Dublin Area 2010 – 2022* state that policies and measures should be adopted at county level to protect, manage and plan landscapes through the provision of Landscape Classification and Character Assessments in accordance with adopted European (and National) Landscape Guidance Documents such as *Guidelines for the Implementation of the European Landscape Convention, February 2008*.

4.4.2 Landscape Character Assessment

The Fingal Development Plan 2011-2017 Landscape Character Assessment (LCA) provides for the classification of Fingal's landscapes into the following (1) types and values and (2) sensitivities. The LCA divides the County into 6 Landscape Character Types representing generic areas of distinctive character that makes one landscape different from another such as uplands or the coast. The LCA places a value on each landscape character type ranging from exceptional to low. Subsequent to the type and value being identified, the sensitivity of each character type is defined as its overall ability to sustain its character in the face of change. Sensitivity is evaluated using criteria ranging from high to low. A highly sensitive landscape is likely to be vulnerable to change whereas a landscape with a low sensitivity is likely to be less at risk from

change. It is important to note that it does not necessarily follow that an exceptional value landscape will be highly sensitive to change or similarly a low value landscape will have a low sensitivity to change

The Landscape Character Assessment for Fingal identifies Baldoyle Bay as being of an Estuary Character Type which is categorised as having an exceptional value recognised by the EU designations (candidate Special Areas of Conservation and Special Protection Areas) that apply to each in additional to national designations such as proposed Natural Heritage Areas and Ramsar. The aesthetic quality of the estuary is also identified as outstanding. In terms of sensitivity the Estuary Character Type is identified as having a high sensitivity to development with particular parts of these areas having a low capacity to absorb new development. The areas contained within the Estuary Character Type which have a low capacity to absorb new development are identified as highly sensitive areas on the Green Infrastructure maps which form part of the Fingal Development Plan. Racecourse Park and the northernmost half of the residentially zoned lands within the LAP boundary are also determined as being highly sensitive to development which may have implications for the scale, form and height of development in this area.

The LAP lands themselves are relatively flat in nature in the northern and eastern sections with contours ranging from 2 metres – 3 metre OD at these locations. The topography of the site rises from between c. 3 metres to a maximum of c. 9 metres OD as one moves in a southerly direction from the northwestern corner of the plans lands (Mayne Road), along the rail line towards the completed residential development at Red Arches on the southern portion of the site, with minor internal undulations. Due to the open and relatively flat nature of the site the completed residential developments at Red Arches and Myrtle are clearly visible from the Strand Road/Coast Road in Baldoyle as are the recently constructed developments on the western side of the rail line (Clongriffin) located within the administrative area of Dublin City Council. The vegetative cover on the reminder of the site is variable.

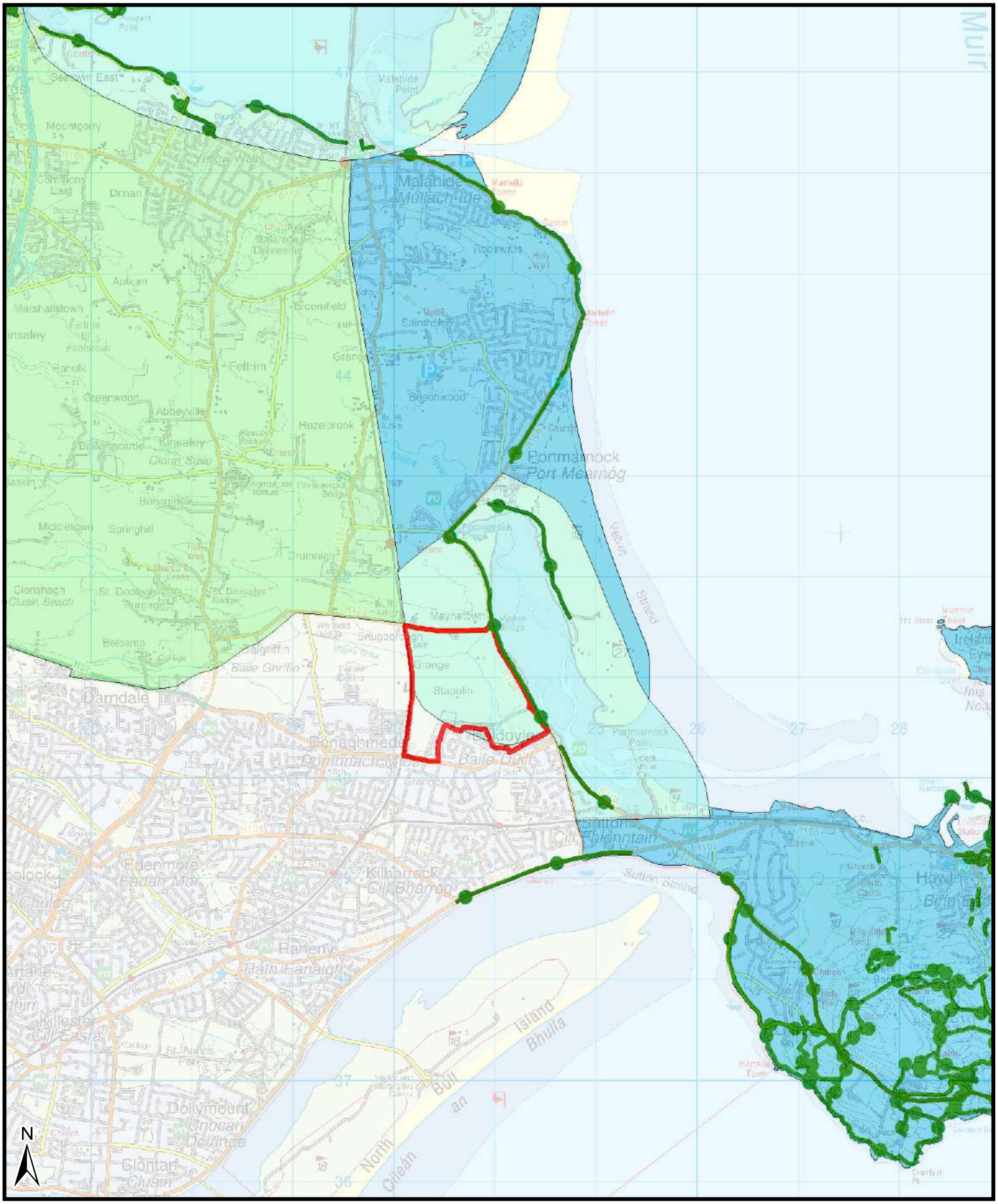
4.4.3 Protected Views and Prospects

A protected view is the requirement within the Fingal Development Plan to preserve the view of a specific place or historic building from another location. Within the Plan, a number of views and prospects are protected and three of these are of particular relevance to the Baldoyle-Stapolin LAP lands. Specifically,

- Portmarnock Peninsula from Baldoyle and Strand Roads,
- Howth Hill from Golf Road, Portmarnock, Strand Road, Baldoyle, and Greenfield Road and Carrickbrack Road, Sutton,
- Cush Point from Strand Road, Baldoyle.

4.4.4 Landscape Issues: Existing Problems / Environmental Considerations

New residential developments and site preparation works within the LAP lands and on the lands to the west within the Dublin City Council administrative area have resulted in changes to the visual appearance of lands within the area however, legislative objectives governing landscape and visual appearance were not identified as being conflicted with. Notwithstanding this, going forward, potential issues with regard to the landscape in Baldoyle-Stapolin include; developments which do not reflect local landscape character, and the relationship of the coastal landscape of the area with the surrounding area. Panoramic view of the edge of the urban fringe at this location meeting the coastal



Landscape Character Areas at Baldoyle/Stapolin

Figure 4.5

Legend

- Draft Baldoyle Stapolin LAP Outline
- Coastal
- Estuary
- Low Lying Agricultural
- Preserve Views

landscape could be damaged by inappropriate and uncoordinated expansion resulting in declining landscape quality. In addition, the largely flat and low lying nature of the landscape in this area increases overall visual sensitivity to large residential and commercial developments.

Some particular aspects of the landscape that need to be given consideration:

- The need to resist the removal of hedgerows and field boundaries where still in place.
- The need to ensure that no further culverting of streams occurs within the plan lands.
- The need to protect important features of the wider landscape such as views for example views towards Howth, the rural area in Fingal with hedgerows and the railway embankment
- The need to ensure the natural environment and open space amenities are connected and integrated as main features of the area's identity and character
- The need to diversify the existing landscape character through the creation of new open spaces including urban squares, wetland parks etc
- The need to ensure that new developments not reflect the local landscape character

4.4.5 Evolution of Landscape in the Absence of a Local Area Plan

In the absence of the Local Area Plan and without the policies contained therein in relation to the massing and height of development on these already zoned lands it is likely that individual development would significantly reduce the landscape value of the sensitive coastal LAP lands. Furthermore, the visual impact of uncoordinated development at the interface between the residentially zoned lands and the High Amenity lands would be uncoordinated and would seriously detract from Protected Views across Baldoyle Bay from Portmarnock. In addition, the further removal of hedgerows, impacting upon streams and riparian zones would impact negatively on the landscape in this area.

4.5 Soils and Geology

4.5.1 Introduction

Soil is the top layer of the earth's crust. It is formed by mineral particles, organic matter, water, air and living organisms. Soil can be considered as a non-renewable natural resource because it develops over very long timescales. It is an extremely complex, variable and living medium and performs many vital functions including: food and other biomass production, storage, filtration and transformation of many substances including water, carbon, and nitrogen. Soil has a role as a habitat and gene pool, serves as a platform for human activities, landscape and heritage and acts as a provider of raw materials. Such functions of soil are worthy of protection because of their socio-economic as well as environmental importance.

Changes in soil result from natural processes and human activities, both contribute to their dynamic and evolving nature. Such changes are matters of concern if they result in the physical, biological or chemical degradation of soils. This can result in the impairment of ecologically essential soil processes, the reduction in productive capacity, the depletion of soil quality and biodiversity and the direct loss of soil.

Many of the changes arise as a result of pressures from human activities. The main pressures on soil resources in Ireland arise from the following sectors:

- intensive agriculture and organic waste disposal;
- forestry;
- industry;
- peat extraction; and
- urbanisation and infrastructure development.

These activities can lead to soil degradation including loss of organic matter, decline in soil fertility, acidification, loss of soil stability, increasing soil erosion, soil compaction, contamination, loss of biodiversity and loss of soil to buildings and infrastructure, and flooding.

To date, there is no legislation which is specific to the protection of soil resources. While the EU has produced a Thematic Strategy for Soil Protection, the proposed Framework Directive for Soils (2004/35/EC) has not been established in law and hence has not been transposed into national legislation yet. Article 5 of the proposed Directive states that, for the purposes of preserving the various functions of soil; sealing, 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 soil should be used in a sustainable manner which preserves its capacity to deliver ecological, economic and social services, while maintaining its functions so that future generations can meet their needs.

The Geological Survey of Ireland GSI has provided information on Bedrock, Soils, Groundwater Classification and Aquifer Vulnerability in the Baldoyle-Stapolin Area (www.gsi.ie).

4.5.2 Soil Type

Soil types, as classified by Teagasc in cooperation with the Forest Service, EPA and GSI, are mapped on Figure 4.5. The most common soil type in the LAP area is identified as Windblown sands, Marine/estuarine silts and clays at the eastern fringes of the plan lands, close to the Coast Road, Alluvium in the area surrounding the Mayne River with the remaining lands comprising Till derived chiefly from limestone.

Three ground investigations are known to have been carried out on the Plan lands over the period 2000-2005 in addition to a walkover survey of the site which was undertaken in 2007 for various EIS's which have been submitted. These former investigations consisted of field work, cable percussive boreholes and trial pits with routine sampling and in-situ testing followed by laboratory testing and factual reporting.

Based on the available records of the ground investigations carried out on the plan lands the ground conditions would appear to generally consist of topsoil overlaying Glacial till. Made ground and/or possible alluvium were also recorded locally above the Glacial Deposits.

The Glacial Deposits within the study area were seen to generally consist of sandy gravely silt and/or clay with a variable amount of coarse constituents and grading locally to granular material (TP10 from ground level to 2.2 metres). The consistency of the

Soil Types within the Baldoyle-Stapolin LAP lands
Figure 4.6

Legend

RBD Subsoils

- Alluvium
- Beach sands and gravels
- Bedrock outcrop and subcrop
- Esker sands and gravels
- Glaciofluvial sands and gravels
- Lake sediments
- Made ground
- Marine/estuarine silts and clays
- Marsh
- Peat
- Scree
- Till derived chiefly from Devonian sandstones
- Till derived chiefly from Lower Palaeozoic rocks
- Till derived chiefly from Namurian rocks
- Till derived chiefly from granite
- Till derived chiefly from limestone
- Till derived chiefly from metamorphic rocks
- Till derived from metamorphic rocks
- Till derived from mixed Devonian and Carboniferous rocks
- Water
- Windblown sands
- RBD Boundaries
- County Boundaries

Watermark

Map center: 323474, 241008

Scale: 1:28,525

Snapshot Date: 31-Jan-2013

cohesive glacial deposits was described as being firm to stiff through to very stiff to hard. It was seen to be weathered (brown in colour, firm to stiff) towards the surface to depths of 0.8 metres to 2.9 metres overlaying fresher deposits (dark grey, very stiff to hard).

Glacial Deposits are expected to significant depth and none of the exploratory holes available proved the base of these deposits. From available records, the maximum depth reached by the boreholes was 10 metres but bedrock was not encountered.

4.5.3 Soil Sealing

Soil sealing occur where the soil surface has been covered with impervious materials as a result of development and infrastructure construction or has changed in nature leading to impermeability, as a result of, for example, compaction. The ecological and infiltration functions of sealed areas are impaired or prevented while surrounding soils may be influenced by change in water flow patterns or the fragmentation of habitats. The function of soils in abating climate change is particularly important in a regional context for cities such as Dublin experiencing rapid growth. The conversion of greenfield sites and sealing of soils can release CO2 into the atmosphere and further reduce areas of 'carbon sinks'. Soils contain about three times the amount of carbon globally as vegetation, and about twice that in the atmosphere. Land use planning must target the use of brownfield sites. Only a portion of the soils in the LAP area have been built upon or sealed off.

4.5.4 Soil Sampling

The existing baseline of data on soils in Fingal has been developed by the Geological Survey of Ireland (GSI) in cooperation with the three other Dublin Local Authorities. This work has been in progress since 2009 under the SURGE Project and was completed in 2012. The project aims to create a baseline dataset of soil geochemistry in Dublin and assess the extent and nature of metals and organic chemicals in Dublin soils both natural and man-made. Geochemical maps of Dublin soils have also been produced which can be used for land use planning, environmental management and health risk assessment. This involved sampling of 1058 points of which 2 were within the boundary of the Draft LAP area. All samples were analysed for 31 inorganic elements including heavy metals. Of the 1058 samples taken, a subset of 194 samples were also analysed for the following persistent organic pollutants:

- Polycyclic aromatic hydrocarbons (PAHs) and
- Polychlorinated bipheyls (PCBs).

The sampling points were for the most part within public parks, open spaces and road margins. For the purposes of the study and to examine the spatial extent of soil chemical concentrations in Dublin, the city was divided into zones which account for the history and geography of different city areas. Baldoyle-Stapolin falls within the 'Outer Suburban Zone'. Results for heavy metals indicate that the concentrations of lead, copper, zinc and mercury are strongly influenced by human activities. PAHs were detected across the city, with Concentrations decline towards the outer suburbs. Results for PCBs in soil indicate isolated, low level detections of PCBs in Dublin again declining towards the outer suburbs.

4.5.5 Geology

Geology encompasses the understanding and study of the solid and liquid matter that constitutes the earth and the processes by which they are formed, moved and changed. Its understanding is necessary to fully appreciate the geological factors that shape and influence the world and its particular structure.

The geology of the area consists of a thick Tournasian argillaceous (muddy) bioclastic (contains fossils) limestone comprising medium to dark grey calcarenites interbedded within thin calcareous shales locally containing oolitic (small round fossil) beds. The glacial overburden is generally relatively thin and is greater than 3 metres in depth. (See Figure 4.7)

The Geological Survey of Ireland classifies the hydrogeology as LL – locally important aquifer. This equates to bedrock which is moderately productive in localised zones. The impure nature of the argillaceous bioclastic limestone means that it is not as brittle as pure limestone and therefore will deform more readily. Deformation of the rock tends to seal fractures and inhibit water movement.

Maps produced by the Radiological Protection Institute of Ireland indicate that 1-5% of the houses in the Baldoyle area are predicted to have radon levels in excess of the 200 Bq/m^3 reference level. This is the second lowest range of radon levels.

Groundwater was encountered at varying depths in all Boreholes and a number of Trial Pits.

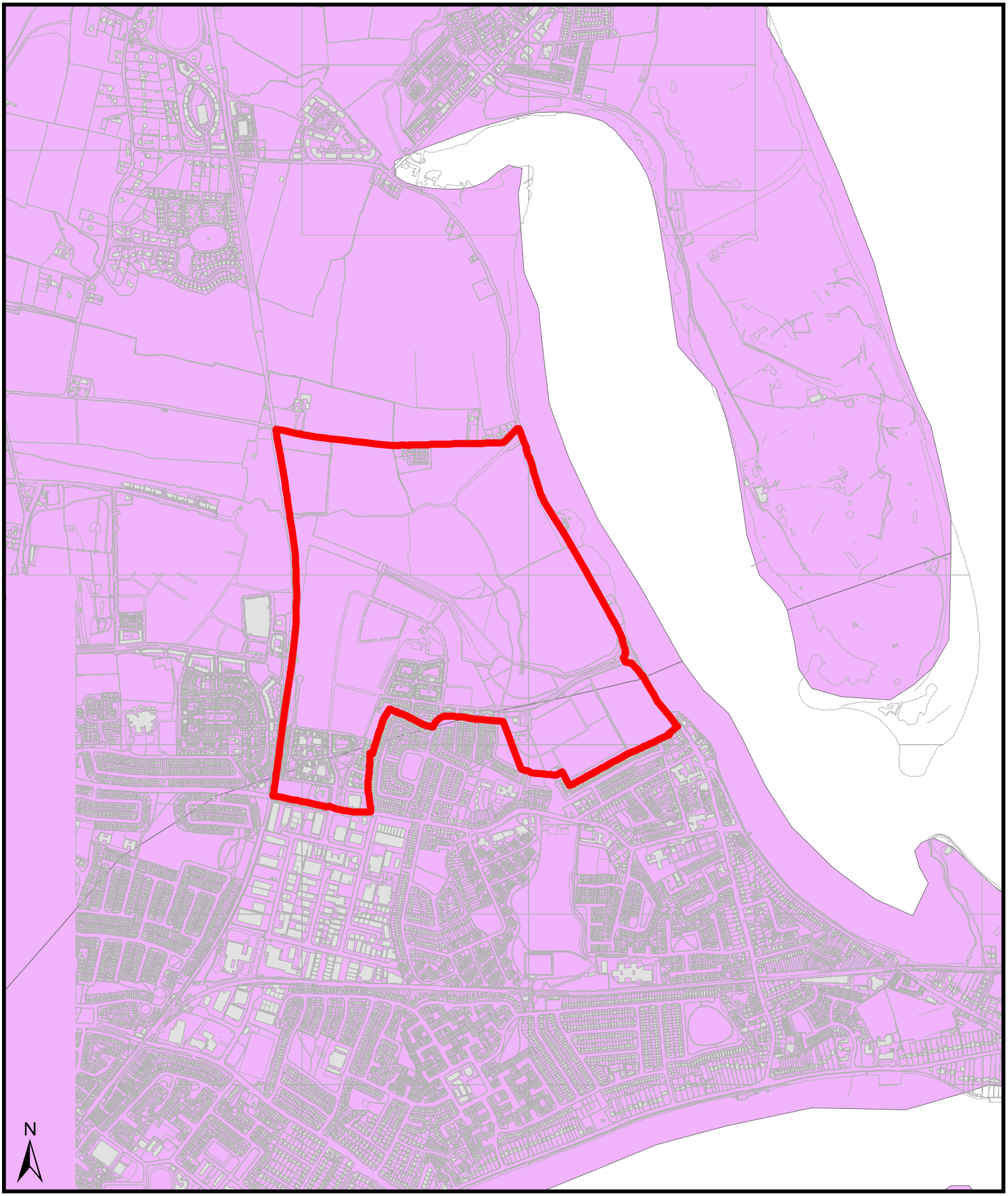
4.5.6 Sites of Geological Interest

In 2007 the Geological Survey of Ireland (GSI) assessed the geological heritage of Fingal and produced a report entitled The Geological Heritage of Fingal which is available on the Council's website (www.fingalcoco.ie). In this report GSI identified sites of geological importance in the County and recommended their protection as County Geological Sites. Some of these sites may be designated, in due course, as Natural Heritage Areas (NHAs) because of their geological interest from a national perspective. There are no sites of geological interest either within or adjoining the plan lands.

4.5.7 Soil and Geology Issues: Existing Problems/Environmental Considerations

Article 5 of the proposed Soil Directive states that, for the purposes of preserving the various functions of soil; sealing, 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 soil should be used in a sustainable manner which preserves its capacity to deliver ecological, economic and social services, while maintaining its functions so that future generations can meet their needs. New residential, commercial and transportation developments and site preparation works, including those in recent years, have resulted in an extent of soil being sealed off across the site.

Soil and geology is closely linked to biodiversity and landscape thus loss, fragmentation and/or deterioration of soils and geology would have a direct negative impact on biodiversity and the landscape. Increase volumes of surface water run-off due to



Bedrock 500k Solid Geology at Baldoyle/Stapolin

Figure 4.7

Legend

Draft Baldoyle Stapolin LAP Outline

Geology Types - Age Bracket

Palaeozoic, Carboniferous, Mississippian

61, Marine shelf & ramp facies; Argillaceous dark-grey bioclastic limestone, subsidiary shale

62, Waulsortian mudbank; Pale-grey massive limestone

65, Marine basinal facies (Tobercolleen & LucanFms - "Calp"); Dark-grey argillaceous & cherty limestone & shale

conversion of permeable landscapes to impermeable causes increased flooding, erosion and alteration of soils and their associated habitat. Other threats include pressures that recreational uses can place on soils and their habitats, including erosion. Finally, the lack of protection and mitigation of impacts of construction on soils can cause soil structural degradation and compaction

4.5.8 Evolution of Geology/Soils in the Absence of the Local Area Plan

In the absence of the LAP there would be no framework directing developments to appropriate locations within the area and ensuring that sensitive locations remain untarnished.

4.6 Water Quality and Flooding

4.6.1 Introduction

Human activities, if not properly managed, can cause deterioration in water quality. Pressures exerted by human activities include the following:

- sewage and other effluents discharged to waters from point sources, e.g. pipes from treatment plants;
- discharges arising from diffuse or dispersed activities on land;
- abstractions from waters; and,
- structural alterations to water bodies.

A point source pressure has a recognisable and specific location at which pollution may originate. Examples of significant point source pressures include direct discharges from waste water treatment plants, licensed discharges from industrial activities, landfills, contaminated lands (e.g. disused gas works) and mines.

A diffuse source pressure unlike a point source is not restricted to an individual point or location. The source of a diffuse pressure can be quite extensive. Significant examples of diffuse pressures include runoff from forestry land agricultural lands.

Excessive abstractions from surface waters and groundwater for drinking and industrial purposes can create pressures on the ability of a water body to maintain both chemical and ecological status.

Structural alterations such as river straightening; construction of embankments, weirs, dams, port facilities and dredging can create conditions such that a water body is no longer able to support the natural ecology which would have existed prior to such modifications. These pressures are also referred to as morphological pressures.

4.6.2 The Water Framework Directive (WFD)

4.6.2.1 Introduction and Requirements

The key piece of legislation governing water quality in Ireland is the Water Framework Directive (WFD) (2000/60/EC) which was established by the European Community and came into force in Ireland in December 2000. It established a new water policy framework for Europe. The WFD was transposed into Irish legislation in December 2003 as the European Communities (Water Policy Regulations 2003, S.I. 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 restore all waters with the aim of achieving “good status” by 2015. All public bodies are required to coordinate their policies and operations so as to maintain the good status of water bodies which are currently unpolluted and improve polluted water bodies to good status by 2015.

4.6.2.2 River Basin Districts and Water Bodies

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

Within each river basin district - for the purpose of assessment, reporting and management - water has been divided into groundwater, rivers, lakes, estuarine waters and coastal waters which are in turn divided into specific, clearly defined water bodies.

The Local Authorities located in the ERBD - including Fingal County Council - have prepared a River Basin Management Plan and Programme of Measures. This Eastern River Basin Management Plan (ERBMP) (2009-2015) identifies the status of water bodies within the RBD and provide objectives in order to implement the requirements of the WFD This is in the form of an interim status assessment carried out by the EPA, which is based on the results of monitoring up to 2008. The interim assessment classifies the surface waters according to their ecological and chemical status while groundwater is classified based on a system combining chemical and quantitative status.

4.6.2.3 Register of Protected Areas

The WFD requires that Registers of Protected Areas (RPAs) are compiled for a number of water bodies or part of water bodies that must have extra controls on their quality by virtue of how their waters are used by people and by wildlife.

The WFD requires that these RPAs contain the following areas: areas from which waters are taken for public or private water supply schemes; designated shellfish production areas; bathing waters; areas which are affected by high levels of substances most commonly found in fertilisers, animal and human wastes - these areas are considered nutrient sensitive; areas designated for the protection of habitats or species, e.g. salmonid areas; Special Areas of Conservation (SACs) and Special Protection Areas(SPAs).

Recreational waters (bathing waters) are included in the RPA and contain all the areas listed in the Bathing Water Regulations (S.I. 155/1992). These include beaches along Sutton (Burrow Beach), Malahide, Portmarnock and Portrane which are located a 15km buffer zone of the LAP lands.

There are a number of RPA Shellfish Areas along the Fingal coast that include the coastal areas of Malahide which is located within a 15km buffer zone of the LAP lands (see Section 4.2.7 for further details). It should also be noted that the Broadmeadow Estuary (Inner) has been listed on the RPA as a Nutrient Sensitive Estuary.

4.6.3 Rivers

4.6.3.1 Q Values

The Mayne River runs through the northern section of the plan area, from east to west, before discharging to Baldoyle Bay at the junction of Mayne Road and Strand Road (R106). The Mayne River rises near Dublin Airport and drains a substantially rural catchment. In general the river slopes uniformly from an elevation of 64.0 m O.D. at the upstream end to 0.0 m O.D. at the outfall. The lowest reaches of the river which traverse the plan lands are relatively flat with the section of the plan lands forming a natural floodplain. The Racecourse Stream is a tributary of the Mayne River, and flows from the south, draining the catchment of Baldoyle and Seagrange.

Under the EPA quality value system (Q) the Mayne River was classified as being of "poor" status in 2008 and was identified as being of "moderate" quality (Q3) in 2010.

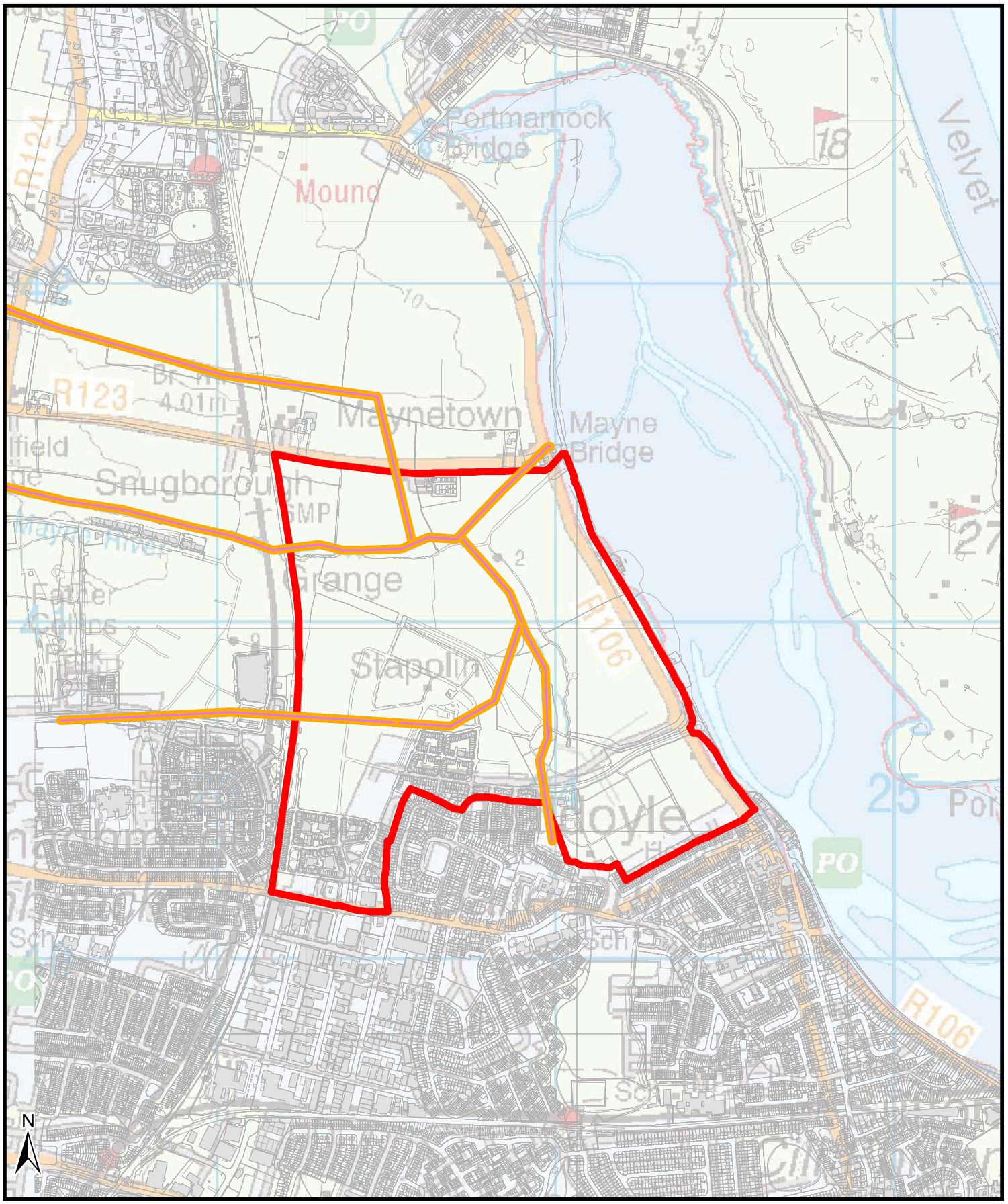
4.6.3.2 Water Framework Directive Surface Water Status

The WFD defines 'surface water status' as the general expression of the status of a body of surface water, determined by the poorer of its ecological status and its chemical status. Thus, to achieve 'good surface water status' both the ecological status and the chemical status of a surface water body need to be at least 'good'.

Ecological status is an expression of the structure and functioning of aquatic ecosystems associated with surface waters. Such waters are classified as of "good ecological status" when they meet Directive requirements.

Chemical Status is a pass/fail assignment with a failure defined by a face-value exceedance of an Environmental Quality Standards (EQS) for one or more Priority Action Substances (PAS) listed in Annex X of the Water Framework Directive (WFD). The EQS values for individual PAS substances are set at European level. Good surface water chemical status means that concentrations of pollutants in the water body do not exceed the environmental limit values specified in the Directive.

The River Mayne is a reportable river under the Water Framework Directive and is currently identified as being of "poor status" while the catchment of the River Sluice to the north is identified as being of Moderate Status. An Investigative Monitoring Programme for the River Mayne Catchment was undertaken as part of the LAP process for Clongriffin-Belmayne and Baldoyle-Stapolin over four weeks in March and April 2012. The purpose of this investigative monitoring was to obtain up to date information on the physicochemical status of the river and to attempt to identify the significant pressures on the river. Samples were taken at 12 locations between the M50/M1 junction and the railway bridge at Baldoyle. The first samples were taken on Wednesday, 21st March 2012 and continued weekly for a month (i.e. 21st March, 28th March, 4th April and 11th April). As the limits imposed on certain pollutants in the European Communities Environmental Objectives (Surface Water) Regulations, 2009 as measured as means or 95 percentile values, more data would be required to determine if the current status of the river satisfied the requirements of the Water Framework Directive. However, if the results in the current study are indicative of typical water quality in the river, then it would fail to meet the requirement of good status under the Water Framework Directive for Ammonia, Phosphorus and possible Biochemical Oxygen Demand (BOD).



EPA Water Quaility Map at Baldoyle/Stapolin

Figure 4.8

Legend

Draft Baldoyle Stapolin LAP Outline

Mayne River

Water Qualiity

Poor

The Mayne River along with the Sluice River, which runs to the north of the Portmarnock South LAP lands, are part of the Santry-Mayne-Sluice Water Management Unit. In Santry Mayne Sluice Management Unit the problems which are preventing the achievement of 'Good Status' can be attributed to:

- High Nutrients (Phosphorus)
- Oxygen Demand
- Low Ecological Rating
- Inferior Habitat

The principal pressures identified are wastewater and industrial discharges and in Dublin misconnected foul sewers from houses and businesses, combined sewer overflows (wastewater discharges) and urban area pollution are principal pressures. A Programme of Measures (POM) is set out to address these issues and must be implemented before 2015. The POM is made up of key priority actions drawn from legislative laws and additional required actions. Notwithstanding this the WFD recognises that in some cases it may not be possible to achieve all core objectives by 2015.

Within the Santry-Mayne-Sluice Management Unit the main factor preventing achievement of Good Status is urban point and diffuse pollution. Full implementation of the measures is expected to correct this; however recovery time will mean that the Mayne River will not achieve Good Status before 2015. Consequently a derogation to achieve good ecological status by 2027 has been obtained for the River Mayne however, the water body into which the River Mayne discharges is an SPA which has a priority status of 2015.

Objective 460 of the Fingal Development Plan seeks to work In co-operation with relevant national agencies, to draw up a plan for improving the water quality of Baldoyle Estuary in conjunction with the Eastern River Basin Management System.

4.6.4 Coastal Waters

Coastal waters are important for tourism, for use as bathing locations and for supporting marine wildlife. The EPA uses the Assessment of Trophic Status of Estuaries and Bays in Ireland ATSEBI) System in order to classify the quality status of transitional waters, such as estuaries and coastal waters. Categories of criteria for nutrient enrichment, accelerated growth, and undesirable disturbance are used by the ATSEBI in order to classify the estuarine and coastal waters. There are four classifications:

- *Eutrophic waterbodies* are those in which each of the criteria is breached, i.e. where elevated nutrient concentrations, accelerated growth of plants and undesirable water quality disturbance occur simultaneously.
- *Potentially Eutrophic waterbodies* are those in which two of the criteria are breached and a third falls within 15% of the relevant threshold value/values.
- *Intermediate waterbodies* are those which do not fall into the Eutrophic or Potentially Eutrophic classes but in which breaches of one or two of the criteria occur.
- *Unpolluted waterbodies* are those which do not breach any of the criteria. It is noted that estuarine and coastal waters can attain Good Status as defined by the WFD through the achievement of Unpolluted status.

The transitional water bodies to be rated within 15km of the LAP lands are North Dublin Bay, Rogerstown Estuary and Malahide Estuary. North Dublin Bay has been classified as being “Unpolluted” and Rogerstown Estuary has been classified as “Eutrophic”. The Broadmeadow Water side of the Malahide Estuary has been described as “Eutrophic”, while the Malahide Bay side has been classified as “Intermediate”. In terms of achieving the WFD objectives by 2015, the entire coastal region of Fingal has been classified as (1a) at significant risk of failing to achieve WFD objectives by 2015.

4.6.5 Quality of Bathing Water

Information on Bathing Water is compiled by the EPA from data submitted by local authorities around the Country. Monitoring results are assessed for compliance with two sets of EU standards specified in the Directive: minimum quality standards (EU mandatory values) and more stringent quality targets (EU guide values). Over the bathing season, water quality at each bathing area must comply with the minimum EU mandatory values. In addition, all bathing areas should endeavour to achieve the stricter EU guide values. In Fingal, water quality is monitored at Balbriggan, Donabate, Loughshinny, Malahide, Portmarnock, Portrane, Rush (South Beach), Skerries and Sutton (Burrow Beach).

The nearest bathing areas to the LAP lands are at Portmarnock and Sutton. While the nearby Portmarnock Velvet Strand beach is classified by the EPA as having ‘good’ water quality in 2010, Sutton Burrow beach to the south is classified as having ‘poor’ water quality due to the presence of microbiological parameter faecal coliforms. Overflows from local pumping stations may have been the cause. Uncontrolled factors such as the weather resulting in overflows from septic tanks and onsite treatment plants may also have contributed. Fingal County Council has recently completed a new pumping station at Sutton "as part of the Dublin Bay Contract 5” with foul drainage from the area now being transferred to the regional sewage plant at Ringsend. It is envisaged that on foot of these works there will be a significant improvement in Bathing Water Quality at Burrow Beach going forward.

4.6.6 Ground Water

4.6.6.1 Introduction

Groundwater is stored in the void spaces in underground layers of rock, or aquifers. These aquifers are permeable, allowing both the infiltration of water from the soils above them and the yielding of water to surface and coastal waters. Groundwater is the part of the subsurface water that is in the saturated zone - the zone below the water table, the uppermost level of saturation in an aquifer at which the pressure is atmospheric, in which all pores and fissures are full of water.

Surface and groundwater functions are closely related and form part of the hydrological cycle. The protection of groundwater from land uses is a critical consideration and groundwater vulnerability is becoming an important management tool. The entire island of Ireland has been designated as a Protected Area for Groundwater under the WFD.

Aquifers are exposed in our surface lakes and rivers. Most groundwater originates from the surface but it permeates through the ground to supply (or ‘recharge’) wells or boreholes. Groundwater is exposed to higher concentrations of pollutants that are retained in the layers of rock and soil (Todd, 1980). The exposure to pollutants lasts

much longer as groundwater moves at a slower pace through the aquifer. The quality of our drinking water supply, fisheries and terrestrial based habitats is intrinsically linked with groundwater quality.

4.6.6.2 Water Framework Directive Groundwater Status

For groundwater bodies, the approach to classification is different from that for surface water. For each body of groundwater, both the chemical status and the quantitative must be determined. Both have to be classed as either “good” or “poor”. The WFD sets out a series of criteria that must be met for a body to be classed as good chemical and quantitative status. Groundwater underlying the LAP area is classified as being of “Good Status”.

In conjunction with the GSI, a Groundwater Protection Scheme has been prepared for the County. This provides guidelines for the planning and licensing authorities in carrying out their functions, and a framework to assist in decision-making on the location, nature and control of developments and activities in order to protect groundwater. Use of the scheme will help to ensure that within the planning and licensing processes due regard is taken of the need to maintain the beneficial use of groundwater. A Groundwater Protection Scheme aims to maintain the quantity and quality of groundwater and in some cases improve it, by applying a risk assessment-based approach to groundwater protection and sustainable development.

4.6.6.3 Aquifer Vulnerability and Productivity

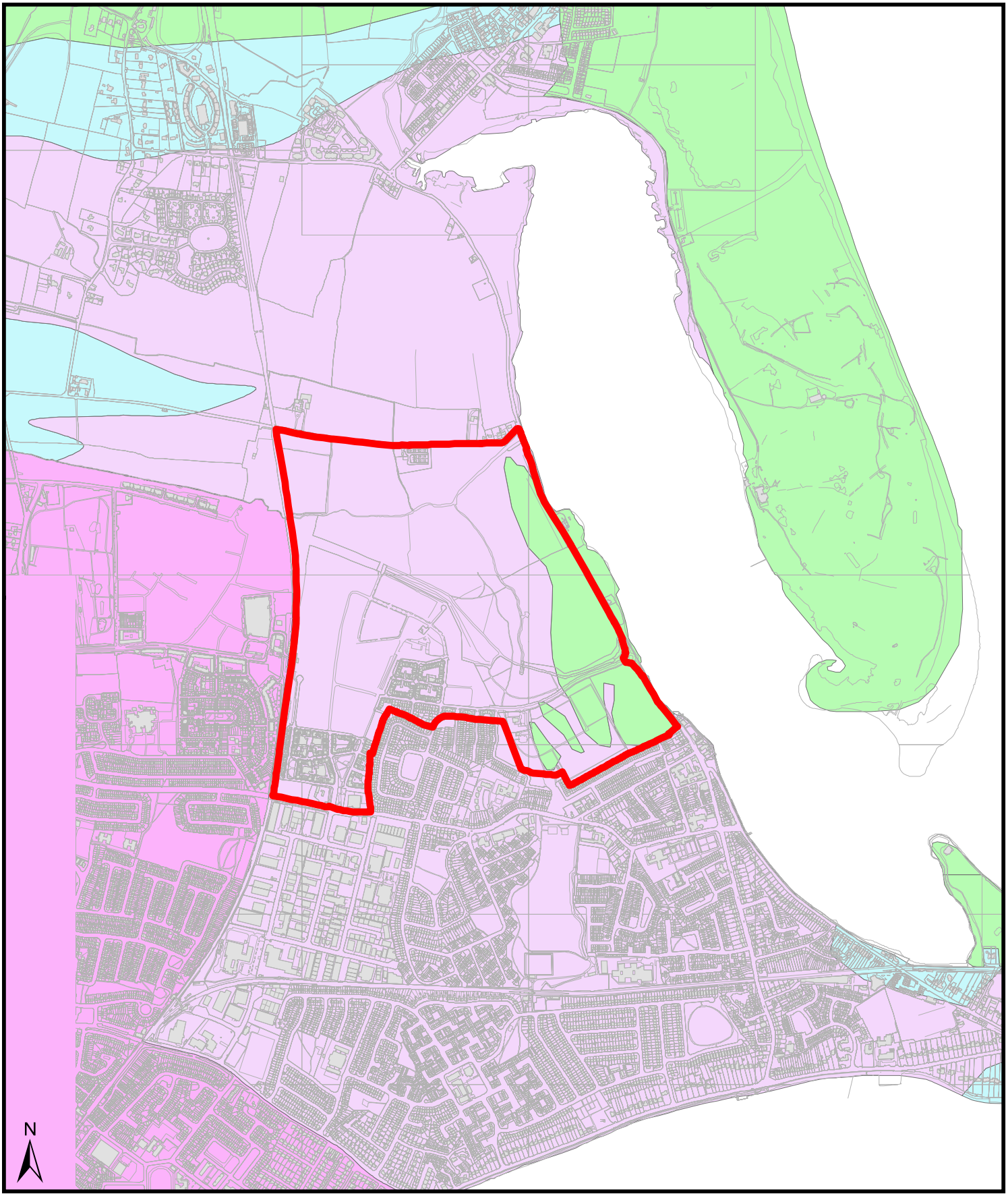
The Geological Survey of Ireland (GSI) rates aquifers based on their hydrogeological characteristics as well as on the value of the groundwater resource. Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter underground water. Only an interim study has taken place for most of Fingal, resulting in a rating of High/Low vulnerability. Groundwater vulnerability in the LAP area is mainly classified as being low with only the eastern sections of the land, closest to the Baldoyle Bay being classified as having high vulnerability. (See Figure 4.9)

The site is underlain by the Boston Hill Formation (also referred to as the Malahide Formation on the GSI website). This consists of muddy limestone and shale. The plan area is covered by two designations on the National Draft Bedrock Aquifer Map. Specifically, the northern half of the plan lands are identified as being Dinantian Lower Impure Limestones which is classified as (LI) - Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones. The southern half of the lands are categorised as being Dinantian Upper Impure Limestones which is classified as (PI) - Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones.

4.7.6 Flooding

The Planning System and Flood Risk Management Guidelines (OPW & DOEHLG, 2009) states that:

‘Flooding is a natural process that can happen at any time in a wide variety of locations. Flooding from the sea and from rivers is probably best known but prolonged and intense rainfall can also cause sewer flooding, overland flow and groundwater flooding. When it impacts on human activities, it can threaten people, their property and the environment. Assets at risk can include housing, transport and public service infrastructure, and



Aquifer Vulnerability at Baldoyle/Stapolin

Figure 4.9

Legend

Draft Baldoyle Stapolin LAP Outline

Groundwater Quaility

- E(Rock at/near surface or karst)
- Extreme
- High
- High to Low. Only an interim study took place
- Low
- Moderate

commercial, industrial and agricultural enterprises. The health, social, economic and environmental impacts of flooding can be significant and have a wide community impact'.

Thus the underlying causes of flooding, heavy rain and high sea levels are, essentially uncontrollable. However, the factors affecting the extent and severity of the flood can be addressed. The most influential of these factors is development, in particular development in flood plains i.e. areas adjacent to rivers that tend to become flooded following periods of heavy rain. Historic records help to indicate which areas are prone to flooding, although it is always possible that areas not known to have flooded in the past or for which no records of flooding are available, might flood in the future due to changes in upstream or downstream conditions or the occurrence of a more extreme rainfall event. The Office of Public Works (OPW) monitors flooding throughout Ireland and has recorded significant flood events within the plan area.

4.7.6.1 OPW National Flood Hazard Mapping & FEMFRAMS

The statutory Planning Guidelines on "The Planning System and Flood Management – Guideline for Planning Authorities" (2009) focus on providing comprehensive consideration of flood risk in the preparing of Regional Plans, Development Plans and Local Area Plans, and in determining applications for planning permission.

These Guidelines indicate that Flood Risk Assessments should be undertaken at different scales by different organisations for many different purposes. The scales are as follows:

- Regional Flood Risk Appraisal (RFRA): A regional Flood Risk Appraisal provides a broad overview of the source and significance of all types of flood risk across a region and highlights areas where more detailed study will be required. These appraisals are undertaken by regional authorities.
- Strategic Flood Risk Assessment (SFRA): A Strategic Flood Risk Assessment provides a broad (area-wide or country-wide) assessment of all types of flood risk to inform strategic land use planning decisions. The SFRA allows the Planning Authority to undertake the sequential approach (described below) and identify how flood risk can be reduced as part of the development plan process.
- Site Flood Risk Assessment (Site FRA): A Site FRA is undertaken to assess all types of flood risk for a new development. This requires identification of the sources of flood risk, the effects of climate change on the food risk, the impact of the proposed development, the effectiveness of flood mitigation and management measures and the residual risks that then remain.

Floodmaps.ie

The OPW maintain a flooding database at floodmaps.ie. From examination of the database there are records of previous tidal or fluvial flooding in this immediate area indicated on the OPW Flood maps, but none within the RA zoned section of the site. The floodmaps.ie generated report identifies all flooding within 2.5 km of the site. These 11 flooding instances listed are unlikely to directly impact on the Objective RA zoned lands *provide for new residential communities in accordance with approved local area plan.* However, of the 11 flooding instances listed within 2.5 km of the site, the Baldoyle Coastal recurring (11) and Coast Road Flood Event 24 October 2011 (1) are adjacent the open space zoned lands along Coast Road within the LAP boundary. The Mayne

River Bridge recurring (9) is adjacent the halting site along Mayne Road, also within the LAP boundary.

FEMFRAMS

The Fingal East Meath Flood Risk Assessment Management Study (FEM FRAMS) was one of four pilot CFRAM studies for the new Flood Risk Assessment and Management Programme. The CFRAM studies are the core of the delivery of the new Flood Policy adopted by the Irish Government in 2004, shifting the emphasis in addressing flood risk towards '*a catchment-based, pro-active approach for identifying and managing existing, and potential future, flood risk*'.The Fingal East Meath Flood Risk Assessment and Management Study has been examined to determine the existing and potential future tidal and fluvial flooding proximate to the LAP lands. The water levels predicted by the FEMFRAMS Tidal Flooding Current Scenario for an exceedance of 0.1 % (1 in 1,000 year) and the FEMFRAMS Mayne River Fluvial Flooding Current Scenario for an exceedance of 0.1 % (1 in 1,000 year) in the vicinity of the LAP lands are set out in Table 4.7.

Table 4.7 FemFrams 0.1% Current Scenario

Node	Location	Flood Level OD Malin	
		Fluvial	Tidal
1Ma906	North of the site (Mayne)	4.23	4.02
1Maa675	North east of the site (Mayne)	3.46	3.11
070	East of the site (Coastal)	-	3.39
074	North east of the site (Coastal)	-	3.41

As can be seen from the Figure 4.10 Flood Extent Maps attached the extent of the flooding is outside the residential zoned lands. However, the northern section of the RA lands is adjacent to the flood zone area. The housing/halting site along Mayne Road is also immediately adjacent the flood zone area, as is the open space area along Coast Road.

The FEMFRAMS Flood Risk Management Plan states that "Baldoyle is affected by both fluvial and tidal flooding. There is a large bank of agricultural land at risk from out of bank flooding from the Mayne River".

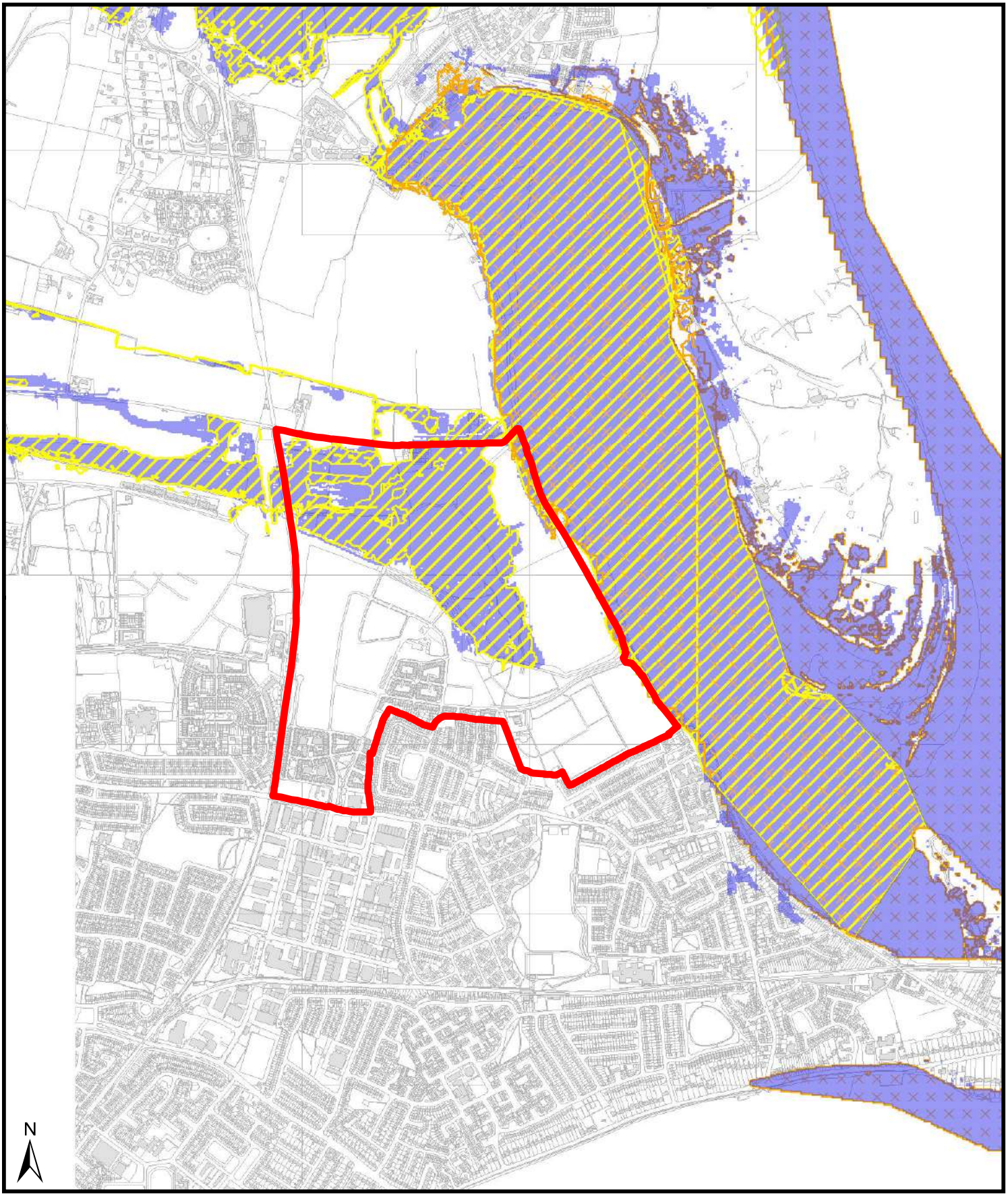
The LAP lands are also covered by Eastern FRAMS however these are only in the process of being prepared and there is no data available at the time of writing.

Dublin Coastal Flooding Protection Project

The 2005 Dublin Coastal Flooding Protection Project Final Report (Royal Haskoning) was reviewed. Section 5.3.1 outlined the options available to protect five specific areas within Baldoyle Estuary. These where at:

Location 1: North of Baldoyle Town Centre
Location 2: South of Mayne River
Location 3: North of Mayne River
Location 4: Northwestern end of Baldoyle Estuary
Location 5: Southern End of Portmarnock

The options outlined general require the construction of flood protection barriers to a minimum of 3.75 m OD Malin in each of the areas.



FEMFrams Flood Mapping at Baldoyle/Stapolin

Figure 4.10

Legend

Draft Baldoyle Stapolin LAP Outline

River (Fluvial) Flooding

1 in 100 (1% chance of flood event occurring in any one year)

1 in 1000 (0.1% chance of flood event occurring in any one year)

Coastal Flooding

1 in 200 (0.5% chance of flood event occurring in any one year)

1 in 1000 (0.1% chance of flood event occurring in any one year)

The works provided will offer protection against tidal flooding to the areas identified as having previously flooded above, or at risk due to the proximity to the flood zones identified in the FEMFRAMS study.

The works proposed at Location 1, 2 & 3 will specifically benefit the LAP lands.

4.7.6.2 Mayne River Flooding/ Flood Risk Assessment of LAP lands

In accordance with the 'Planning Systems and Flood Risk Management Guidelines for Planning Authorities' (DoEHLG, 2009), the preparation of this plan was the subject of a Strategic Flood Risk Assessment (SFRA). The SFRA includes the identification of a number of measures necessary to ensure flood risk is incorporated into the planning of this area and recommendation that development proposals for a number of areas within the plan boundary be the subject of site-specific flood risk assessment appropriate to the nature and scale of the development being proposed.

4.7.8 Water Issues: Existing Problems / Environmental Considerations

Based on available water quality data, the water quality in the Mayne River and its wider catchment will need significant improvement in order to comply with the objectives of the WFD. According to the Santry-Mayne-Sluice Water Management Unit Report (2009) the principal pressures on the Santry-Mayne-Sluice are misconnected foul sewers from houses and businesses, combined sewer overflows (wastewater discharges) and urban area pollution.

The ERBD Management Plan and associated Programme of Measures include provisions to help ensure that these water bodies meet the objectives of the WFD. The Draft LAP through the incorporation of objectives relating specifically to areas such as SuDS and appropriate construction management techniques will help to management pollutants arising from the site that may affect water quality in Baldoyle Bay and the River Mayne thus aiding compliance with targets set out in the ERBD Management Plan. It is noted that Objective 460 of the Fingal Development Plan seeks to work in co-operation with relevant national agencies, to draw up a plan for improving the water quality of Baldoyle Estuary in conjunction with the Eastern River Basin Management System.

Malahide Shellfish Area is located c.2km to the northeast and extends from Lambay Island to Portmarnock. Balbriggan/Skerries Shellfish Area is situated in adjacent tidal waters. Any pollution or output from the River Mayne or the LAP lands to the estuary has potential to impact on the quality of sea water and on the health of the Shellfish Area off the Irish coast. The Shellfish Waters Directive sets out a mix of mandatory and recommended physical, chemical and microbiological water quality requirements that EU members must meet in order to protect these designated areas.

4.7.9 Evolution of Water in the Absence of a Local Area Plan

There is significant legislation which provides for the protection and enhancement of water resources and quality at European, National, Regional and County level. These include the Water Framework Directive and associated EU Directives, the Eastern River Basin District (ERBD), and associated WMU action plans, the Planning Guidelines on Flooding and Risk Management and the Fingal Development Plan 2011-2017.

In the absence of the Draft Baldoyle-Stapolin 2013-2019, these instruments will continue to provide universal protection to surface, groundwater and estuarine waters and their associated habitats and species. However, there would not be a localised settlement specific planning framework within which to regulate, aid and/or control development whether economic, social or environmental. The Local Area Plan sets out specific objectives for the area and is adaptable to local issues, particularly in relation to surface water drainage and flooding. The combination of all approaches will yield the best approach to improving and safeguarding water resources.

In the absence of the Plan, the issue of Sustainable Drainage Systems (SuDS) would not be implemented in site specific locations, thus surface water run-off due to uncontrolled development would be discharged directly into the groundwater system. The cumulative effects of such runoff have the potential if combined with other factors, e.g. severe rainfall, to result in flooding. Biodiversity would be exposed and vulnerable to a direct loss of species types and numbers, and amenity value of the area could indirectly suffer if lake and beaches in the plan area suffered reduction in their water quality status.

While EU and national legislation will apply, the primary issues affecting water quality and flood control such as population increase, loss of floodplain, increased run-off etc which can be controlled at the LAP level will not be addressed adequately at a local level. Ultimately the result would be unsustainable and undesirable.

4.8 Air Quality and Noise

4.8.1 Ambient Air Quality

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

The principles for this European approach are set out under Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC) as transposed into Irish law under Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011). These Regulations replaces the Air Quality Standards Regulations 2002 (S.I. No. 271 of 2002), the Ozone in Ambient Air Regulations 2004 (S.I. No. 53 of 2004) and S.I. No. 33 of 1999.

At a national level the National Climate Change Strategy 2007-2011 provides for the protection of air quality. The strategy for reducing emissions will be shared across all sectors but the main focus will be on transport, residential, industry, electricity production, the public sector and waste. The Programme for Government outlines a 3% reduction in greenhouse gas emissions per annum. The programme will also require Ireland to join the top five countries in the world, as measured by the Environmental Performance Index (EPI). The National Climate Change Strategy will also be supported by other relevant government policy such as the National Development Plan, Transport 21 and National Energy Policy 2007.

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.

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 (NOx) and particle matter (PM10), which are derived from traffic based sources. Significant reduction of nitrogen oxides (NOx) from road transport is required if Ireland is to meet its commitments under the National Emissions Ceiling (NEC) Directive by 2010. NOx emissions are not expected to meet the target date.[2]

At a regional level, Fingal County Council has adopted 'The Air Quality Management Plan for the Dublin Region, 2008-2012' under the provisions of the Air Pollution Act 1987.

4.8.2 EPA Air Quality Zones

The Air Quality Standards Regulations 2002, (S.I.271/2002) transposed the Air Quality Framework Directive (96/62/EC 1996) and the first two daughter directives on air quality into Irish law.

These established the air quality standards for sulphur dioxide, nitrogen dioxide, lead, PM10, carbon monoxide CO and benzene. There are additional air quality regulations with regard to ozone which are dealt with directly by the Environmental Protection Agency

The various regulations specify the dates by which the limit values or target values for each of the pollutants must be achieved and also the reference methods for sampling, analysis and, measurement. There are also specific requirements in relation to providing the public with information on ambient air quality.

For the purposes of monitoring in Ireland, four zones are defined in the Air Quality Standards Regulations 2002 (S.I. 271 of 2002).

The main areas defined in each zone are:

- Zone A: Dublin Conurbation;
- Zone B: Cork Conurbation;
- Zone C: Other cities and large towns comprising Galway, Limerick, Waterford, Clonmel, Kilkenny, Sligo, Drogheda, Wexford, Athlone, Ennis, Dún Laoghaire-Rathdown, Naas, Carlow, Tralee and Dundalk; and
- Zone D: Rural Ireland, i.e. the remainder of the State - small towns and rural areas of the country - excluding Zones A, B and C.

[2] EPA. Irelands Environment 2008. Air Quality. P43.

The LAP lands are located within Zone A for the Dublin conurbation with the closest monitoring sites to the LAP lands being located at Swords and Marino. The index is calculated based on the latest available measurements of PM10, sulphur dioxide, nitrogen dioxide and ozone. In October 2010, air quality in Zones A was reported as 'Good'.

4.8.3 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 Baldoyle-Stapolin LAP area.

4.8.4 Noise

4.8.4.1 The Environmental Noise Directive

Noise is unwanted sound. It can seriously harm human health and interfere with daily activities at school, at work, at home and during leisure time. Traffic noise alone is today harming the health of almost every third European. 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.

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

This 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 EU 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 indicators and use these maps to assess the number of people which may be impacted upon as a result of excessive noise levels;
- Draw up action plans to reduce noise where necessary and maintain environmental noise quality where it is good; and,
- Inform and consult the public about noise exposure, its effects, and the measures considered to address noise.
- The END does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of the competent authorities. Limit values are left to each member state. At this point in time, Ireland does not have any limit values.

4.8.4.2 Noise Action Plan and Noise Model

Under the Environmental Noise Regulations 2006 SI number 140 of 2006, the Fingal County Council is required to produce 'Maps' for noise emanating from major Industry and transport. Fingal County Council has revised and upgraded their 'Noise Maps' for the 2012 base year. These maps are to be used to assess the number of people

annoyed and sleep-disturbed respectively throughout Dublin. The maps are Strategic Noise Maps, and should be used for strategic, high level planning and not for the assessment of local noise nuisances.

The 'Noise Maps' show colour coded areas in Fingal based on noise levels, in 7 bands beginning at 45 decibels and increasing in increments of 5 decibels. Noise Maps are produced for Night Time Levels, Daytime Levels and 24Hr Levels. The EU Directive does not give an indication as to what level of noise is acceptable. This is left to each member state. At this point in time, Ireland does not have any statutory limit values, as is the case for air pollution. However, in accordance with the requirements of EU Directive 2002/49/EC Fingal County Council, in collaboration with the three other Dublin Local Authorities, produced an Action Plan relating to the 'Assessment of Environmental Noise for the Dublin Agglomeration 2008-2013' including noise maps for the Dublin Agglomeration. 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. It identifies areas with desirable low sound levels as those area with a with a night time level less than 50 decibels and\or a daytime level less than 55 decibels.

The main Dublin to Belfast rails passes to the western edge of this area. The Rail Maps have been revised for the 2012 base year. It has been estimated that there has been no significant change in sound emissions from this source over the 2007 base year. The most prominent sound emission sources in the area for this Local Area Action Plan are from the traffic sector.

From the noise mapping carried out it is evident that the undesirable noise levels in the LAP lands are focused around Grange Road where daytime levels of 65-70dB are approached with night-time levels of 50-55dB. These levels decrease when moving away from the road thus confirming the main findings from the Fingal noise mapping where traffic noise is considered the dominant source in Fingal.

4.8.5 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 and these remain a threat to air quality and therefore a reduction in private car movements will result in a reduction in emissions such as PM_{10}, $PM_{2.5}$ and NO^2. This will necessitate a modal shift from the private car to high quality public transport. There is also a requirement to reduce greenhouse emissions produced by human activities, particularly in transport and construction.

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 following development of the area. Therefore, there is a need to ensure that new residential development is designed and constructed in such a way as to minimise noise disturbances, particularly from traffic. This can be realised by encouraging a greater modal split towards public transport as well as walking and cycling. In addition there is a need to manage potential noise from other proposed uses such as shops, offices etc (e.g. air conditioning units) and from possible night time entertainment uses.

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

Air quality and noise are transboundary issues and largely outside the control of any one functional area or Local Authority. However, it requires a collective approach in order to counter the potential impacts in this regard. In the absence of the Plan issues may potentially arise through excessive commuting through a lack of coordinated transport policy, etc. in the absence of the LAP, there is little strategic direction or policy to facilitate modal shift, energy efficiency measures etc and potentially lead to a deterioration in air and noise quality.

4.9 Climate Change and Sustainability

4.9.1 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 have as dramatic an effect on a county such as Fingal given its extensive coastal edge. The Baldoyle-Stapolin LAP lands are flanked on their eastern edge by Baldoyle Bay and, the parkland area in particular, could be susceptible to any future increases in sea levels arising as a result of climate change. Also, if sea levels rise dramatically one of the predicted effect is the increase in vertical and horizontal extent of estuaries 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 Mayne, would be significantly affected by such an event.

4.9.2 Causes of Greenhouse Gases in Ireland

Climate change is a transboundary issue affecting the entire planet and is fundamental in providing social stability and sustainable development. It is now generally accepted that the build up of greenhouse gases such as carbon dioxide is threatening global climate stability. Ireland ratified the UN Framework Convention on Climate change in 1994 and the Kyoto Protocol in 1997. Ireland has given an undertaking to limit net growth of greenhouse gases to 13% above 1990 levels by the period 2008-2012. However the economic growth witnessed in Ireland over the past decade has resulted in greenhouse gas emissions being 29% above 1990 levels in 2002.

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.

4.9.3 Climate Model Predictions and Sea Level Rise

The EPA's 'Climate Change: Regional Climate Model Predictions for Ireland' (2005) report provides an analysis of future Irish climate conditions for the period 2021–2060 based on the outputs from a new regional climate modelling facility located in Met Éireann. Projected temperature changes from the model output show a general warming in the future period with mean monthly temperatures increasing typically between 1.25 and 1.5°C. The largest increases are seen in the southeast and east, with the greatest warming occurring in July.

For precipitation, the most significant changes occur in the months of June and December; June values show a decrease of about 10% compared with the current climate, noticeably in the southern half of the country; December values show increases ranging between 10% in the south-east and 25% in the north-west. In the ERBD River Basin Management Plan it is predicted that less rain will fall during the year, but that more intense storms will be experienced. Year on year the conditions will vary significantly, and from catchment to catchment, and it is not yet clear what conditions should be accommodated.

In the future scenario, the frequency of intense cyclones or storms over the North Atlantic area in the vicinity of Ireland increases by about 15% compared with the current climate. This is related to the projected general rise in sea surface temperatures. Sea level changes result from changes that occur in external forcing mechanisms, such as changes in the redistribution of heat between the equator and the poles and other atmospheric changes. The EPA's 'Climate Change: Scenarios and Impacts for Ireland' (2003) report chose three sea level rise scenarios in order to assess six selected areas along the Irish coastline (one of which is Dublin Bay) at risk from an increase in sea level: 0.09 m, 0.48 and 0.88 m in conjunction with a digital elevation model to project probabilities of inundation. The maps presented in the publication were not of sufficient quality to use in this report and the GIS layers used to create the maps were not available from either the EPA or the authors of the report. However, it is noted that the maps indicate that rising sea levels could place certain areas of land at Dublin Bay - including lands in Fingal – at risk. At the time the report was written, sea level at Dublin was rising by 0.23 mm per year.

4.9.4 Potential Effects of Changed Climate and Rising Sea Levels

The EPA's 'Climate Change: Scenarios and Impacts for Ireland' (2003) report identifies where vulnerability to climate change exists in Ireland and what adjustments are likely in the operation of environmental systems in response to such changes.

At the regional scale, the major effects of a sea level rise are loss of land as a consequence of increased erosion (due to changes in coastal currents and sedimentation rates) and inundation and increased risk of flooding (both at the coast and inland along major river networks during storm surge events). Flooding risk would also be enhanced if a storm surge were coupled with intense or long duration precipitation events. Coastal floodplains are especially at risk on occasions when a high tide and storm surge coupled with a period of intense rainfall lead to a breach in the carrying capacity of the drainage network, a situation in Ireland which has become evident over

the last decade. Sea level rise presents itself as a serious problem where there is infrastructure at risk of inundation. In Ireland, the EPA report identifies the impacts of sea level rise will be most apparent in the major cities, including Dublin, and that these will be most vulnerable from an economic perspective. The inability of the shoreline to adjust naturally to a change in conditions in areas of dense infrastructure may enhance any impacts as the system tries to attain a new equilibrium between sediment erosion, transportation and deposition.

As increased temperatures will lead to greater amounts of water vapour in the atmosphere and an accelerated global water cycle, it is reasonable to expect that river catchment areas will be exposed to a greater risk of flooding. Heavier winter rain and summer storms may cause more flash flooding, causing an increase in diffuse pollution loads to waters from soil run-off or the overflow from CSOs (combined sewer overflows) and raising demand for flood controls. Summer droughts are more likely and there may be a reduction in drinking water supplies.

River flooding tends to be more common during the wetter winter months when soils are near saturation and can be exacerbated in coastal areas when interactions occur between high tides and high flows. Many of the rivers draining upland areas have a rapid or 'flashy' response to rainfall enhanced by rising topography. Steep slopes and thin soils favour rapid flow pathways and water is rapidly transmitted to the channel network especially in urbanised catchments with extensive areas of impermeable surfaces.

The effect of a sea level rise on estuaries will tend to enlarge their vertical and horizontal extent, resulting in the penetration of tides further upstream. The outflow from rivers would be impeded as a consequence, which, in a high intensity rainfall event where runoff is high, would increase the risk of flooding.

A critical impact of climate change will be the likely changes to habitats and the flow conditions in rivers and lakes. The ERBD has been undertaking research work on the effects of abstractions on river and lake ecology to develop an understanding of the relationship between hydrology, flow, depth and habitats for key species.

4.9.5 Biodiversity

Salt marshes and sand dunes are ecological strongholds providing a variety of habitats for a range of different species. Many of the marsh systems in Ireland provide over-wintering feeding grounds for many species of migratory birds. The loss of these habitats could present major problems for species numbers and diversity, aspects dealt with in a previous section (see Section 4.2 on Biodiversity, Flora and Fauna).

Rising sea levels could lead to the covering of some of the County's habitats which are important to bird populations, in particular Baldoyle Bay and the Malahide Estuary. As much of the County's coastal areas are developed, the potential for habitats to migrate inland is limited. This could impact in certain areas on waterfowl roosting as well as feeding areas, by reducing or eliminating roosting areas, or making them more liable to human disturbance. In addition, temperature changes might give invasive alien species a competitive advantage in waters, thus affecting biodiversity.

4.9.6 Climate Change Issues: Existing Problems/Environmental Consideration

The main issues facing Fingal in relation to the development of the Baldoyle-Stapolin LAP lands are climate change related to increased amounts of greenhouse gases, including CO^2 emissions, from transport movements, and the danger posed by flooding events, which will occur as a result of the former. Solutions require reductions in unsustainable transport movements, and the amelioration of potential flooding events. In this regard, prioritising the development of LAP areas adjoining the rail line, the carrying out of a Flood Risk Assessment and the use of Sustainable Urban Drainage Systems (SUDS) in the LAP lands will be primary strategies in the plan.

The manner in which transport movements can be reduced is tied into the provision of high quality public transport between key locations in Fingal and into the surrounding counties, particularly Dublin City Council. 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 Baldoyle area and the developing area of Clongriffin/Belmayne, 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.

4.9.7 Evolution of Climate Change in the Absence of a Local Area Plan

The Local Area Plan will provide for opportunities to locate a medium/high density mixed use development in proximity to the recently constructed rail station at Clongriffin. In the absence of a Local Area Plan, such development would be less regulated, and could tend towards lower unsustainable densities which would work against the further provision of high quality public transport.

The lack of a Local Area Plan would also facilitate development based around existing estate models, providing for enclosed unconnected developments which would not facilitate pedestrian movement. This would increase short distance car movements to local facilities as well as reducing public transport movement to workplaces thus increasing the levels of greenhouse gases and CO^2 than will be produced if the Plan was in place.

The Draft LAP requires that new housing and building developments comply with the energy regulations. Compliance with these regulations will minimise energy use and the subsequent production of greenhouse gases. Also in the absence of proper planning and development, building construction materials may not comply with the energy regulations requirements. Greenhouse gas emissions would increase which would be contrary to the policies of the National Climate Change Strategy (2007).

The full implementation of the Guidelines on Flood Risk Management would be less likely, leading to unsuitable location of development and poor design for water inundation, along with increased areas of impermeable surfaces.

Development along potential river floodplains would be likely to take place, leading to increased likelihood of flooding in the event of high rainfall. Development on green spaces and in locations suitable for retention areas would be likely, further increasing the likelihood of severe flooding.

4.10 Material and Cultural Assets

4.10.1 Introduction

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

Material Assets

- Waste Water;
- Drinking Water;
- Waste Management;
- Transport Infrastructure.

Cultural Assets

- Architectural Heritage;
- Archaeological Heritage.

4.10.2 Wastewater

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. All of the sludge products generated are either recycled as a useful fertiliser, or used as a green energy source. Sampling and analysis of Ringsend Wastewater Treatment Plant effluent is carried out daily in fulfilment of the requirements of the Urban Wastewater Treatment Regulations 2001 (S.I. 254 of 2001). Dublin City Council is currently finalising proposals to increase the capacity of the plant from 1.7 million PE (population equivalent) to 2.1 million PE, with a target completion date of 2015.

Under the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. 684 of 2007) wastewater discharges above a certain threshold will have to be licensed by the Environmental Protection Agency. Dublin City Council currently has a licence application in respect of the discharge from Ringsend wastewater treatment plant with the EPA and will have to adhere to the discharge emission limit values that which will be set by the EPA. Local Authorities are expressly forbidden under these regulations from knowingly allowing further developments if these developments are likely to result in a deterioration in the status of any waterbodies.

In 2010, the Environmental Protection Agency granted a Discharge Licence to Dublin City Council under the Waste Water Discharge (Authorisation) Regulations (2007). Dublin City Council must comply with the conditions of this discharge licence. The

ultimate objective of this licence is to restrict discharges from the wastewater network into rivers and waters. The 2007 Regulations also require that the Water Service Authority satisfies itself that there is drainage capacity available in the network prior to granting a planning permission for any development. This requirement will apply to all developments within the LAP.

There is recognition of the need to upgrade the existing treatment plants and the drainage connection network in the region. The predicted development flows to 2031 set out in the GDSDS indicate a need to plan for the expansion of the existing system. The majority of options examined within the GDSDS indicate the capping of flows to Ringsend at 2.16 million PE and directing additional flows to another facility within the Greater Dublin Area[3].

The Greater Dublin Drainage initiative which is currently underway aims to provide strategic drainage infrastructure required for the Greater Dublin Area (GDA) to continue to develop, both socially and economically. The Greater Dublin Drainage initiative involves the provision of a new wastewater treatment works; a marine outfall; and a new drainage network in the northern part of the GDA. It is currently estimated that construction for the new Wastewater Treatment Plant and orbital pipelines will commence in approximately mid-2017.

The North Fringe Interceptor Sewer, which is a major trunk sewer constructed in 2004, will be the receiving environment for any future development on the Baldoyle-Stapolin LAP. The North Fringe Interceptor Sewer runs along the northern and eastern boundary of the lands. The sewer in this area is a 1600mm GRP pressure pipe and is connected to the Sutton Pumping Station. It generally flows under gravity except for specific flow and overflow conditions that could arise if the Sutton Pumping Station is out of commission. From the Sutton Pumping Station the wastewater will be discharged to the Waste Water Treatment Plant at Ringsend. The lands within the Draft LAP area are all part of the original design catchment for the North Fringe Sewer, and hence, at a strategic level, there is adequate capacity to facilitate development within this area.

Within the site a foul sewer pipe network will be constructed to serve any future development. This network will be connected to a Pumping Station and a rising main. This rising main will connect to the North Fringe Interceptor Sewer.

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).

4.10.3 Waste Water: Existing Problems / Environmental Considerations

In the short term there is the potential for a waste water treatment shortfall in the area if the upgrade of the Waste Water Treatment Plant at Ringsend does not keep pace with development. The overloading of waste water treatment plants, low levels of treatment and discharge of outflow to water bodies at risk has significant potential to harm human

[3] Final Environmental Report for the SEA of the GDSDS (May 2008) Section 3.3

health - through contamination and pollution of drinking water – and biodiversity and contribute to failing Water Framework Directive(WFD) objectives if unmitigated.

In the longer term however, it is considered that the completion of the GDSDS will resolve the majority of issues regarding wastewater treatment constraints up to 2031. This will allow for wastewater treatment capable of serving sustainable and in some instances, appropriate higher density development of the County, without any negative impact on the achievement of the objectives of the WFD. Notwithstanding the increased capacity of the wastewater treatment plants for the County, sustainable development along high quality public transport corridors should form the basis for growth over the lifetime of the LAP.

If new development was not accompanied by appropriate waste water infrastructure /capacity then it is likely that adverse impacts upon a number of environmental components would arise.

4.10.4 Drinking Water

4.10.4.1 Existing and Future Water Supply

Fingal County Council Water Services Department is responsible for the delivery of a high quality drinking water supply to approximately 90,000 households and non-domestic properties in the County. In addition the Council provides drinking water to the same number of premises in Dublin City, South Dublin, Meath and Kildare.

Fingal is fortunate to be self sufficient in terms of water supply. The Council runs two water treatment plants. The primary source of Fingal's water is the Leixlip Treatment plant on the River Liffey. This plant provides a guaranteed output of 148 megalitres per day, although it can produce up to 168 megalitres for short periods. Of the water produced by Fingal only a half is used within the county, the rest being exported to Dublin City, South Dublin, Kildare and Meath. Some parts of the county that border on the City are supplied by feeds from within Dublin City, whose water originates from Ballymore Eustace and Roundwood.

Treated water is distributed throughout Fingal using a combination of pumped mains, gravity mains and reservoirs. Presently, the water supply serving Baldoyle comes from the Liffey at its abstraction point at Leixlip and is fed by the North Fringe Water Supply Scheme via the Ballycoolin Reservoir.

There are plans for the expansion of the Leixlip Plant to increase production capacity to 215Ml/day. The expansion should be complete by the end of the end of 2013. Following the expansion there will be no more capacity for additional abstractions from the River Liffey.

The Water Supply Project – Dublin Region is currently assessing the strategic need and sourceoptions for a new water supply source for the Dublin Region Water Supply Area, which includes Fingal. The requirement for a new water supply is based on the future planned development of the Greater Dublin Area as identified in the National Spatial Strategy (2002-2020) and previous studies carried out to investigate how water demand for future development in the region can be met when existing sources have been developed to their sustainable water supply limits. The current estimate, based on a per

capita consumption of 145 l/day indicates that a new source is required by 2016. Ten new water source options are currently being evaluated in this study.

4.10.4.2 Drinking Water Quality

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 2010 indicates that Fingal County has exceeded the monitoring requirements as required by the European Communities (Drinking Water) Regulations (No.2), 2007. Microbiological compliane in Fingal Public Water Supplies stood at 100% in 2010 whilst chemical compliance levels stood at 99.8%. The overall rate of compliance with water standards in Fingal at 98.5%, was above the national average and the quality of water in Fingal 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.

4.10.5 Waste Management

National waste policy is well established in Ireland with the foundation laid in the publication of Changing Our Ways in 1998. At the core of this national policy statement is the EU Waste Hierarchy with a preference for the prevention, reuse and recycling (including biological treatment) of waste ahead of energy recovery and landfill disposal. The waste sector is estimated to account for an estimated 2% of total green house gas emissions in 2009.

Fingal County Council, Dublin City Council, South Dublin County Council, and Dún Laoghaire-Rathdown County Council jointly developed the Waste Management Plan for the Dublin Region. The current Waste Management Plan for the Dublin Region 2005-2010 sets out a regional policy framework for the sustainable management of waste arising in the region. It is based on the priority of prevention and minimisation of waste, maximising recycling and minimising landfill bulk through thermal treatment. This Waste Management Plan is currently under review together with a Strategic Environmental Assessment.

Fingal County Council has a commitment under the Waste Management Plan 2005-2010 to provide infrastructure for recycling, biological treatment and composting of waste as well as waste prevention and minimisation initiatives. Facilities within the county at Arthurstown and Balleally are now at capacity and closed with waste collection now being carried out by a number of third party companies and disposed of under licence.

Recycling remains central to the Waste Plan with a new Regional Materials Recovery Facility at Ballymount in South Dublin for the processing of all green bin recyclables. Regional Materials Recovery facility at Ballymount, Dublin 12 became operational in 2009. The regional MRF is designed to cater for the processing of green materials in the Dublin Region for the next 20 years. The facility has an annual capacity of 100,000 tonnes per annum. An issue for recycling is developing recyclable markets as most materials are exported to foreign markets for reprocessing and recycling, as the quantities generated in Ireland do not provide the necessary economies of scale for indigenous reprocessing.

In 2007, the DOEHLG Market Development Group published a 5-year programme for the stimulation of recycling markets. Energy recovery is part of the management plan and the region will thermally treat residual waste with a new Waste to Energy Plant (6.2 hectares) in Poolbeg. The facility will be able to handle 600,000 tonnes of municipal waste annually. The facility will produce energy to meet the needs of approximately 50,000 houses in the form of energy supplied to the National Grid. The facility will also have the capacity to provide district heating for up to 60,000 homes. Planning permission, an EPA Licence and a licence from the Commissioner for Energy Regulation has been granted. A grid connection with the ESB and a Foreshore licence has also been granted.

In the Dublin Region, progress towards achieving the adopted waste targets has been steady. The municipal waste recycling rate is the headline indicator for municipal waste and a target of 45% by 2010 was set in the Regional waste plan 2005 - 2010. A municipal waste recycling rate of 47% was reached in 2010 and represents a 3% increase on the 2009 figure. The commercial sector continues to perform well with high levels of segregation of dry recyclable and packaging waste types driving recovery in this sector. The household recovery rate continues to progress with the use of green (dry recyclables) and brown bins(garden and food waste). The household waste recycling rate is a secondary indicator for municipal waste and increased to 44% in 2010 compared to 41% in 2009. The long term waste recycling target of 59% by 2013 remains a challenge.

The Council has four recycling centres which are located at Balleally Landfill; Estuary Recycling Centre, Swords; Coolmine Recycling Centre and Balbriggan Recycling Centre, and 80 bring banks around the County with the closest being located in Baldoyle Industrial Estate, Balgriffin, Sutton and Portmarnock. Fingal County Council have reported increases in the volume of material being recycled at the bring bank facilities.

4.10.6 Transport

4.10.6.1 Roads

Baldoyle-Stapolin is well situated in close proximity to the strategic national road network. The main road network in the immediate vicinity of the LAP lands includes Grange Road which runs to the south of the plan lands. Grange Road provides the strategic link to the N32, Malahide Road, and M50/M1 to the west and to the R106 Stand Road/Coast Road to the east. The Coast Road/Strand Road, runs along the eastern perimeter of the plan lands and links the northern villages of Portmarnock and Malahide, via Baldoyle, with Sutton Cross and the Dublin Road (Howth – Clontarf) and onwards to

the city centre. The Mayne Road, which runs to the north of the site, also provides an access westwards towards the Malahide Road and the M50/M50 Motorways.

Within the site a number of internal roads have been constructed to serve the existing residential developments at Myrtle and Red Arches. These include the main access routes from the Coast Road and the Grange Road respectively.

4.10.6.2 Public Transport

The main Dublin-Belfast railway line lies immediately to the west of the site and provides DART and suburban rail services to Malahide (and further north) and the City Centre from the newly constructed Clongriffin Station which is located centrally along the western boundary of the RA (residentially) zoned land.

The total journey time from Clongriffin to Connolly Station in Dublin City Centre is estimated at 17 minutes on the DART and c. 12 minutes on the Suburban Commuter Train. Currently, this station is served by a maximum of 5 no. trains in the am peak hour (8.00am – 9am) with a maximum total of 8 no. trains serving the station between 5pm and 7pm. Outside of these hours the station is served by trains going in either direction on average every half an hour.

Among the bus routes serving the plan lands are the 29A which stops on the Grange Road and the number 15 which currently terminates at Clongriffin Square to the west of the railway line within the Dublin City Council area. The following provides a list of all services operating within proximity of the LAP lands at the time of preparation of the Plan:

- 29A - Grange Road – Abbey Street
- 32 Malahide - Baldoyle - City Centre
- 32X Estuary Road - Baldoyle - City Centre - UCD
- 102 - Sutton Dart Station via Baldoyle to Dublin Airport
- 15 - Clongriffin Square also via Eden Quay to Rathfarnham

Bus Services operating on the Malahide QBC, which is within 2km of the plan lands, currently include the following:

- 27 – Clare Hall via Eden Quay to Tallaght
- 27X – Clare Hall via Connolly to UCD
- 42 – Malahide to Eden Quay
- 43 – Swords to Eden Quay

Route 17A operates from Howth Junction to Blanchardstown Shopping Centre via Beaumont Hospital and Ballymun.

Based on the above it can be concluded that the LAP lands are highly accessible in terms of public transport given their proximity to the newly constructed Clongriffin Train Station and the level of bus services that can potentially be accessed from the site.

4.10.6.3 Pedestrian and Cycle Route Network

Within the LAP lands, although the development is only partially complete, there is a network of pedestrian and cycle routes throughout the site providing access from the

Coast Road to the Grange Road entrance and there is also a temporary road in place which provides access for both pedestrians and cyclists to the train station. While permeability through the site for pedestrians and cyclists is relatively good given the unfinished nature of the overall development, there is an identified lack of cycle ways and connecting footpaths serving some of the existing estates adjoining the LAP lands. Despite the presence of a temporary stair and lift access to the train station, the LAP lands suffer from high levels of severance from the developing residential and commercial area of Clongriffin to the west due to the presence of the rail line. In addition there are no linkages at present to the adjoining developments of Castlerosse and Stapolin Lawns which makes access to the train station from these areas somewhat circuitous.

Outside the plan lands, while there is a dedicated pedestrian and cycle track along Baldoyle Road from the Dublin Road in Sutton to Baldoyle Village, the Coast Road is not an attractive environment for cyclists and pedestrians due to its narrowness coupled with the speed and volume of the traffic. There is an objective for a dedicated cycle/pedestrian route along the Coast Road linking through the Main Street of Portmarnock town centre to the north and to the Dublin Road, Sutton to the south. This will form part of the proposed Fingal Coastal Way which, when fully operational will link Balbriggan with Howth and at Sutton will connect in with the proposed Sutton to Sandycove route (S2S route).

4.10.7 Material Assets Issues. Existing Problems / Environmental Considerations

In the short term there is the potential for a waste water treatment shortfall in the area if the upgrade of the Waste Water Treatment Plant at Ringsend does not keep pace with development. The overloading of waste water treatment plants, low levels of treatment and discharge of outflow to water bodies at risk has significant potential to harm human health - through contamination and pollution of drinking water – and biodiversity and contribute to failing Water Framework Directive(WFD) objectives if unmitigated.

In the longer term however, it is considered that the completion of the GDSDS will resolve the majority of issues regarding wastewater treatment constraints up to 2031. This will allow for wastewater treatment capable of serving sustainable and in some instances, appropriate higher density development of the County, without any negative impact on the achievement of the objectives of the WFD. Notwithstanding the increased capacity of the wastewater treatment plants for the County, sustainable development along high quality public transport corridors should form the basis for growth over the lifetime of the LAP. If new development was not accompanied by appropriate waste water infrastructure /capacity then it is likely that adverse impacts upon a number of environmental components would arise.

Long-term water supplies for the County should be resolved through the Water Supply Project –Dublin Region. This project aims to supply water to the Dublin region up to 2031 and beyond. Improvements in the existing water infrastructure as well as more efficient use of the water resource, including payment for usage, are considered sufficient to accommodate development within the County for the period of the LAP. To this end the need to conserve water will be highlighted in the LAP. Fingal County Council currently ensures the provision of excellent quality drinking water. These high standards will not be affected by improvements to the network.

The management of waste and promoting better waste management both in developments and altering people's behaviour around waste management and recycling also remains an ongoing issue. The Council through the planning process will ensure that new residential and commercial developments will include facilities for the collection of separate waste streams. The Council will also continue its environmental awareness programme for the public and businesses with regard to their responsibility as generators of waste. In the case of the LAP the plan will promote sustainable material use in development by developing relevant policies and standards particularly in the area of construction as the construction industry accounts for a quantity of waste generation. In addition, the should insist on a proportion of building materials being recycled materials, such as, concrete, brick, stone thereby reusing materials rather than utilising new materials in development. Similarly, the planning authority should insist on a proportion of materials being from renewable sources such as low embodied energy materials and low toxic materials. The LAP should also ensure the provision of sufficient quantity and high quality recycling facilities for waste sorting located conveniently for collection as well ensuring that standards for the storage, segregation and removal of waste at individual development/site level are taken into account at the planning stage.
In terms of transport provision, there is a need to prioritise development where alternative and sustainable modes of public transport are available or planned, to make provision for improved cycle and walking routes within the LAP land, and to improve accessibility to and maximise the use of sustainable forms of transport. Notwithstanding this, the maintenance and upgrade of the existing road network and, where necessary, the provision of new road networks or realignments of existing roads are essential to ensure that the road network and its carrying capacity are maintained to a high standard as well as recognising the importance of a safe and efficient road network for all users.

While transportation is one of the cornerstones of the Irish economy and will continue to be promoted as an essential component to the further sustainable development of Fingal and the LAP lands, the function of the Local Authority can be somewhat limited in that the National Roads Authority are directly responsible for the national roads network, funding for all Regional and Local roads comes principally from the Department of Transport, Iarnród Éireann are directly responsible for the rail network and Bus Éireann and other private operators are responsible for public bus services

4.10.8 Evolution of Material Assets in the Absence of a Local Area Plan

The Local Area Plan will ensure sustainable development of necessary infrastructure/capacity for the predicted population increases throughout the area. In the absence of a plan, development would not have the necessary infrastructure to provide adequate environmental mitigation. In this case, the receptors, population and habitats, would suffer from unplanned and unmonitored development. It is envisaged that the provisions of the Draft LAP and the provisions of the County Development Plan 2011-2017 will contribute towards protection of the environment with regard to impacts arising from material assets.

4.10.9 Cultural Assets

4.10.10 Introduction

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 most important items of archaeological and architectural heritage in the county are recorded under the Record of Monuments and Places, and Appendix 3- the Record of Protected Structures, of the current Development Plan. There are over 700 Recorded Monuments and approx 800 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.

4.10.11 Architectural Heritage

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

The Record of Protected Structures (RPS) is legislated for under the Planning and Development Acts 2000-2010. Protected Structures are defined as structures, or parts of structures that are of special archaeological, artistic, cultural, scientific, social or technical point of view.

There are no recorded Protected Structures within the plan lands. However, the ruins of Stapolin House, and the remains of its tree-lined driveway lie at the centre of the plan lands, adjacent to the abandoned racecourse. Also remnants of the layout of the racecourse can be found within the parkland areas.

4.10.12 Archaeological Heritage

Archaeology is the study of past societies through the material remains left by those societies and the evidence of their environment. Archaeological heritage consists of such material remains (whether in the form of sites and monuments or artefacts in the sense of moveable objects) and environmental evidence. As archaeological heritage can be used to gain knowledge and understanding of the past it is of great cultural and scientific importance. Archaeological sites and monuments vary greatly in form and date; examples include earthworks of different types and periods, (e.g. early historic ringforts and prehistoric burial mounds), megalithic tombs from the Prehistoric period, medieval buildings, urban archaeological deposits and underwater features. Archaeological sites may have no visible surface features; the surface features of an archaeological site may have decayed completely or been deliberately removed but archaeological deposits and features may survive beneath the surface.

Archaeological heritage is protected under the National Monuments Acts (1930-2004), Natural Cultural Institutions Act 1997 and the Planning Acts. The Record of Monuments and Places (RMP) is an inventory, put on a statutory basis by amendment to the National Monuments Act 1994, of sites and areas of archaeological significance, numbered and mapped.

There are no recorded archaeological sites within the proposed development area. The nearest archaeological features are mounds which lie to the western side of the railway

track within the Dublin City Council administrative area and there are also a number of recorded archaeological features within the Portmarnock South LAP lands which lie to the north of the Moyne Road . While none of these sites and monuments will be directly affected by the proposed development, their presence in the vicinity gives an indication of the archaeological activity in the area.

The overall plan lands have been the subject of a series of progressive desk studies, surveys and on-site investigations as part of the previous planning applications and were submitted for development on the site under the previous Area Action Plan in consultation with the Department of Arts, Heritage & the Gaeltacht.

4.10.13 Cultural Assets Issues

The context of archaeological and architectural heritage has changed over time within and surrounding the LAP lands however no active conflicts between development and legislative objectives governing archaeological and architectural heritage were identified.

4.10.14 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 RMP however, intangible aspects of cultural heritage including identity and sense of place may not be promoted and supported as strongly in the absence of the plan.

Section 5 Strategic Environmental Objectives

5.1 Introduction

Strategic Environmental Objectives (SEO) are used to help show whether the objectives of the plan are beneficial to the environment, to compare the environmental effects of alternatives, or to suggest improvements. They serve a different purpose from the objectives of the plan or programme though they may in some cases overlap with them. A SEO is a statement of what is intended, usually specifying the desired direction of change.

As such, this Section of the SEA presents the environmental objectives that have been identified for the environmental assessment process, against which the different LAP alternatives will be assessed in Section 7.

5.2 Development of Strategic Environmental Objectives, Targets and Indicators

The SEA objectives have been devised having regard to the baseline information and the existing environmental issues relevant to the Local Area Plan. The objectives were developed to be consistent with environmental protection objectives established by International, European and National environmental policies, objectives and standards. Importantly, the selection of SEA objectives is required to be relevant to the context of the proposed LAP. The Strategic Environmental Objectives are focussed on protecting and enhancing the natural and human environment and on minimising negative effects.

The SEA objectives used in this report take the form of a general statement referring to a general direction of change, which are given specific targets and then measured by an indicator. A target usually underpins an objective often having a time deadline that should be met. Indicators are measurements of variables over time, which are used to measure or demonstrate the achievement of objectives and targets. The objectives outlined in this section will be used for the assessment of the alternatives.

The primary source used in formulating the SEOs were the SEA Guidelines (DOEHLG, 2004) and the Environmental Report of the Fingal Development Plan 2011-2017. This list has been amended to give affect to objectives that are considered relevant to this LAP. The use of SEOs is a requirement of Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) which specifies the information content of Environmental Reports. The SEA objectives are set out in Table 5.1.

Also included in Table 5.1 are Detailed Assessment Criteria, which represent the issues that will be considered during the assessment of whether the Plan, including the proposed alternatives, will contribute to meeting the Strategic Environmental Objectives.

Table 5.1 Strategic Environmental Objectives

Strategic Environmental Objective and SEA Topic Area	Detailed Assessment Criteria
Objective 1 **Biodiversity Flora and Fauna (BFF)** Protect and where appropriate, enhance biodiversity, particularly protected areas and protected species	• Provide effective protection of international, national and local "protected areas" and "rare and distinctive species" • Provide effective protection of biodiversity in the wider landscape including species and habitats protected by law • Contribute to the Fingal Biodiversity Action Plan objectives
Objective 2 **Population, Human Health (PHH)** Provide high-quality residential, working and recreational environments and sustainable transport	• Reduce population exposure to high levels of noise, vibration and air pollution • Increase modal shift to public transport • Contribute to the co-ordination of land use and transportation • Improve access to recreation opportunities • Contribute to the mitigation of floods and droughts
Objective 3 **Soil (S)** Protect the function and quality of the soil resource in Fingal	• Re-use of brownfield lands, rather than developing Greenfield lands • Safeguard soil and geological quality, quantity and function
Objective 4 **Water (W)** Protect and where necessary improve water quality and the management of watercourses and groundwater to comply with the standards of the Water Framework Directive objectives and measures and all water, habitat and fisheries based legislation including the Urban Wastewater Treatment Directive, the Freshwater Fish Directive, the Shellfish Waters Directive, etc.	• Improve water quality in rivers, lakes, estuaries and groundwater • Promote sustainable drainage practices to improve water quality and flow and to enhance opportunities for biodiversity • Reduce the impacts from point source pollution, diffuse source pollution, abstraction and flow regulation and morphological alterations • Ensure flow regulation is appropriate • Prevent deterioration of water bodies from morphological alterations • Promote sustainable use of water and water conservation
Objective 5 **Air Quality and Climatic Factors (AQ/C)** Contribute to mitigation of, and adaptation to, climate change and air quality issues	• Reduce levels of air pollution • Minimise emissions of greenhouse gases • Reduce waste of energy, and maximise use of renewable energy sources • Ensure that all new housing is energy efficient • Ensure flood protection and management • Restrict development in flood plains • Reduce vulnerability to the effects of climate change

Strategic Environmental Objective and SEA Topic Area (cont'd)	Detailed Assessment Criteria (cont'd)
Objective 6 **Cultural Heritage (CH)** Protect and, where appropriate, enhance the character, diversity and special qualities of cultural, architectural and archaeological, heritage	• Improve protection for areas of archaeological potential and for undiscovered archaeology • Promote a better understanding of sensitive environments and human interaction with those environments
Objective 7 **Landscape (LH)** Protect and, where appropriate, enhance the character, diversity and special qualities of landscapes in Fingal	• Improve protection for landscapes and seascapes of recognised quality • Ensure that landscape character is considered in the development process • Maintain clear urban/rural distinctions • Enhance provision of, and access to, green space in urban areas
Objective 8 **Material Assets (MA)** Make best use of existing infrastructure and promote the sustainable development of new infrastructure	• Improve availability and accessibility of commercially provided facilities and public services • Protect Greenfield land and promote the use of brownfield sites • Increase local employment opportunities • Improve efficiencies of transport, energy and communication infrastructure • Ensure sufficient waste water treatment infrastructure • Provide drinking water supply and water conservation measures • Reduce the generation of waste and adopt a sustainable approach to waste management

5.2.1 Internal Compatibility of Strategic Environmental Objectives

The internal compatibility of the Strategic Environmental Objectives has been examined to identify potential areas of conflict in relation to each objective so that subsequent decisions can be well based. As shown in Table 5.2 the eight objectives are generally compatible. For example, the objectives for air quality and climate change are consistent with protecting and enhancing biodiversity and protecting human health. In some cases there is no obvious relationship between the objectives, e.g. no direct link between enhancing soil quality and function and making efficient use of water management infrastructure.

Table 5.2 Internal Compatibility of SEA Objectives

Objective 1 BFF	**Y**							
Objective 2 PHH	**Y/N**	**Y**						
Objective 3 S	**Y**	**Y**	**Y**					
Objective 4 W	**Y**	**Y**	**Y**	**Y**				
Objective 5 AQ	**Y**	**Y**	**Y**	**Y**	**Y**			
Objective 6 CH	**Y/N**	**Y/N**	**Y/N**	**Y/N**	**Y**	**Y**		
Objective 7 L	**Y/N**	**Y/N**	**Y**	**Y/N**	**Y**	**Y**	**Y**	
Objective 8 MA	**Y**	**Y**	**Y/N**	**Y**	**Y**	**Y/N**	**Y**	**Y**
	Obj 1 BFF	**Obj 2 PHH**	**Obj 3 S**	**Obj 4 W**	**Obj 5 AQ**	**Obj 6 CH**	**Obj 7 L**	**Obj 8 MA**

Key: Y = Yes, compatible N = No, not compatible 0 = Neutral Y/N = May be compatible depending on how it is implemented

5.2.2 Compatibility with the LAP Vision

The Vision for the Baldoyle-Stapolin LAP is outlined in Section 3 of this report. It seeks to create a place that is appealing, distinctive and sustainable, with minimal impact on the surrounding environment and the coast. The Vision includes four development themes, those themes being:

- Sustainable Development
- High Quality Places for All
- A New Heart for Baldoyle-Stapolin
- Homes for the Future

Within each of these themes are associated LAP objectives. The compatibility of the Strategic Environmental Objectives and the LAP objectives within the Vision was examined using a compatibility matrix (Table 5.3). The LAP Vision objectives are listed below for ease of reference.

Objective 1: Establish sustainable communities, which embody the principles of sustainable development and meet current and future social, economic and environmental needs in a balanced and integrated way.

***Objective 2*:** Be at the forefront of sustainable development with commercial buildings, community facilities, housing and infrastructure which employ best practice in all aspects of environmental sustainability.

***Objective 3*:** Establish a rich tapestry of quality connected open spaces and river corridors across the LAP lands, which provide for visual amenity and recreational use while addressing the need for nature conservation and flood risk mitigation.

***Objective 4*:** Implement an integrated and sustainable transport infrastructure strategy for Baldoyle-Stapolin which supports the effective management of sustainable travel patterns across the site.

Objective 5: Achieve a high standard of design through development that creates a real sense of place through the juxtaposition and provision of buildings, streets, spaces, features and facilities of high quality design, layout and materials.

Objective 6: Create a sustainable mixed-use centre for Baldoyle-Stapolin which meets local needs by providing a range of retail, commercial, leisure and residential uses and establishes a distinctive sense of place and heart for the community.

***Objective 7*:** Deliver between 800-1,100 new dwellings, in addition to those already developed on the LAP lands, to help meet existing and future housing needs and to create a sustainable mixed-use community.

***Objective 8*:** New homes will provide a mix of type, size and tenure including social housing, medium to high-density layout appropriate to the location of the site and be designed to highest standards.

In most cases, where the LAP aims to promote development, there is potential for negative impacts to BFF, W, S, CH and L depending on how the development is delivered and this is reflected in the number of Y/N in the matrix.

Table 5.3 Compatibility of SEA with LAP Vision Objectives

	SEA OBJECTIVES							
LAP VISION OBJECTIVES	**BFF**	**PHH**	**S**	**W**	**AQ**	**CH**	**L**	**MA**
1	Y	Y	Y	Y	Y	Y	Y	Y
2	Y/N	Y	Y/N	Y/N	Y/N	Y	Y/N	Y
3	Y	Y	Y	Y	Y	Y	Y	Y
4	Y/N	Y	Y/N	Y/N	Y	Y/N	Y/N	Y
5	Y/N	Y	Y/N	Y/N	Y/N	Y/N	Y/N	Y
6	Y/N	Y	Y/N	Y/N	Y/N	Y/N	Y/N	Y
7	Y/N	Y	Y/N	Y/N	Y/N	Y/N	Y/N	Y
8	Y/N	Y	Y/N	Y/N	Y/N	Y/N	Y/N	Y

5.2.3 Strategic Environmental Indicators and Targets

The overall purpose of environmental indicators in the SEA is to provide a way of measuring the environmental effect of implementing the LAP. Environmental indicators are also used to track the progress in achieving the targets set in the SEA as well as the LAP itself. The proposed indicators have been selected bearing in mind the availability of data and the feasibility of making direct links between any changes in the environment and the implementation of the LAP.

Targets were considered over the duration of the baseline data collection and assessment, and throughout the consultation process, in order to meet the Strategic Environmental Objectives as well as the objectives of the Plan. In each case, any target that is set must be attributable to the implementation of the Plan. The targets and indicators associated with each SEA Objective are presented in Table 5.4.

Table 5.4 Strategic Environmental Objectives, Targets and Indicators

Objectives	Sub Objective (where relevant)	Targets	Indicators	Source/Responsibility
Objective 1 **Biodiversity Flora and Fauna** Protect and where appropriate, enhance biodiversity, particularly protected areas and protected species	• Avoid loss of locally rare and distinctive species • Avoid loss of designated sites (SACs/SPAs/NHAs) • Enhance Green linkages • Facilitate the actions set out within the Fingal Biodiversity Action Plan	• No planning permissions granted within 100m of the boundary of a designated site • Facilitate relevant actions of the Fingal Biodiversity Action Plan by 2019 • No loss of locally rare /distinctive species/habitats • No net loss of green linkages established under Green Infrastructure Plan/Strategy • No loss of designated sites	• Number of developments receiving planning permission within 100m of the boundary of a designated site • Number of actions facilitated in Biodiversity Action Plan • Number of sites containing locally rare/distinctive species/habitats. • Area of new green infrastructure established • Number of planning permissions with biodiversity conditions	Fingal Co. Co. – Planning/Heritage Officer Biodiversity Officer
Objective 2 **Population, Human Health** Provide high-quality residential, working and recreational environments and sustainable transport	• Ensure that all new developments granted permission are adequately served with community facilities • Ensure that the LAP lands are provided with a good mix and quality of house type facilitating mixed tenure • Ensure that local employment opportunities are promoted • Ensure that sustainable transport modes are readily accessible	• Provide 20 childcare places per 75 houses • Reserve a school site to accommodate resident school going children. • All new homes to be built within o 300m of a local park o 2km of a neighbourhood park o 1km of commercial facilities • Appropriate mix of house and tenure type (including social housing) in all new developments. • All granted planning applications for new residential developments to be accompanied by a design	• Ratio of houses in LAP to total childcare places provided • School site reserved for primary school • Number of new homes built within o 300m of a local park o 2km of a neighbourhood park o 1km of commercial facilities • % of planning applications granted for new residential developments that are accompanied by a design statement • % of employed both living and working in Fingal • Distance and mode of	Fingal Co. Co. - Housing Planning (with input from Fingal Childcare Committee) Parks/Planning Community/Planning CSO, POWSCAR

Objectives	Sub Objective (where relevant)	Targets	Indicators	Source/Responsibility
		statement • Increase the % of local residents working locally • Decrease in journey time and distance travelled to work during the lifetime of the plan	transport to work.	
Objective 3 **Soil** Protect the function and quality of the soil resource in Fingal	• Safeguard soil and geological quality, quantity and function	• No land reclamation permits	• Number of land reclamation permits issued	Fingal Co. Co. - Environment
Objective 4 **Water** Protect and where necessary improve water quality and the management of watercourses and groundwater to comply with the standards of the Water Framework Directive objectives and measures and all water, habitat and fisheries based legislation including the Urban Wastewater Treatment Directive, the Freshwater Fish Directive etc.	• Improve water quality in rivers, lakes, estuaries and groundwater. • Promote sustainable use of water and water conservation	• Implementation, insofar as effected by the Plan lands, of the Programme of Measures identified under the ERBD River Basin Management Plan for the River Mayne. • New residential developments to incorporate water conservation measures such as rainwater harvesting	• River Mayne achieving 'good status' as defined in the WFD • % of residential units which incorporate water conservation measures as part of their planning permission.	EPA Fingal Co. Co. - Water Services Planning
Objective 5 **Air Quality and climate** Contribute to mitigation of, and adaptation to, climate change and air quality issues	• Implement the Planning System and Flood Risk Management Guidelines • Incorporate the objectives of the Floods Directive into sustainable planning and development	• All new residential development within the areas to have undergone a site specific flood risk assessment. • No new residential development within the 1:1000 flood plain	• % of new developments that have been conditioned to implemented the recommendations of the site specific flood risk assessment • Number of non water	FEMFRAMS Fingal Co. Co. - Housing/ Architects/ Planning Transportation/Planning

Objectives	Sub Objective (where relevant)	Targets	Indicators	Source/Responsibility
	• Development of a sustainable transportation infrastructure which reduces the need for travel and journey length • Ensure that all new housing is energy efficient	• All new residential buildings granted planning permission within the lifetime of the plan to have a minimum A3 BER Rating • Increase in the number of persons using sustainable modes of transport i.e. bus, rail, cycling and walking in the Plan lands	compatible developments permitted in the high risk zone (greater than 1:200 year event for coastal flooding and 1:100 year event for river flooding). • Percentage of new residential buildings granted planning permission with minimum A3 BER rating • % of persons using sustainable modes of transport within the CSO small areas relevant to the Plan lands.	Water Services/Planning Planning CSO – small area population statistics (SAPS)
Objective 6 **Cultural Heritage** Protect and, where appropriate, enhance the character, diversity and special qualities of cultural, architectural and archaeological, heritage in Fingal	• Protect the cultural heritage of Fingal with regard to the landscape surrounding the LAP lands.	• No impacts on the cultural heritage value by development granted planning permission • Retention of views to key sights such as Ireland's Eye	• Number of planning permissions within 100m of designated sites • Number of developments which have taken account of views.	Fingal Co. Co. - Planning Heritage Officer
Objective 7 **Landscape** Protect and, where appropriate, enhance the character, diversity and special qualities of landscapes in Fingal	• Avoid the loss of designated views • Protect and enhance the designated coastal landscape having particular regard to its designations under the Habitats Directive and the Birds Directive	• Maintain and enhance the character of the coastal landscape and its biodiversity value • Layout of development to incorporate protected views	• Number of protected views lost through development • Implementation of the objectives and measures of the Landscape Masterplan in the LAP by 2019	Fingal Co. Co. – Planning/ Heritage Officer Environment (Parks) Biodiversity Officer
Objective 8 **Material Assets**	• Ensure higher densities are achieved on zoned	• Increase the density of development in proximity to the	• Percentage of development that is built out in	EPA Fingal Co. Co. –

Objectives	Sub Objective (where relevant)	Targets	Indicators	Source/Responsibility
Make best use of existing infrastructure and promote the sustainable development of new infrastructure	residential lands in close proximity to public transport • Protect and promote the coastline of Fingal as an asset now and in the future. • Discharge to waste water treatment plants that comply with the Water Framework Directive and the Urban Waste Water Directive	rail line • Increase in the length in Km of coastal walkway developed over the lifetime of the plan • Ensure that all waste water is drained to WWTPs that comply with the Water Framework Directive and the Urban Waste Water Directive	accordance with the Preferred Masterplan and the Sequencing and Phasing strategy of the LAP • Length in Km of coastal walkway • % of development that is connected to Ringsend Wastewater Treatment Plant or other plant that conforms with the requirements of the Water Framework Directive and the Urban Waste Water Directive	Planning Water services Parks Environment

Section 6 Local Area Plan Alternatives

6.1 Introduction

The preparation of the local area plan and the associated policy and objectives affecting Baldoyle presents an opportunity to affect the way physical change and development occurs, how it happens and the character of that process. The SEA process seeks to document the development process where key decisions are reached, and consider the environmental impacts of the policy path chosen. The examination of alternative means of achieving the strategic objectives of a plan, recognises the broad challenges before policy makers, as well as seeking the articulation of why the plan prescribes one path over another.

6.2 Excluding the Do-Nothing Scenario

The consideration of plan alternatives is a real-world exercise that recognises the plan must work within the existing context of national and regional policy and plans, climate change, and an Irish and European legislative framework that has sustainable development at its core. It is not an open-book exercise, where every conceivable option is examined. Therefore, in selecting realistic alternatives that could be evaluated, 'no development' was considered an unreasonable alternative, as it would not reflect the statutory and operational requirements of the Plan.

6.3 Legislative Context

The consideration of Alternatives is a requirement of the SEA Directive (2001/42/EC). It states under Article 5(1) that;

> *Where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated. The information to be given for this purpose is referred to in Annex I.*

Annex 1 (h) of the Directive clarifies that the information to be provided on alternatives under Article 5(1), is *inter alia* an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.

Article 9 of the Directive requires that a statement shall be prepared providing information on the reasons for choosing the plan as adopted, in the light of the other reasonable alternatives dealt with.

Annex 1 (f) details the environmental topics to be considered in the evaluation of the alternatives, which is the same as that addressed in the assessment of the plan itself:

> *biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors*.

Therefore, the Directive emphasises that the SEA process must consider alternatives that are 'reasonable', and take into account 'the objectives' of the plan, and 'the geographical scope of the plan'. The term 'reasonable' is not defined in the legislation. Good practice points to the analysis of 'Alternatives' as being a constructive and informative exercise for the policy makers, and that only 'possible' options for policy are examined. Plan scenarios that run counter to European environmental directives, the National Spatial Strategy, Ministerial Guidelines or Regional Planning Guidelines would not be considered reasonable.

Alternatives are required to take into account the objectives of the plan. The alternatives study therefore must operate within the vision set out for the LAP, which itself conforms to Development Plan policy, and provide an examination of alternative means of implementing the plan. For the purposes of this Alternatives Study, it is the 8 Objectives contained within the Vision of the LAP and listed previously in Section 5, Paragraph 5.2.2, which form the basis of the Alternatives analysis.

Finally, the consideration of reasonable alternatives must take into account 'the geographical scope of the plan'. The plan comprises areas of contrasting character, taking in the built form of the urban areas of Baldoyle, the Natura 2000 sites at Baldoyle Bay and the rural lands between the Coast Road and the railway line. The alternatives study must take account of this contrasting landscape and context, and only consider policies appropriate for the nature and extent of the plan area.

6.4 Consideration of Alternatives

The Vision outlined in Section 3 of the LAP reflect that sustainable development, high quality places for all, a new heart for Baldoyle-Stapolin in the form of a vibrant village centre, and homes for the future are fundamental values at the very heart of the plan. However, as with all land use plans, policy must address a balancing act between economic growth and urbanisation on the one hand with obligations to protect the environment and heritage of the local and wider area on the other. The LAP sits within a wider planning framework which also seeks to balance the need for development with the need to protect the natural and cultural heritage. The Main Aims of the Development Plan, set out in Section 1.2 of that Plan, reflect this challenge, stating it is the aim to provide for the future well being of the residents of the County by:

- promoting the growth of economic activity and increasing employment opportunities;
- protecting and improving the quality of the built and natural environments; and
- ensuring the provision of necessary infrastructure and community facilities.

In line with the Development Plan and national and regional policy, the LAP seeks to consolidate development thus supporting sustainable transport and the identification of settlements and helping to protect, maintain and enhance the natural heritage of the local area and County.

The zoning context of the LAP is set by the Development Plan and alternatives cannot reasonably suggest a different zoning. Therefore, the alternatives all accept that residential zoning makes up the main built element of the Plan lands with a significant area of High Amenity zoning to the north and east.

Alternatives also need to consider the local context. In the Action Area Plan drawn up for the lands in 2001 the lands were to provide for approximately 2,600 homes and a

population in excess of 7,500 persons. To date, over 600 units are completed with a further 205 started with no work progressing. The form of development is generally higher density, compact urban form with semi-private courtyard spaces and on-street and underground car parking. Planning permissions exist for a further 1,289 units on the lands, also higher density. This scale of development was predicated on the provision of the necessary infrastructure. In particular, the construction of a new railway station was required at Clongriffin on the lands bounding the site to the west. This railway station has been delivered and is operational. In addition, much of the internal road network is in place as is most of the underground infrastructure to serve the site, including foul drainage and water supply. A large regional park, Racecourse Park, with associated pitches and play areas was part of the original vision for the lands. This has been partly realised through the delivery of pitches, changing rooms and a play area and the taking in charge of a significant portion of the remainder of the regional park by the Council. Agreements are in place to take in charge the remainder of the park over time.

The consideration of alternatives has taken account of the uncertain economic environment within which the Plan is being prepared. However, it is also recognised that the lifetime of the Plan may go beyond the current uncertainty and the Plan seeks to provide a robust framework that meets with the requirement for proper planning and sustainable development.

Concurrent to a context of uncertain national/international economy, is an increasingly stringent environmental regime. Advancements in legislation from the EU, which include Habitats, SEA, Water Framework and Environmental Liability Directives, place an increasing responsibility on local authorities and state agencies such as the EPA and NPWS to protect and conserve the natural environment. A failure to incorporate and address measures arising out of such primary legislative context would place the parties involved liable to severe penalties.

Three alternatives have been considered within the context of 'reasonable' set out in paragraphs 6.2, 6.3 and 6.4.1 above and in the local and planning context set out above.

Each alternative development scenario has been assessed against the SEA objectives to identify any potential effect or impact on different aspects or components of the environment. The assessment is presented in matrix form. The potential impacts for each alternative are determined as; having a positive or negative impact; as being likely to have both positive and negative impacts but in the absence of further detail the impact is unclear or; having a neutral or no impact. The assessment of the impacts is both qualitative and quantitative, and is based on experience to date and consultation with relevant professionals within the Planning Authority and in relevant agencies.

The key for the potential effects used in the matrices is as follows:

+ Potential positive impact
- Potential negative impact
+/- Both positive and negative impacts likely or that in the absence of further detail the impact is unclear
O Neutral or no impact

Following the environmental assessment of the three alternative development scenarios, the preferred alternative will be selected and described in greater detail. Then a further assessment of the chosen alternative including the identification of

any significant impacts of implementing this alternative on the different components of the environment will be outlined in Section 7.

6.5 Description and Analysis of Alternatives

6.5.1 Alternative 1: Predominantly Suburban Form of Development

6.5.1.1 Description

This option would allow for a predominantly suburban form of development to occur across the remainder of the undeveloped site. By doing so it would cater for the perceived current market for own door, own garden houses. It would concentrate on the provision of more family type housing.

It would differ significantly from the existing compact urban form of development on the lands in that it would provide for predominantly semi-detached houses with on curtilage parking. In essence it would provide for a large traditional housing estate on the remainder of the plan lands.

At a typical density of 35 units/ha this form of development would provide for less than 700 new units on the undeveloped lands. This would equate to a new population of approximately 2000 persons.

6.5.1.2 Planning and Environmental Impact

- Would not maximise the potential for land use-transport integration (*Smarter Travel*) and sustainable travel
- Would not capitalise on current infrastructural development in the form of Clongriffin Railway Station
- Would not build on or progress the high quality compact urban form and design already present in the development
- Would differ from the anticipated urban form of development bought into by existing residents in Red Arches and Myrtle
- A reduced population would make the viability of the village centre proposed around the railway station uncertain
- Would make uncertain the infrastructural investment required around the railway station to create a civic space that links the elevated railway station to the development
- A reduced population would impact on the potential for a vibrant urban space around the village centre
- Would meet with the thrust of settlement policy to consolidate development within the Metropolitan Area but likely to create demand for further residential zoning in the medium term as targets set in the core strategy more difficult to achieve when land potential is not maximised
- May reduce the need for road improvements in the wider area in the short-medium term
- Would provide for predominantly family type accommodation
- Would meet perceived market demand in the short term
- Increases pressure on surrounding natural environment and designated sites but to a lesser extent than the permissions already granted would have done if they were to go ahead

6.5.1.3 Comparison of Alternative 1 against SEA Objectives

The predominantly suburban form of development is assessed against the most relevant SEA Objectives and sub-objectives to the Local Area Plan in Table 6.1.

Table 6.1: Assessment of SEA Objectives against Alternative 1

SEA Objectives	Impacts
Biodiversity, Flora and Fauna	
BO1 Avoid loss of locally rare and distinctive species	**+/-**
B02 Avoid loss of designated sites (SACs/SPAs/NHAs)	**+/-**
B03 Enhance Green linkages	**+**
B04 Facilitate the actions set out within the Fingal Biodiversity Action Plan	**+**
Population and Human Health	
P01 Ensure that all new developments granted permission are adequately served with community facilities	**-**
P02 Ensure that the LAP lands are provided with a good mix and quality of house type facilitating mixed tenure	**+/-**
P03 Ensure that local employment opportunities are promoted	**-**
P04 Ensure that sustainable transport modes are readily accessible	**O**
Water	
WO1 Improve water quality in rivers, estuaries and groundwater	**O**
WO2 Promote sustainable use of water and water conservation	**+**
Climate Factors and Air Quality	
C01 Implement the Planning System and Flood Risk Management Guidelines	**+**
C02 Incorporate the objectives of the Floods Directive into sustainable planning and development	**+**
C03 Development of a sustainable transportation infrastructure which reduces the need for travel and journey length	**-**
C04 Ensure that all new housing is energy efficient	**+/-**
Landscape	
LO1 Avoid the loss of designated views	**O**
LO2 Protect and enhance the designated coastal landscape having particular regard to its designations under the Habitats Directive and the Birds Directive	**+**

Material Assets	
M01 Ensure higher densities are achieved on zoned residential lands in close proximity to public transport	**-**
M02 Protect and promote the coastline of Fingal as an asset now and in the future.	**+/-**
M03 Discharge to waste water treatment plants that comply with the Water Framework Directive and the Urban Waste Water Directive	**+**

6.5.2 Alternative 2: Higher Density Compact Urban Form

6.5.2.1 Description

This option would allow for a high density compact form of urban development not dissimilar to that already granted and/or in place for the majority of the site. It would maximise the potential for the lands in terms of residential units, population and land use and transport integration.

At a typical density averaging 70 units/ha this form of development would provide for approximately 1,400 new units on the undeveloped lands. This would equate to an additional population of approximately 4000 persons. In total this would bring the residential units on the LAP lands to 2,200 units.

This type of development would be dependent on underground car parking and courtyard style semi-private open space to accommodate the higher densities. Apartment or duplex style dwellings would be the main unit type with scope for town houses in parts of the lands. While the plan could ensure that the size of apartments would be suitable for family units, the perceived current market preference for own door, own garden units would not be met for the majority of the site.

The scale of development would ensure sufficient carrying capacity on the lands for a viable and vibrant village centre.

6.5.2.2 Planning and Environmental Impact

- Would maximise the potential for land use-transport integration (*Smarter Travel*) and sustainable travel
- Would capitalise on current infrastructural development in the form of Clongriffin Railway Station
- Would build on and progress the high quality compact urban form and design already present in the development
- Would increase certainty of the viability of the village centre around the railway station
- Would increase the potential for a vibrant urban space around the village centre
- Would meet with settlement policy to consolidate development within the Metropolitan Area and reduce the potential pressures for further residential development on surrounding lands by meeting with targets set in the core strategy
- The capacity at Ringsend Treatment Plant is limited and given the higher densities the delivery of early stages of development could be stalled until such time as the planned Ringsend upgrade has been completed
- Would put increased pressure for road improvements locally and in the wider South Fringe area

- Would provide for a mix of accommodation size but predominantly in apartment or duplex type units
- Would not meet perceived market demand and could stifle development on the site in the short term
- A higher density of development would be likely to increase the population pressures on sensitive and designated sites in the immediate locality but also in designated and sensitive sites in other nearby areas.

6.5.2.3 Comparison of Alternative 2 against SEA Objectives

The higher density compact urban form of development is assessed against the most relevant SEA Objectives and sub-objectives to the Local Area Plan in Table 6.2.

Table 6.2: Assessment of SEA Objectives against Alternative 2

SEA Objectives	Impacts
Biodiversity, Flaura and Fauna	
BO1 Avoid loss of locally rare and distinctive species	**+/-**
B02 Avoid loss of designated sites (SACs/SPAs/NHAs)	**+/-**
B03 Enhance Green linkages	**+**
B04 Facilitate the actions set out within the Fingal Biodiversity Action Plan	**+**
Population and Human Health	
P01 Ensure that all new developments granted permission are adequately served with community facilities	**+**
P02 Ensure that the LAP lands are provided with a good mix and quality of house type facilitating mixed tenure	**+**
P03 Ensure that local employment opportunities are promoted	**+**
P04 Ensure that sustainable transport modes are readily accessible	**+**
Water	
WO1 Improve water quality in rivers, estuaries and groundwater	**O**
WO2 Promote sustainable use of water and water conservation	**+**
Climate Factors and Air Quality	
C01 Implement the Planning System and Flood Risk Management Guidelines	**+**
C02 Incorporate the objectives of the Floods Directive into sustainable planning and development	**+**

C03 Development of a sustainable transportation infrastructure which reduces the need for travel and journey length	**+**
C04 Ensure that all new housing is energy efficient	**+**
Landscape	
LO1 Avoid the loss of designated views	**O**
LO2 Protect and enhance the designated coastal landscape having particular regard to its designations under the Habitats Directive and the Birds Directive	**+/-**
Material Assets	
M01 Ensure higher densities are achieved on zoned residential lands in close proximity to public transport	**+**
M02 Protect and promote the coastline of Fingal as an asset now and in the future.	**+/-**
M03 Discharge to waste water treatment plants that comply with the Water Framework Directive and the Urban Waste Water Directive	**+**

6.5.3 Alternative 3: Combined Densities within Predominantly Compact Urban Form

6.5.3.1 Description

This option would allow for a combination of densities within a predominantly compact urban form of development to occur across the remainder of the undeveloped site. This alternative would give recognition to the perceived market preference for own-door, back garden type houses by allowing for a lower density on those parts of the site which will be developed out first. It also provides for the continuation of the existing compact urban form of development by ensuring that the layout is based on a perimeter block format which is flexible enough to accommodate mixed typologies in terms of unit type.

As a result, this alternative would provide for different house types in the form of townhouse, semi-detached and detached and also apartment and duplex units. The higher densities would be achieved in the village centre, closest to the rail line, and at the parkland edge where there is a possibility for pavilion type blocks of apartments. This alternative provides some flexibility in unit type and density, allowing for different options within the same basic layout.

With densities in the range of 37-80 units/ha across the site, this form of development would provide for approximately 1100 new units on the undeveloped lands. This would equate to a population of approximately 3000 persons.

6.5.3.2 Planning and Environmental Impact

- Would significantly go towards maximising the potential for land use-transport integration (*Smarter Travel*) and sustainable travel
- Would capitalise on current infrastructural development in the form of Clongriffin Railway Station

- Would build on and progress the high quality compact urban form and design already present in the development
- Would help increase certainty of the viability of the village centre around the railway station
- Would increase the potential for a vibrant urban space around the village centre
- Would meet with settlement policy to consolidate development within the Metropolitan Area and reduce the potential pressures for further residential development on surrounding lands by meeting with targets set in the core strategy
- Allow for early stages of development to progress before capacity issues at Ringsend Treatment Plant stall further development giving time for the Ringsend upgrade to commence before higher density development is commenced on site
- Would put increased pressure in the medium term for road improvements locally and in the wider South Fringe area
- Would provide for a mix of accommodation size and type, providing for a wide choice
- Would meet perceived market demand in the short term and allow for more sustainable use of the lands in the medium to long term
- A mixed density of development would increase the population pressures on sensitive and designated sites in the immediate locality and in designated and sensitive sites in other nearby areas.

6.5.3.3 Comparison of Alternative 3 against SEA Objectives

The Combined Densities within Predominantly Compact Urban Form is assessed against the most relevant SEA Objectives and sub-objectives to the Local Area Plan in Table 6.3.

Table 6.3: Assessment of SEA Objectives against Alternative 3

SEA Objectives	Impacts
Biodiversity, Flaura and Fauna	
BO1 Avoid loss of locally rare and distinctive species	**+/-**
B02 Avoid loss of designated sites (SACs/SPAs/NHAs)	**+/-**
B03 Enhance Green linkages	**+**
B04 Facilitate the actions set out within the Fingal Biodiversity Action Plan	**+**
Population and Human Health	
P01 Ensure that all new developments granted permission are adequately served with community facilities	**+**
P02 Ensure that the LAP lands are provided with a good mix and quality of house type facilitating mixed tenure	**+**
P03 Ensure that local employment opportunities are promoted	**+**

P04 Ensure that sustainable transport modes are readily accessible	**+**
Water	
WO1 Improve water quality in rivers, estuaries and groundwater	**O**
WO2 Promote sustainable use of water and water conservation	**+**
Climate Factors and Air Quality	
C01 Implement the Planning System and Flood Risk Management Guidelines	**+**
C02 Incorporate the objectives of the Floods Directive into sustainable planning and development	**+**
C03 Development of a sustainable transportation infrastructure which reduces the need for travel and journey length	**+**
C04 Ensure that all new housing is energy efficient	**+**
Landscape	
LO1 Avoid the loss of designated views	**O**
LO2 Protect and enhance the designated coastal landscape having particular regard to its designations under the Habitats Directive and the Birds Directive	**+**
Material Assets	
M01 Ensure higher densities are achieved on zoned residential lands in close proximity to public transport	**+**
M02 Protect and promote the coastline of Fingal as an asset now and in the future.	**+**
M03 Discharge to waste water treatment plants that comply with the Water Framework Directive and the Urban Waste Water Directive	**+**

6.6 Selection of Preferred Alternative

A summary of the scoring/ rating of each of the development alternatives against the SEA objectives is provided in Table 6.4. Each development alternative was totalled and the scores were compared against each other, from this it is clear that Alternative 3, 'Combined Densities within Predominantly Compact Urban Form' is the preferred alternative.

Alternative 3, 'Combined Densities within Predominantly Compact Urban Form' offers sustainable levels of population growth which can be matched by social and physical infrastructure provision. It would have beneficial effects on the provision of community facilities, housing mix, amenities and best use of existing infrastructure as well as providing for opportunities to enhance the biodiversity value of the lands

within the vicinity of the designated European sites at Baldoyle Bay. It did not make as efficient use of land as Alternative 2 but this was balanced against the potential for early delivery followed by the potential for higher density in the medium-long term. While all of the alternative assessments assumed that the Plan had clear measures to manage the regional park within its lands, the higher density of Alternative 2 also made the management of the sensitive coastal areas more uncertain.

Table 6.4 Scoring of Development Alternatives against SEA Objectives

Alternative Development Scenario	**+** Potential Positive Impact	**-** Potential Negative Impact	**+/-** Both positive & negative or unclear	**0** Neutral or no impact	**Total Positive**
Alternative 1	8	4	4	3	**8**
Alternative 2	13	0	4	2	**13**
Alternative 3	15	0	2	2	**15**

Section 7 Evaluation of Plan Policies

7.1 Introduction

The objective of this section is to determine the 'likely significant' effects of the Baldoyle-Stapolin Local Area Plan on the environment. The assessment methodology adopted here is based on the environmental objectives (Section 5) and the Plan objectives (as set out in the various chapters of the Plan). The environmental objectives of water, biodiversity, cultural heritage and landscape, human health, soils, geology, air and climate listed in Section 9 are individually assessed against the Plan objectives and policies.

The section headings within the draft Baldoyle-Stapolin LAP are set out in the table below and will be followed in assessing the Plan.

Table 7.1 LAP Section Headings

Executive Summary	
Section 1	***Introduction***
Section 2	***Context***
Section 3	***Vision, Themes and Objectives***
Section 4	***Themed Objectives***
4A	***Green Infrastructure***
4B	***Transport and Movement***
4C	***Water Services and Utilities***
4D	***Residential Development and Density***
4E	***Community and Education***
4F	***Retail and Employment***
4G	***Sustainable Development Framework***
Section 5	***Urban Design***
Section 6	***Sequencing and Phasing***

7.2 Assessment Criteria

The assessment criteria used here is based on the determination of the 'likely significant' impacts of the Plan's policies and objectives on the environmental objectives. The likelihood of an impact occurring on any of the environmental objectives are determined and the significance and duration of the likely impact is then determined. The following criteria have been used to determine significance of an impact:

• Positive or negative impacts

A positive impact improves the quality of the environment by, for example, improving water quality, protecting sensitive habitats, or providing amenities for people. A negative impact diminishes the quality of the environment by, for example, reducing species diversity, creating habitat loss, reducing air quality or water quality. A negative impact can be sufficiently minimised or eliminated by the adoption of appropriate mitigation measures.

• Long-term and short-term impacts

A short-term impact will usually last for the duration of a project for example the construction of a road or a wastewater treatment plant. A long-term impact is normally the residual impact that remains after mitigation measures have been put in place. It may last 10 years or longer which is beyond the lifetime of the LAP.

• Significant impact
The likely significant effects of the implementation of the LAP on the environment, including impacts on biodiversity, population, human health, ecology, soil, water, air and climate, cultural heritage, landscape and the interaction of the above, must be investigated. The effects of the LAP on these topics should include quantification of the impacts as short-term, long-term, temporary, permanent and positive and negative.

These criteria will be represented in the matrix and tables as follows:
++ Long term/ permanent positive impact
+ Short term positive impact
-- Long term/ permanent negative impact
- Short term negative impact
? May conflict with environmental objectives
0 Insignificant impact or no relationship

The overall significance of an impact is dependant upon two factors – the size of the disturbance caused (magnitude) and the sensitivity of the receptor. The sensitivity of a receptor may be based on the legal status of a site, for example, a Natura 2000 site or a Natural Heritage Area. It may also be based on the proximity to population centres, schools, hospitals etc. or it may be based on the importance of a resource, for example, groundwater for public drinking water supply or a site of archaeological importance. The magnitude of an impact will be dependent upon its duration and frequency.

7.3 Assessment Methodology

The assessment of the LAP against the environmental objectives will take two forms. A paragraph summarising the impacts for each SEO against each chapter with an associated table. This will allow for the assessment of the LAP where the objectives are more strategic and are not given a specific numbering within the Plan. Map based and specific objectives will also be assessed. The listed LAP objectives within each section of the Plan will be assessed against the SEOs in a matrix.

7.3.1 Population and Human Health
The Draft Plan will increase the population of the Baldoyle area by as much as 4000 persons. The Plan provides for the delivery of the necessary social, physical and environmental infrastructure to cater for the increase in population both for the new and the existing residents. There is a strong emphasis in the Plan for a high quality living environment, through the provision of a hierarchical network of open space provision, high quality and sustainable design, local services and local retail and business opportunities, good public transport networks and connections to it and the maintenance of the rich estuarine environment and its associated habitat.

The Plan also seeks to improve the quality of life for the existing residents within the Coast development by ensuring that undeveloped sites are maintained and aesthetically improved from their current situation.

The overall impact of the Plan on population and human health is considered to be beneficial and will ensure a good quality living environment.

Table 7.2 Summary of Impacts of Draft LAP Policies on Population and Human Health

Draft Local Area Plan Sections	Description of LAP Section	Population and Human Health - Impacts
Introduction	This section sets out the legislative framework and LAP process and has no policies to assess	
Context	This section sets out the context of the LAP and has no policies to assess	
Vision, Themes and Objectives	Sets out four key development themes: - Sustainable Development - High Quality Places for All - A New Heart for Baldoyle-Stapolin - Homes for the Future	++
Green Infrastructure Strategy	Reflects the key themes set out in the Fingal Development Plan green infrastructure strategy, in particular; - Biodiversity - Parks, Open Space and Recreation - Sustainable Water Management - Landscape and; - Theme 1 of the Vision (above)	++
Transport and Movement	Seeks to meet future demands for travel and connectivity emanating from the LAP lands in a sustainable way. Indicates future road improvements.	++ but with some short term negative impact as roads are being constructed
Water Services and Utilities	Deals with water supply and conservation; foul water drainage; surface water management (including SuDS); Flood Risk Management; Water Quality; Climate Change and with utilities including electricity, gas, telecommunications and renewable energy technologies	++
Residential Development and Density	Deals with housing mix, density and design	++
Community and Education	Community facilities and services Childcare and play Educational facilities	++
Retail and Employment	Local village and local employment	++
Sustainable Development Framework	Promotes sustainable urban design principles, design and construction techniques and waste management	++
Urban Design	Sets out an urban design framework	++
Sequencing and Phasing	Linking the delivery of development infrastructural investment and to the delivery of the village centre	++
Appendix 1 Sustainable Urban Drainage Systems	Outlines the strategy for the sustainable drainage for the plan lands	++
Appendix 2 Strategic Flood Risk Assessment	Flood risk assessment of the plan lands	++

7.3.2 Biodiversity, Flora and Fauna

Baldoyle Bay is covered by a number of national and international conservation designations due to the important habitats, species of birds, animals and plants that occur within the site. It is designated as a Special Protection Area (pSPA) for birds under the EU Birds Directive and is internationally important for Light-bellied Brent Geese and nationally important for a further 5 species. It is also a Special Area of Conservation (SAC) for its habitats under the EU Habitats Directive and a Ramsar site recognised as being a wetland of international importance. Nationally it is a proposed Natural Heritage Area and a statutory Nature Reserve. In formulating policies and objectives for the LAP, full regard was had to the EU Habitats and Birds Directives and national environmental legislation. An Appropriate Assessment of the LAP has been carried out as required by the Habitats Directive and informs the plan and a Natural Impact Report (NIR) accompanies the Plan.

The Plan has sought to balance the needs and requirements of the environment with the residential zoning objective and resultant increased population and associated pressures on the surrounding sensitive environment. The green infrastructure strategy and Landscape Masterplan for the lands seek to ensure that the amenity of the regional Racecourse Park is available to the growing population while protecting the most sensitive elements of the lands on the eastern perimeter. In particular, the Plan proposes to fence off an area of land within the Mayne Marsh conservation area from general use. This area of land also includes a section of Baldoyle Bay SAC at the northeast corner.

There is an objective in the Fingal Development Plan 2011-2017 to provide a coastal way along the Fingal coast. This would link into the S2S (Sutton to Sandycove) cycleway to the south. A section of this coastal way had previously been identified along the Baldoyle estuary within the Plan lands and had gone through a separate appropriate assessment process. The Plan has included this shared cycle and pedestrian way along the eastern perimeter. An objective in the Plan ensures that the path will be no wider than 3.6m which although wider than originally envisaged and assessed but not as wide as the standards would generally require. A separate AA will be required for the path at project stage. The Landscape Masterplan has compensated any habitat lost because of the coastal way through management within the rest of the park area. This management will include practices to ensure grazed grass suitable for Brent geese as well as other practices to encourage biodiversity and maintenance of the existing species.

Within the residential areas there is a strong emphasis on greening the landscape through the provision of wide boulevards and local and pocket parks. These will be part of the ‘stepping stone’ and corridor approach to the green infrastructure strategy. There is also a strong emphasis on sustainable drainage, using best practice solutions which include attenuation ponds planted with appropriate vegetation to encourage waterfowl. Sustainable design also encourages green roofs.

The Plan includes objectives to ensure that only non-invasive species are used in planting and that planting be native where possible. This will encourage biodiversity by providing for the needs of locally found species of birds, in particular. The Plan lands are currently in a state of vacant dereliction with topsoil stripped. The sequencing and phasing section includes requirements to deal with these undeveloped or ‘interim sites’ through planting in some cases and mounding with grass banks in others.

The overall effect of the Plan on biodiversity, fauna and flora will be beneficial.

Table 7.3 Summary of Impacts of Draft LAP Policies on Biodiversity, Flora and Fauna

Draft Local Area Plan Sections	Description of LAP Section	Biodiversity, Flora and Fauna - Impacts
Introduction	This section sets out the legislative framework and LAP process and has no policies to assess	
Context	This section sets out the context of the LAP and has no policies to assess	
Vision, Themes and Objectives	Sets out four key development themes: - Sustainable Development - High Quality Places for All - A New Heart for Baldoyle-Stapolin - Homes for the Future	++
Green Infrastructure Strategy	Reflects the key themes set out in the Fingal Development Plan green infrastructure strategy, in particular; - Biodiversity - Parks, Open Space and Recreation - Sustainable Water Management - Landscape and; - Theme 1 of the Vision (above)	++
Transport and Movement	Seeks to meet future demands for travel and connectivity emanating from the LAP lands in a sustainable way. Indicates future road improvements.	++ some short term negative impact as development is being constructed, and as the cycle/pedestrian path is developed.
Water Services and Utilities	Deals with water supply and conservation; foul water drainage; surface water management (including SuDS); Flood Risk Management; Water Quality; Climate Change and with utilities including electricity, gas, telecommunications and renewable energy technologies	++
Residential Development and Density	Deals with housing mix, density and design	? There will be increased population pressures on the sensitive landscapes which will have to be managed
Community and Education	Community facilities and services Childcare and play Educational facilities	0
Retail and Employment	Local village and local employment	0
Sustainable Development Framework	Promotes sustainable urban design principles, design and construction techniques and waste management	++
Urban Design	Sets out an urban design framework	++
Sequencing and Phasing	Linking the delivery of development infrastructural investment and to the delivery of the village centre	++
Appendix 1 Sustainable Urban Drainage Systems	Outlines the strategy for the sustainable drainage for the plan lands	++
Appendix 2 Strategic Flood Risk Assessment	Flood risk assessment of the plan lands	++

7.3.3 Soil

Many of the changes to soil arise as a result of pressures from human activities. The main pressures on soil resources in Ireland include urbanisation and infrastructure development. A proposed EU Framework for Soil (2004/35/EC) states that, for the purposes of preserving the various functions of soil; sealing, 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 residential area of the Plan lands, having started construction and stalled after the first two phases, has already been stripped of topsoil and at this time, while not fully sealed, could be considered a brownfield site. The proposed densities on the land will most likely result in fewer underground car parks thereby reducing the need for soil removal from the lands. Furthermore, the preferred densities within the LAP would reduce future pressure for the development of greenfield lands by accommodating target populations within existing zoned lands. It is considered that there will be no significant impacts on soil from the development of the LAP.

7.3.4 Water

Water Quality – The Baldoyle-Stapolin area falls within the Eastern River Basin District (ERBD). This Eastern River Basin Management Plan (ERBMP) (2009-2015) identifies the status of water bodies within the RBD and provides objectives in order to implement the requirements of the WFD. The Mayne River (located in the Santry-Mayne-Sluice water management unit (WMU) in the ERDB plan) runs through the northern section of the plan area, from east to west, before discharging to Baldoyle Bay at the junction of Mayne Road and Strand Road (R106). In addition the Racecourse Stream, which is a tributary of the Mayne River, traverses the site. The overall status of the Mayne River is classified by the EPA *2011 Review* as being of "poor" status. Maintaining and improving water supply to a good status is a key consideration in development of the LAP lands. In the Santry Mayne Sluice WMU the main problems identified were high nutrients, oxygen demand, low ecological rating and inferior habitat. The main causes can be attributed to wastewater and industrial discharges, due to misconnected foul sewers, combined sewer overflows and urban area pollution.

Surface Water - A SUDS Strategy for Baldoyle-Stapolin, prepared by Waterman Moylans on behalf of the Council identifies various measures that may be employed throughout the development taking into account the existing surface water infrastructure that is in place across the site. The implementation of Sustainable Drainage Systems (SuDS) measures will ensure that surface water run-off will not be discharged directly into the groundwater system, thereby improving water quality, the potential for biodiversity and amenity.

Flooding - In accordance with the 'Planning Systems and Flood Risk Management Guidelines for Planning Authorities' (DoEHLG, 2009), the preparation of the LAP was the subject of a Strategic Flood Risk Assessment (SFRA). The SFRA includes the identification of a number of measures necessary to ensure flood risk is incorporated into the planning of the area and recommendations were made that development proposals for a number of areas within the plan boundary be the subject of site-specific flood risk assessment appropriate to the nature and scale of the development being proposed

The policies of the Plan will ensure that there is no dis-improvement to the status of the Mayne River and should help to improve its status. The implementation of SuDS

strategies will decrease the rate of surface water runoff, thereby reducing the potential for flooding, and its quality. The SuDS measures have the added benefit of increasing the potential for greater biodiversity and also for recreation and amenity. The impact of the Plan on water is considered to be beneficial.

Table 7.4 Summary of Impacts of Draft LAP Policies on Water

Draft Local Area Plan Sections	Description of LAP Section	Water - Impacts
Introduction	This section sets out the legislative framework and LAP process and has no policies to assess	
Context	This section sets out the context of the LAP and has no policies to assess	
Vision, Themes and Objectives	Sets out four key development themes: - Sustainable Development - High Quality Places for All - A New Heart for Baldoyle-Stapolin - Homes for the Future	++
Green Infrastructure Strategy	Reflects the key themes set out in the Fingal Development Plan green infrastructure strategy, in particular; - Biodiversity - Parks, Open Space and Recreation - Sustainable Water Management - Landscape and; - Theme 1 of the Vision (above)	++
Transport and Movement	Seeks to meet future demands for travel and connectivity emanating from the LAP lands in a sustainable way. Indicates future road improvements.	++
Water Services and Utilities	Deals with water supply and conservation; foul water drainage; surface water management (including SuDS); Flood Risk Management; Water Quality; Climate Change and with utilities including electricity, gas, telecommunications and renewable energy technologies	++
Residential Development and Density	Deals with housing mix, density and design	++
Community and Education	Community facilities and services Childcare and play Educational facilities	++
Retail and Employment	Local village and local employment	0
Sustainable Development Framework	Promotes sustainable urban design principles, design and construction techniques and waste management	++
Urban Design	Sets out an urban design framework	++
Sequencing and Phasing	Linking the delivery of development infrastructural investment and to the delivery of the village centre	++
Appendix 1 Sustainable Urban Drainage Systems	Outlines the strategy for the sustainable drainage for the plan lands	++
Appendix 2 Strategic Flood Risk Assessment	Flood risk assessment of the plan lands	++

7.3.5 Air Quality, Noise and Climatic Factors

Air Quality - The LAP lands are located within Zone A for the Dublin conurbation, as identified in the Air Quality Standards Regulations 2002, (S.I.271/2002), with the closest monitoring sites being located at Swords and Marino. The index is calculated based on the latest available measurements of PM10, sulphur dioxide, nitrogen dioxide and ozone. In October 2010, air quality in Zone A was reported as 'Good'.

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 Baldoyle-Stapolin LAP area.

Noise - Noise mapping as part of the Dublin Agglomeration Draft Action Plan indicated that traffic congestion and movement were the issues regarding noise pollution. The noise levels in the LAP area are likely to increase short-term during the construction period but they could also increase in the longer term with vehicular movement. The LAP seeks to promote sustainable transport through the use of public transport in the form of rail and bus, walking and cycling. Bus and rail are within 600m walking distance of the residential development while the village centre is at the foot of the railway station. Walking and cycling are encouraged in the plan lands through good connectivity and permeability with cycle routes along the boulevards and through the parklands linking to Baldoyle village with further extensions planned to link the development to Portmarnock and futher north.

Reduction in private car movements will result in a reduction in emissions such as particle matter (PM10) and nitrogen dioxide (NOx) and in noise levels associated with private transport.

Climatic Factors - The main issues facing Fingal in relation to the development of the Baldoyle-Stapolin LAP lands are climate change related to increased amounts of greenhouse gases, including CO^2 emissions, primarily from transport movements, and the danger posed by flooding events as sea levels rise and increased frequency and volume of rain events. Solutions require reductions in unsustainable transport movements, and the amelioration of potential flooding events.

The LAP promotes the use of sustainable transport and higher densities along the railway at the village centre and northern edge of the development. Increased densities will enable the improvement of public transport provision and timetabling. This will help to reduce CO^2 emissions. Increased densities will also ensure that efficient use is being made of land thus reducing the pressure for further development to accommodate the same population and reducing the potential impact of flooding and car dependent urban sprawl by less physical area of urban development. The use of the Sequential Test and the Justification Test for any areas prone to flooding, the carrying out of a Flood Risk Assessment and the use of Sustainable Urban Drainage Systems (SUDS) in the LAP lands will be primary strategies in the plan.

Any new urban development has the potential for a negative impact on climate change. Mitigation measures such as SuDS and those indicated in the paragraphs above will be necessary to offset the potential impacts. The LAP has incorporated these mitigation measures and it is considered that the impacts on air quality, noise and climatic factors will generally be insignificant or beneficial.

Table 7.5 Summary of Impacts of Draft LAP Policies on Air, Noise and Climatic Factors

Draft Local Area Plan Sections	Description of LAP Section	Water - Impacts
Introduction	This section sets out the legislative framework and LAP process and has no policies to assess	
Context	This section sets out the context of the LAP and has no policies to assess	
Vision, Themes and Objectives	Sets out four key development themes: - Sustainable Development - High Quality Places for All - A New Heart for Baldoyle-Stapolin - Homes for the Future	++
Green Infrastructure Strategy	Reflects the key themes set out in the Fingal Development Plan green infrastructure strategy, in particular; - Biodiversity - Parks, Open Space and Recreation - Sustainable Water Management - Landscape and; - Theme 1 of the Vision (above)	++
Transport and Movement	Seeks to meet future demands for travel and connectivity emanating from the LAP lands in a sustainable way. Indicates future road improvements.	++ for the sustainable elements of transport. -- new roads infrastructure will have a long term negative impact
Water Services and Utilities	Deals with water supply and conservation; foul water drainage; surface water management (including SuDS); Flood Risk Management; Water Quality; Climate Change and with utilities including electricity, gas, telecommunications and renewable energy technologies	++
Residential Development and Density	Deals with housing mix, density and design	++ Increased densities will mitigate against climate change through better use of land -- buildings and roads to add to carbon emissions unless designed as carbon neutral
Community and Education	Community facilities and services Childcare and play Educational facilities	++ sustainable design will help climate adaptation -- buildings and roads to add to carbon emissions unless designed as carbon neutral
Retail and Employment	Local village and local employment	++ Provision of local services and employment will reduce need to travel

Sustainable Development Framework	Promotes sustainable urban design principles, design and construction techniques and waste management	++
Urban Design	Sets out an urban design framework	++ Encourages sustainable design incorporating climate change mitigation features
Sequencing and Phasing	Linking the delivery of development infrastructural investment and to the delivery of the village centre	++ Provides local facilities in tandem with population increase
Appendix 1 Sustainable Urban Drainage Systems	Outlines the strategy for the sustainable drainage for the plan lands	++
Appendix 2 Strategic Flood Risk Assessment	Flood risk assessment of the plan lands	++

7.3.6 Cultural Heritage

The LAP lands have no known significant features of archaeological or architectural interest. The ruins of Stapolin House, and the remains of its tree-lined driveway lie at the centre of the plan lands, adjacent to the abandoned racecourse. The LAP has incorporated the landscape features associated with this house through the urban design layout and the inclusion of a significant local park, Stapolin Haggard on the lands which were the subject of the house. The old tree lined avenue will be incorporated into the main north-south boulevard – Stapolin Avenue.

Table 7.6 Summary of Impacts of Draft LAP Policies on Cultural Heritage

Draft Local Area Plan Sections	Description of LAP Section	Cultural Heritage - Impacts
Introduction	This section sets out the legislative framework and LAP process and has no policies to assess	
Context	This section sets out the context of the LAP and has no policies to assess	
Vision, Themes and Objectives	Sets out four key development themes: - Sustainable Development - High Quality Places for All - A New Heart for Baldoyle-Stapolin - Homes for the Future	++
Green Infrastructure Strategy	Reflects the key themes set out in the Fingal Development Plan green infrastructure strategy, in particular; - Biodiversity - Parks, Open Space and Recreation - Sustainable Water Management - Landscape and; - Theme 1 of the Vision (above)	++
Transport and Movement	Seeks to meet future demands for travel and connectivity emanating from the LAP lands in a sustainable way. Indicates future road improvements.	++ some short term negative impact as development is being constructed, and as the cycle/pedestrian path is developed.
Water Services and Utilities	Deals with water supply and conservation; foul water drainage; surface water management (including SuDS); Flood Risk Management;	++

	Water Quality; Climate Change and with utilities including electricity, gas, telecommunications and renewable energy technologies	
Residential Development and Density	Deals with housing mix, density and design	++
Community and Education	Community facilities and services Childcare and play Educational facilities	++
Retail and Employment	Local village and local employment	++
Sustainable Development Framework	Promotes sustainable urban design principles, design and construction techniques and waste management	++
Urban Design	Sets out an urban design framework	++
Sequencing and Phasing	Linking the delivery of development infrastructural investment and to the delivery of the village centre	++
Appendix 1 Sustainable Urban Drainage Systems	Outlines the strategy for the sustainable drainage for the plan lands	++
Appendix 2 Strategic Flood Risk Assessment	Flood risk assessment of the plan lands	++

7.3.7 Landscape

The Landscape Character Assessment within the Fingal Development Plan 2011-2017 identifies Baldoyle Bay as being of an Estuary Character Type which is categorised as having an exceptional value recognised by the EU designations (candidate Special Areas of Conservation and Special Protection Areas) that apply to each in additional to national designations such as proposed Natural Heritage Areas and Ramsar. The aesthetic quality of the estuary is also identified as outstanding. In terms of sensitivity the Estuary Character Type is identified as having a high sensitivity to development with particular parts of these areas having a low capacity to absorb new development.

Within the Plan, a number of views and prospects are protected and three of these are of particular relevance to the Baldoyle-Stapolin LAP lands. Specifically,

- Portmarnock Peninsula from Baldoyle and Strand Roads,
- Howth Hill from Golf Road, Portmarnock, Strand Road, Baldoyle, and Greenfield Road and Carrickbrack Road, Sutton,
- Cush Point from Strand Road, Baldoyle.

The LAP has taken account of the sensitive nature of the site through the building typologies, in particular, indicating that pavilion style blocks are most suited to the parkland edge allowing for the visual extension of the parkland through the blocks. Views have been protected through the layout of the key routes extending views to Ireland's Eye, Howth and the coast. The compact urban form, while creating a new feature on the landscape, will ensure that development is contained and not sprawling. The Green infrastructure strategy will ensure that the parkland area is managed to reduce the pressures on the landscape and improved as a habitat while streams will be left open to maintain biodiversity.

The impact on the Plan on the landscape will generally be positive with some negative impacts.

Table 7.7 Summary of Impacts of Draft LAP Policies on Landscape

Draft Local Area Plan Sections	Description of LAP Section	Landscape - Impacts
Introduction	This section sets out the legislative framework and LAP process and has no policies to assess	
Context	This section sets out the context of the LAP and has no policies to assess	
Vision, Themes and Objectives	Sets out four key development themes: - Sustainable Development - High Quality Places for All - A New Heart for Baldoyle-Stapolin - Homes for the Future	++
Green Infrastructure Strategy	Reflects the key themes set out in the Fingal Development Plan green infrastructure strategy, in particular; - Biodiversity - Parks, Open Space and Recreation - Sustainable Water Management - Landscape and; - Theme 1 of the Vision (above)	++ generally positive although there may be some negative impacts from new pathways through the park
Transport and Movement	Seeks to meet future demands for travel and connectivity emanating from the LAP lands in a sustainable way. Indicates future road improvements.	0 generally insignificant but there may be some negative impacts with the cycle/pedestrian path.
Water Services and Utilities	Deals with water supply and conservation; foul water drainage; surface water management (including SuDS); Flood Risk Management; Water Quality; Climate Change and with utilities including electricity, gas, telecommunications and renewable energy technologies	++
Residential Development and Density	Deals with housing mix, density and design	++ Generally positive through the compact urban form but the parkland edge will bring development closer to the coast.
Community and Education	Community facilities and services Childcare and play Educational facilities	0
Retail and Employment	Local village and local employment	0
Sustainable Development Framework	Promotes sustainable urban design principles, design and construction techniques and waste management	++
Urban Design	Sets out an urban design framework	++
Sequencing and Phasing	Linking the delivery of development infrastructural investment and to the delivery of the village centre	++
Appendix 1 Sustainable Urban Drainage Systems	Outlines the strategy for the sustainable drainage for the plan lands	++
Appendix 2 Strategic Flood Risk Assessment	Flood risk assessment of the plan lands	++

7.3.7 Material Assets

The material assets of the Plan lands include waste water and drinking water infrastructure, waste management facilities and transport infrastructure. The regional park itself is also a material asset but the impact of the Plan on it has been dealt with in the paragraphs above.

Waste water - In the short term there is the potential for a waste water treatment shortfall in the area if the upgrade of the Waste Water Treatment Plant at Ringsend does not keep pace with development. The overloading of waste water treatment plants, low levels of treatment and discharge of outflow to water bodies at risk has significant potential to incur pollution. The Plan has included objectives to ensure that development is not granted which cannot be adequately treated for waste water. This will also be dealt with at planning application stage of each phase of development.

Water supply – There is adequate water supply to meet the needs of the LAP lands. Nonetheless, the need to conserve water is recognised in the LAP and policies are in place, such as rainwater harvesting, to ensure this.

Waste management - Fingal has a commitment under the Waste Management Plan 2005- 2010 to provide infrastructure for recycling, biological treatment and composting of waste as well as waste prevention and minimisation initiatives. The Council has four recycling centres which are located at Balleally Landfill; Estuary Recycling Centre, Swords; Coolmine Recycling Centre and Balbriggan Recycling Centre, and local bring banks around the County with the closest to the LAP lands being located in Sutton and Portmarnock. The LAP has included policies on waste management and the provision of a bring bank facility within the village centre.

Transport infrastructure – The LAP includes provisions for the upgrade of the existing transport infrastructure and new infrastructure in the wider south Fingal area. These are on foot of a transport assessment which identified required infrastructure and phasing requirements. Section 6 of the LAP on Sequencing and Phasing ensures that transport infrastructure, along with other relevant infrastructure, is delivered in parallel with development. The Plan also includes a requirement for a bus ramp over the railway line to link the development at Clongriffin in the Dublin City lands to the Baldoyle-Stapolin lands. The railway station at Clongriffin was delivered as part of the earlier phases of development on both sides of the railway line. Within the Plan lands, cycleways and pedestrian paths are proposed to provide connectivity between different parts of the Plan lands and between the different settlements as part of the green infrastructure strategy.

Table 7.8 Summary of Impacts of Draft LAP Policies on Material Assets

Draft Local Area Plan Sections	Description of LAP Section	Material Assets - Impacts
Introduction	This section sets out the legislative framework and LAP process and has no policies to assess	
Context	This section sets out the context of the LAP and has no policies to assess	
Vision, Themes and Objectives	Sets out four key development themes: - Sustainable Development - High Quality Places for All - A New Heart for Baldoyle-Stapolin - Homes for the Future	++
Green Infrastructure	Reflects the key themes set out in the	++

Strategy	Fingal Development Plan green infrastructure strategy, in particular; - Biodiversity - Parks, Open Space and Recreation - Sustainable Water Management - Landscape and; - Theme 1 of the Vision (above)	
Transport and Movement	Seeks to meet future demands for travel and connectivity emanating from the LAP lands in a sustainable way. Indicates future road improvements.	++ New development puts increased pressure on existing road networks but this will be off set by new roads infrastructure. Increased densities will facilitate better public transport services.
Water Services and Utilities	Deals with water supply and conservation; foul water drainage; surface water management (including SuDS); Flood Risk Management; Water Quality; Climate Change and with utilities including electricity, gas, telecommunications and renewable energy technologies	++ Until Ringsend is upgraded development on the LAP lands will put increased pressure on waste water infrastructure. However, development cannot go ahead if there is not sufficient capacity in the WWTP
Residential Development and Density	Deals with housing mix, density and design	++ Increased pressure on existing infrastructure but this will be off set by the requirement for new infrastructure
Community and Education	Community facilities and services Childcare and play Educational facilities	++
Retail and Employment	Local village and local employment	++
Sustainable Development Framework	Promotes sustainable urban design principles, design and construction techniques and waste management	++
Urban Design	Sets out an urban design framework	++
Sequencing and Phasing	Linking the delivery of development infrastructural investment and to the delivery of the village centre	++
Appendix 1 Sustainable Urban Drainage Systems	Outlines the strategy for the sustainable drainage for the plan lands	++
Appendix 2 Strategic Flood Risk Assessment	Flood risk assessment of the plan lands	++

The following matrix (Table 7.9) assesses the impact of the listed objectives within the LAP against the Strategic Environmental Objectives for each Section of the LAP.

Legend (Impacts)
++ Long term/ permanent positive impact
+ Short term positive impact
-- Long term/ permanent negative impact
- Short term negative impact
+/- Potential for both positive and negative impacts in the long and short term
0 Insignificant impact or no relationship

Legend (Strategic Environmental Objectives)
BFF – Biodiversity, Flora and Fauna
PHH – Population and Human Health
S - Soil
W - Water
AQ/C – Air Quality and Climatic Factors
CH – Cultural Heritage
L – Landscape
MA – Material Assets

Table 7.9 Assessment of Impact of Local Area Plan Objectives against Strategic Environmental Assessment Objectives

Section 3 Vision, Themes and Objectives		Strategic Environmental Assessment Objectives							
		BFF	**PHH**	**S**	**W**	**AQ/C**	**CH**	**L**	**MA**
Objective 1	Establish sustainable communities which embody the principles of sustainable development and meet current and future social, economic and environmental needs in a balanced and integrated way.	++	++	++	++	++	++	++	++
Objective 2	Be at the forefront of sustainable development with commercial buildings, community facilities, housing and infrastructure which employ best practice in all aspects of environmental sustainability**.**	++	++	++	++	++	++	++	++

Section 3 Vision, Themes and Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective 3	Establish a rich tapestry of quality connected open spaces and river corridors across the LAP Lands, which provide for visual amenity and recreational use while addressing the need for nature conservation and flood risk mitigation.	++	++	++	++	++	++	++	++
Objective 4	Implement an integrated and sustainable transport infrastructure strategy fir Baldoyle-Stapolin which supports the effective management of sustainable travel patterns across the site.	++	++	++	++	++	++	++	++
Objective 5	Achieve a high standard of design through development that creates a real sense of place through the juxtaposition and provision of buildings, streets, spaces, features and facilities of high quality design, layout and materials.	++	++	0	0	++	++	++	++
Objective 6	Create a sustainable mixed-use centre for the Baldoyle-Stapolin which meets local needs by providing a range of retail, commercial, leisure and residential uses and establishes a distinctive sense of place and heart for the community.	++	++	0	0	++	++	0	++
Objective 7	Deliver between 800-1100 new dwellings, in addition to those already delivered on the LAP lands, to help meet existing and future housing needs and to create a sustainable mixed-use community.	++	++	0	0	+/-	++	+/-	++

Section 3 Vision, Themes and Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective 8	New homes will provide a mix of type, size and tenure including social housing, medium to high-density layout appropriate to the location of the site and be designed to highest standards.	+/-	++	0	0	+/-	++	0	++

Section 4A Green Infrastructure Objectives		Strategic Environmental Assessment Objectives							
		BFF	PHH	S	W	AQ/C	CH	L	MA
Overarching Objectives									
Objective GI 1	Create a high-quality, well-connected and sustainable natural environment of green spaces and watercourses that are rich in biodiversity and promote active and healthy lifestyles.	++	++	++	++	++	++	++	++
Objective GI 2	Require a high-quality design approach to all green infrastructure, which creates inviting, flexible, multifunctional places, protects and enhances local distinctiveness and character, incorporates existing features and important vistas.	+/-	++	+/-	+/-	++	++	++	++
Objective GI 3	Maximise the opportunities for enhancing the green infrastructure resource through the provision of urban landscape features such as green corridor routes and links, swales, green roofs, trees and shrubs within the new development and public realm.	++	++	++	++	++	++	++	++
Objective GI 4	Provide for the protection, conservation and enhancement of wildlife habitats and natural resources, including the existing watercourses on site and features such as ecologically important hedgerows and mature trees within the LAP area.	++	++	++	++	++	++	++	++

Section 4A Green Infrastructure Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective GI 5	Develop and enhance existing green infrastructure, create new habitats where any are lost, improve physical and habitat linkages between the adjoining Baldoyle-Stapolin, Portmarnock and Clongriffin LAP lands and develop a new high quality well landscaped public realm, connecting into the wider green network.	++	++	++	++	++	++	++	++
Objective GI 6	Comply with all of the policies of the current Fingal Development Plan relating to open space, biodiversity and green infrastructure and open space provision.	++	++	++	++	++	++	++	++
Objective GI 7	Ensure that plans, designs, detailed schedules and specifications of work including management plans, where privately managed, for all public open spaces and green infrastructure are integral to all planning applications	+/-	++	0	++	++	+/-	+/-	+/-
Designated Sites									
Objective GI 8	Maintain or restore the favourable conservation condition of Annex 1 habitat(s) and/or the Annex II species for which the Baldoyle cSAC has been selected: [1140] Mudflats and sandflats not covered by seawater at low tide [1310] Salicornia and other annuals colonizing mud and sand	++	++	++	++	++	++	++	++

Section 4A Green Infrastructure Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
	[1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1410] Mediterranean salt meadows (*Juncetalia maritimi*)								
Objective GI 9	Maintain qualifying interest habitats and species within the Baldoyle Bay SPA and SAC at favourable conservation condition to ensure the ecological integrity of Baldoyle Bay and further ensure that the LAP lands continue to provide supporting function for the Qualifying Interest species.	++	++	++	++	++	++	++	++
Objective GI 10	Ensure that sufficient information is provided as part of development, plan or project proposals to enable Appropriate Assessment screening to be undertaken and to enable a fully informed assessment of impacts on biodiversity to be made.	++	++	++	++	++	++	++	++
Mitigation within Ecological Buffer Zone									
Objective GI 11	Ensure compliance with the landscape Masterplan for Racecourse Park and the Portmarnock South LAP lands contained within this LAP which incorporates mitigation measures for any loss of habitat for the conservation interests of Baldoyle Bay.	++	++	++	++	++	++	++	++

Section 4A Green Infrastructure Objectives cont'd	BFF	PHH	S	W	AQ/C	CH	L	MA
Objective GI 12 Promote opportunities for the enhancement of local biodiversity features including the creation of new habitats through managed spaces and new water features such as pools and ponds in order to promote wildlife use associated with the existing designated sites. Such proposals may be subject to an Appropriate Assessment of the likely significant effects on European sites due to the proximity of urban centres.	++	++	++	++	++	++	++	++
Objective GI 13 Provide appropriately designed and located combined pedestrian and cycle routes of no wider than 3m through Racecourse Park, and minimise access points to avoid disturbance to protected habitats and species within Baldoyle Bay and Racecourse Park.	-	++	-	+/-	++	+/-	+/-	++
Objective GI 14 Ensure the minimisation of signage within Racecourse Park to protect the visual enjoyment of the park and the integrity of the wider natural environment.	++	++	0	0	0	++	++	0
Creating a Green Network								
Objective GI 15 Create a cohesive network of green corridors, green routes/ links and stepping stones throughout the LAP lands that facilitate wildlife movement between the residential areas to the surrounding landscape as shown on Figure 4A.1 – Landscape Masterplan.	++	++	0	++	++	++	+/-	++

Section 4A Green Infrastructure Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective GI 16	Create new green links to connect publicly accessible open spaces to main destination points, such as the DART station, bus stops, village centre, proposed school, health facilities, other publicly accessible open spaces including Racecourse Park.	+/-	++	0	0	++	++	+/-	++
Objective GI 17	Develop a green link along the Mayne River, where it does not conflict with the conservation objectives of the SAC, under the existing railway arches in Racecourse Park, to connect the parkland with the proposed linear park along the Mayne River within the Dublin City Council administrative area.	+/-	++	0	0	++	++	+/-	++
Objective GI 18	Ensure that the design of all green corridors, links and stepping stones takes account of the sensitivities of habitats and avoids adverse impacts resulting from noise, lighting and other types of disturbance.	++	++	0	0	0	++	++	++
Objective GI 19	Improve education and awareness of the importance of green corridors, links and stepping stones and ecological connectivity to help ensure their retention and management for future generations.	++	++	0	++	++	++	++	++

Section 4A Green Infrastructure Objectives cont'd	BFF	PHH	S	W	AQ/C	CH	L	MA
Sustainable urban Drainage Systems								
Objective GI 20 Require that water storage areas be designed and integrated into the development with consideration to their drainage, recreation, biodiversity and amenity value.	++	++	0	++	++	++	++	++
Objective GI 21 Ensure, as far as practical, that the design of SuDS enhances the quality of open spaces and biodiversity.	++	++	++	++	++	++	++	++
Objective GI 22 Promote open SuDS features and wetland and pond features in planned open spaces such as the pocket park, local parks and Racecourse Park subject to satisfactory resolution of management programmes, public safety, ease of cleansing and maintenance access.	++	++	0	++	++	++	++	++
Objective GI 23 Ensure that the design of swales and stormwater attenuation areas and SuDS proposals within private developments include commitments to addressing a net gain in biodiversity through the use of appropriate planting.	++	++	0	++	++	++	++	++
Objective GI 24 Require that SuDS corridors alongside roads and green corridors incorporate wildlife habitat, pedestrian links and structural planting where appropriate.	++	++	0	++	++	++	++	++

Section 4A Green Infrastructure Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective GI 25	Require that SuDS features in Racecourse Park shall be designed as extensive, naturalistic open features (e.g. ponds, wetlands) of value to wildlife and local amenity. Their water quality and storage objectives shall be dealt with in combination with landscape integration, visual amenity and protection/enhancement of biological diversity.	++	++	++	++	++	++	++	++
Objective GI 26	Require that where SuDS features are connected to the Mayne River best practice will apply and consultation with the relevant national bodies such as the National Parks and Wildlife Service and Inland Fisheries Ireland will take place to agree on the methodology for such works. In any event, the design of SuDS features shall not conflict with conservation management objectives.	++	++	++	++	++	++	++	++
Landscapes, Views and Vistas									
Objective GI 27	Ensure that development along the parkland edge of the residential lands is sensitively designed to reflect the 'Sensitive Landscape' designation on these lands in the Fingal Development Plan.	0	++	0	0	0	++	++	++

Section 4A Green Infrastructure Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective GI 28	Ensure that any new hedgerows and tree species within the site are planted with non-invasive species which will provide alternative habitat for displaced wildlife, be compatible with local landscape values and help maintain connectivity for species which relied on such features for commuting or feeding.	++	++	++	0	0	++	++	++
Objective GI 29	Maximise the potential views of the surrounding area from the development lands. In particular, the views of Ireland's Eye, the coast and the higher parklands, to the north, at Portmarnock shall be protected.	0	++	0	0	0	++	++	++
Recreation and Amenity – Open Space Hierarchy									
Objective GI 30	Manage the open space at Racecourse Park and any associated lands in accordance with the Landscape Masterplan and mitigation measures and polices included in this LAP.	++	++	++	++	++	++	++	++
Objective GI 31	Promote sustainable recreation within the LAP lands that will allow inclusive use of the open space without causing adverse effects on the physical and biological functions of the green infrastructure and/or qualifying interest species and habitats of European sites.	++	++	++	++	++	++	++	++

Section 4A Green Infrastructure Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective GI 32	Require Appropriate Assessment (AA) Screening for any development, including changes to the landscape, within Racecourse Park. This will include any changes to existing or future layout, materials or surfaces of pitches.	++	++	++	++	++	++	++	++
Objective GI 33	Ensure the provision of adequate areas of high quality, safe and overlooked open space within residential developments, which meet the required standards for distance from homes.	0	++	0	0	++	++	++	++
Objective GI 34	Facilitate the development of open spaces and civic spaces at suitable locations within the Plan Area and protect existing open spaces from inappropriate development, so as to maintain their attractiveness and role in enhancing the residential and ecological amenities of the area. The quantum of open space provided within the LAP lands must comply with standards set out in the Open Space Hierarchy in Table 4A.3.	++	++	0	++	++	++	++	++
Objective GI 35	Require the provision of playing pitches in the northwestern corner of the Racecourse Park, south of Mayne Road, or alternative agreed location. Any alternative location may be subject to Appropriate Assessment.	--	++	0	+/-	+/-	+/-	--	+/-

Section 4A Green Infrastructure Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective GI 36	Ensure that Station Square incorporates a green core which allows for the visual and physical extension of Ireland's Eye Avenue to and from the train station.	++	++	0	++	++	++	++	++
Objective GI 37	Facilitate the potential for public activities and events in Station Square through the incorporation of design elements which allow for such.	0	++	0	0	0	++	0	++
Objective GI 38	Ensure the timely delivery of open space having regard to the open space hierarchy, the preferred Masterplan layout and the phasing requirements of this LAP.	++	++	0	++	++	++	++	++

Section 4B Transport and Movement		Strategic Environmental Objectives							
		BFF	PHH	S	W	AQ/C	CH	L	MA
Overall Transport and Movement									
Objective TM 1	Ensure that any transport proposals take full account of the sensitivities of the receiving environment including European designated sites.	++	++	++	++	++	++	++	++
Objective TM 2	Place strong emphasis on sustainable forms of transport such as walking, cycling and public transport particularly for short trips.	++	++	0	++	++	++	+/-	++
Objective TM 3	Support and facilitate the development of an integrated public transport network in the LAP lands and enhanced public transport services in association with relevant transport providers, agencies and stakeholders.	++	++	++	++	++	++	++	++
Objective TM 4	Facilitate enhanced patronage and efficient utilisation of public transport and promote walking and cycling through a range of means, including cycle routes, a bus link to Clongriffin-Belmayne and public transport interchange.	++	++	++	++	++	++	+/-	++
Objective TM 5	Require that sustainable densities are achieved across the site in order to ensure that existing public transport services can be supported and upgraded in the future.	+/-	++	++	+/-	+/-	++	+/-	++

Section 4B Transport and Movement Objectives cont'd	BFF	PHH	S	W	AQ/C	CH	L	MA
Objective TM 6 Protect, promote and ensure a well connected, joined-up street network that integrates street types and users.	0	++	0	0	+/-	++	0	++
Future Road Improvements								
Objective TM 7 Liaise with the NTA and the NRA in the phasing of development as it relates to the Baldoyle-Stapolin lands and the wider South Fingal and Dublin City Council area.	+/-	++	+/-	+/-	+/-	+/-	+/-	++
Objective TM 8 Ensure that the phasing of development within the LAP lands has regard to the capacity of the road network and to public transport provision.	0	++	0	0	++	0	0	++
Internal Road Network								
Objective TM 9 Implement a street hierarchy that puts pedestrians first and promotes streets as links for all types of movement and as places in their own right, to ensure a strategic, accessible and safe street network across the LAP lands.	++	++	0	0	++	++	0	0
Objective TM 10 Create a high-quality public realm network which provides a range of size of public space that can function as places for social gathering.	+/-	++	0	0	++	++	+/-	++

Section 4B Transport and Movement Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective TM 11	Ensure that streets are designed as attractive public spaces in accordance with the Section 5 Urban Design of the LAP. They shall cater for a range of users with priority generally given to pedestrians and cyclists and shall be designed to minimise the impact of speeding vehicles.	0	++	0	0	++	++	++	++
Objective TM 12	Ensure that design and layout of streets takes into account the requirements of vulnerable road users and mobility impaired people.	0	++	0	0	++	++	0	++
Objective TM 13	Ensure that the layout and design of new streets within the development minimises the potential for rat-running through and from Coast Road and Grange Road.	0	++	0	0	0	0	0	0
Pedestrian and Cycling Connectivity									
Objective TM 14	Provide a clear, safe and legible network of cycling and pedestrian routes within the LAP lands that will link key destinations, including the village centre, Clongriffin train station and other important local destinations.	+/-	++	0	0	++	++	+/-	++
Objective TM 15	Ensure that safe connections and linkages throughout the site and to Clongriffin train station are maintained all times during the build out of the remainder of the LAP lands.	0	++	0	0	++	++	0	++

Section 4B Transport and Movement Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective TM 16	Provide dedicated pedestrian and cycle routes in the central green spaces that form the spine of the Boulevards at Ireland's Eye and Stapolin Avenue.	--	++	0	0	++	++	0	++
Objective TM 17	Ensure that all road junctions which intersect Ireland's Eye Avenue and Stapolin Avenue are designed in such a manner as to ensure pedestrian and cyclist priority at these crossings. This may be achieved through the use of measures such as raised tables, landscaping or other agreed means.	0	++	0	0	++	++	0	0
Objective TM 18	Ensure that street design encourages walking and cycling throughout the development making use of the principles of shared surfaces, where appropriate.	0	++	0	0	++	++	0	++
Objective TM 19	Provide cycle and pedestrian facilities in appropriate locations including cycle parking, storage and associated facilities and seating within public places.	+/-	++	0	0	++	++	0	++
Linkages with the Surrounding Area									
Objective TM20	Ensure the early provision of permanent access arrangements for pedestrians, cyclists and those with disabilities to Clongriffin train station and the developing areas of Clongriffin-	0	++	0	0	++	++	0	++

Section 4B Transport and Movement Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
	Belmayne though the provision of access via the new public realm at Station Square as the first phase of the village centre.								
Objective TM21	Ensure the provision of a bus ramp to connect Baldoyle- Stapolin to Clongriffin-Belmayne as part of the delivery of the second phase of the village centre or earlier as required.	0	++	0	0	++	0	+/-	++
Objective TM22	Provide, as part of the Fingal Coastal Way, an agreed and appropriately designed combined pedestrian and cycle route, of no wider than 3m, through the eastern edge of Racecourse Park, minimising access points and signage to avoid disturbance and ensuring the integrity of the protected habitats and species within Baldoyle Bay and Racecourse Park.	+/-	++	0	0	++	++	+/-	++
Objective TM23	Work in association with Dublin City Council to secure, with the agreement of Iarnroid Eireann or other relevant 3rd parties, a pedestrian and cycle link under the railway line via the existing arched bridge underpass in the northwestern corner of Racecourse Park	+/-	++	0	0	++	++	+/-	++
Objective TM24	Facilitate, with residents' support, the upgrading of existing cul-de-sacs and areas of open space by opening them up to allow pedestrian and cyclist access where it significantly shortens	0	++	0	0	++	++	0	++

Section 4B Transport and Movement Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
	trips to community facilities, schools, open spaces, shopping facilities or public transport stops for future and existing residents.								
	Car Parking Provision								
Objective TM25	As development progresses, require that car parking standards within the LAP lands are reviewed in parallel with improvements in public transport services with the aim of implementing reduced levels of car parking which would reflect the strategic nature of the LAP adjacent to public transport.	0	+/-	0	0	++	0	0	++
Objective TM26	Require that, in line with the need to promote increased densities in Growth Areas 2 and 3 and the likelihood that a greater quantum of apartment units will be provided particularly along the Parkland edge to the north of the site, car parking be provided off-street in either underground or podium type parking arrangements.	0	++	+/-	+/-	+/-	0	++	++
Objective TM27	Ensure that where multi use/public car park facilities are proposed in the village centre, the management regime will be subject to the agreement of the local authority.	0	++	0	0	++	0	0	++

Section 4B Transport and Movement Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective TM28	Seek the preparation of car park management plans as part of the planning applications in Growth Areas 2 and 3 that would promote shared use of car parking to include appropriate charges to encourage modal shift where deemed necessary.	++	++	0	0	++	0	++	+/-
Objective TM29	Seek well integrated design solutions for adequate car parking within the design and layout of schemes whether parking is provided on-street, at podium level or within basements. Particular attention should be paid to visitor parking and the potential for the development of car storage facilities.	0	++	0	0	0	0	++	++
	Bicycle Storage								
Objective TM30	Require adequate bicycle storage provision within, or close to, each dwelling in accordance with the standards set out in the Fingal Development Plan.	0	++	0	0	++	0	0	++
Objective TM31	Require the provision of cycle parking facilities in new commercial, retail, community facilities etc., in accordance with the standards set out in the Fingal Development Plan. Secure bicycle racks shall be provided in all cases where bicycle parking is deemed to be necessary by the Planning Authority. Such racks should be	0	++	0	0	++	0	0	++

Section 4B Transport and Movement Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
	within 25 metres of a destination for short term parking (shops) and within 50 metres for long term parking (school, office etc). All long term cycle racks (more than three hours), including those adjacent to the train station shall be protected from the weather.								
Objective TM32	All cycle facilities in multi-storey car parks will be at ground floor level and completely segregated from vehicular traffic. Cyclists should also have designated entry and exit routes at the car park.	0	++	0	0	++	0	0	++
Section 4C Water Services and Utilities		**Strategic Environmental Objectives**							
		BFF	**PHH**	**S**	**W**	**AQ/C**	**CH**	**L**	**MA**
Water Supply and Water Conservation									
Objective WS 1	Ensure that priority is given to the provision of water supply in the LAP lands corresponding to the area's strategic designation in the Regional Planning Guidelines as being within the Metropolitan Area of the Greater Dublin Area and as set out in the core strategy of the Development Plan.	0	++	0	++	0	0	0	++
Objective WS2	Ensure that new developments are adequately serviced with a suitable quantity and quality of drinking water supply. Where deficiencies exist development will be limited to that which can be provided for, based on available water supply.	0	++	0	++	0	0	0	++

Section 4C Water Services and Utilities cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective WS3	Promote water conservation to reduce the overall level of water loss in the public supply and require that new domestic developments provide for water supply metering.	++	++	0	++	0	0	0	++
Objective WS4	Require that a Water Management and Conservation Plan, detailing how best practice in water conservation shall be applied in respect of the proposed development to include both watermains and internal plumbing, be prepared for the development of these lands in order to limit unnecessary water usage, leakage and excessive consumption.	++	++	0	++	0	0	0	++
Objective WS5	Require the adoption of water saving measures throughout future development. This will increase the extent of development capable of being serviced by the existing water treatment plant. Such measures would include: • Water butts to collect rainwater • Low flush and dual flush toilets • Low water use appliances • Rainwater harvesting	++	++	0	++	++	0	0	++
Objective WS6	Ensure that water main layout for any proposed development is in accordance with the most up-to-date version of Fingal County Council's 'Guidelines for the Laying of Distribution Watermains' and 'Guidelines for Drinking Water Supply.	0	++	0	++	0	0	0	++

Section 4C Water Services and Utilities cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Foul Water Drainage									
Objective WW 1	Permit new development only where it can be clearly demonstrated that there is adequate capacity in the wastewater disposal infrastructure in accordance with applicable requirements and standards, including urban wastewater treatment disposal standards.	++	++	++	++	0	0	0	++
Objective WW2	Ensure the separation of foul and surface water effluent through the provision of separate sewerage and surface water run-off networks.	++	++	++	++	++	0	0	++
Section 4C Water Services and Utilities cont'd		**BFF**	**PHH**	**S**	**W**	**AQ/C**	**CH**	**L**	**MA**
Objective WW3	Require that an up to date condition survey (as constructed drawings, CCTV surveys etc) of the foul network in place across the site is submitted as part of any future planning applications.	++	++	++	++	0	0	0	++
Surface Water Management									
Objective SW1	Require that surface water attenuation is provided generally in locations identified in the SuDS Strategy. Design of surface water attenuation shall be based on the requirements of the Greater Dublin Strategic Drainage Study. Particular reference shall be made to Volume 2, Appendix E which provides guidance on	++	++	0	++	++	0	++	++

Section 4C Water Services and Utilities cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
	attenuation design and best practice cases (as may be updated).								
Objective SW2	Require all planning applications to submit details of compliance with the SuDS Strategy for the LAP which include proposals for the management of surface water within sites, and runoff rates from sites, protecting the water quality and flow regime of the River Mayne and retrofitting best practice SuDS techniques on existing sites where possible.	++	++	0	++	++	0	++	++
Objective SW 3	Require local/site specific SuDS measures in tandem with development.	++	++	0	++	++	0	++	++
Objective SW 4	Require green roofs for commercial development within the LAP unless otherwise agreed.	++	++	0	++	++	0	++	++
Objective SW 5	Ensure urban areas are designed to accommodate surface water flood flow at times of extreme events through the dual use of roads and pathways as flood conveyance channels and appropriate areas (parkland, car parks, large paved areas etc) are used as temporary flood ponding areas.	+/-	++	0	++	0	0	0	++
Objective SW 6	Ensure that all trees planted in/adjacent to hard	++	++	++	++	++	0	++	++

Section 4C Water Services and Utilities cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
	paved areas (footpaths, parking areas etc) incorporate tree root structural cell systems.								
Objective SW 7	Require that surface water discharge from the development replicates existing greenfield runoff rates by limiting flow by means of flow control devices constructed to the requirements of Fingal County Council.	++	++	++	++	++	0	0	++
Objective SW 8	Require that proposals for sustainable drainage systems include provisions for future maintenance of these systems. In this regard, maintenance plans shall be required as part of each planning application.	+/-	++	0	++	++	0	0	++
Objective SW 9	Require a settlement pond to allow for treatment of all surface water discharges from the development site during the construction phase.	++	++	++	++	0	0	++	++
	Flood Risk Management								
Objective FRM1	Implement the EU Flood Risk Directive (2007/60/EC) and have due regard to the relevant Flood Risk Management Plan and the recommendations and outputs arising from same which relate to or impact the Plan area.	++	++	0	++	++	0	0	++

Section 4C Water Services and Utilities cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective FRM2	Implement the provisions of the DoEHLG/OPW publication 'The Planning System and Flood Risk Management: Guidelines for Planning Authorities' 2009 or any superseding document in relation to flooding and flood risk management and facilitate flood management measures, as appropriate.	+/-	++	0	++	++	0	0	++
Objective FRM 3	Require all planning applications for residential and/or commercial floorspace on sites in areas at risk of flooding to 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.	+/-	++	0	++	++	0	0	++
Objective FRM 4	Ensure that any proposals for basements are included in a site specific flood risk assessment.	0	++	0	++	++	0	0	++
Water Quality									
Objective WQ 1	Implement the relevant recommendations and measures as outlined in the Eastern River Basin Management Plan 2009- 2015 or any other plan that may supersede same during the lifetime of this Local Area Plan. Development shall only be permitted where it can be clearly demonstrated.	++	++	++	++	++	0	++	++

Section 4C Water Services and Utilities cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
	that the proposal would not have an unacceptable impact on the water environment, including surface water, groundwater quality and quantity, river corridors and associated wetlands.								
Objective WQ 2	Seek the rehabilitation of the Mayne River to good water status, its restoration as a natural amenity and protection of the riparian corridor through the LAP area.	++	++	++	++	++	0	++	++
Objective WQ 3	Implement the SuDS Strategy for the LAP lands.	++	++	++	++	++	0	0	++
Utilities									
Objective UT 1	Facilitate the provision of adequate gas and electricity infrastructure within the Plan Area, to the requirements of the relevant service providers and in accordance with the principles of proper planning and sustainable development.	0	++	0	0	0	0	+/-	++
Objective UT 2	Facilitate the provision of adequate telecommunication infrastructure within the Plan Area, including telephone and broadband service, to the requirements of the relevant service providers and in accordance with the principles of proper planning and sustainable development.	0	++	0	0	0	0	--	++

Section 4C Water Services and Utilities cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective UT 3	Require that ducting be shared where possible and underground services are placed where they create minimum disturbance to road users.	0	++	0	0	0	0	0	++
Objective UT 4	Ensure that telecommunications infrastructure is adequately screened, integrated and /or landscaped so as to address collision risk for birds, minimise any adverse visual impacts and preserve significant views from the visual intrusion of large-scale telecommunications infrastructure.	++	++	0	0	0	++	++	0
Objective UT 5	Require that new buildings be sustainable in their siting, orientation, design and construction. Passive solar design techniques, high energy efficiency, low impact construction methods and the use of local /sustainable building materials and/or recycled aggregates will be encouraged to ensure that new developments minimise their environmental impacts and long term costs.	++	++	++	++	++	++	+/-	++
Objective UT 6	Require all planning applications within the LAP lands to demonstrate how they have incorporated the principles of energy efficiency and environmental sustainability and require energy efficient systems to be incorporated into any water services pumping stations.	+/-	++	0	++	++	0	0	++

Section 4C Water Services and Utilities cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective UT 7	Facilitate and actively promote the development of energy infrastructure such as:- • Smart meters for electricity, gas and thermal energy • Smart Grid development for micro electricity generation • District Heating Networks • Gas and Electric Infrastructure for vehicles that will facilitate increased energy efficiency in buildings, the use of indigenous low carbon electric and thermal energy resources and assist in establishing low carbon commerce and communities.	+/-	++	+/-	0	++	0	+/-	++
Objective UT 8	Promote and facilitate the development of renewable sources of energy and associated infrastructure within the LAP area and encourage the integration of micro-renewable energy sources into the design and construction of new developments as appropriate.	+/-	++	0	++	++	0	0	++
Waste Management									
Objective WM 1	Promote the prevention, reduction and recycling of waste in new developments. Applicants for future development will be required to submit proposals demonstrating how this is to be achieved.	++	++	++	++	++	0	++	0

Section 4C Water Services and Utilities cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective WM 2	Facilitate the installation of bring banks at suitable locations within the Plan Area. These will be situated as to not cause disturbance to ecological sensitive areas.	0	++	0	0	0	0	++	++
Construction and Demolition Waste									
Objective WM 3	Require that developers/applicants submit a construction and demolition waste programme at planning application stage. Such a programme shall set out how the management/ recovery/disposal of construction/demolition waste material generated at the site during excavation and construction phases of development will be dealt with, in accordance with relevant national waste management legislation.	++	++	++	++	0	0	0	0
Objective WM 4	Require that, where development does not occur within one year from the granting of permission, a revised demolition waste programme shall be submitted for approval three months prior to the submission of the first commencement notice.	++	++	++	++	0	0	++	0
Objective WM 5	Ensure that developers/applicants demonstrate that all waste is removed from the plan lands by approved waste disposal contractors to approved waste disposal facilities.	++	++	++	++	0	0	++	++

Section 4C Water Services and Utilities cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective WM 6	Ensure that developers/applicants take adequate measures to minimise the impacts of traffic, noise, dust and litter during construction phases. A methodology statement for such measures shall be submitted at planning application stage, and developers shall employ best practice as applicable at the time of construction.	++	++	++	++	++	++	++	++

Section 4D Residential Development, Density & Heights		Strategic Environmental Objectives							
		BFF	PHH	S	W	AQ/C	CH	L	MA
Housing Mix									
Objective RS 1	Require that a suitable variety and mix of dwelling types and sizes are provided in developments to meet different needs, having regard to demographics, social changes and the human life cycle patterns.	0	++	0	0	++	0	0	++
Objective RS 2	Ensure that one bedroom dwellings are kept to a minimum within the development and are provided only to facilitate choice for the homebuyer. In any event, no more than 5% of units in any application or over the whole development, shall be one bedroom units.	0	++	0	0	0	0	0	++
Social Housing									
Objective RS3	Ensure that between a minimum of 7.5% and a maximum of 15% of the LAP lands is reserved for those in need of social or affordable housing in accordance with the Fingal Housing Strategy or as per the revisions of any subsequent Strategy and Part V of the Planning and Development Act 2000 (as amended).	0	++	0	0	0	0	0	++
Objective RS4	Facilitate the development of strong, vibrant and mixed tenure communities.	0	++	0	0	++	++	0	++

Section 4D Residential Development, Density & Heights cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Traveller Accommodation									
Objective RS 5	Provide accommodation facilities for the traveller community in accordance with the relevant Traveller Accommodation Programme.	0	++	0	0	0	++	0	++
Density and Urban Design									
Objective RS 6	Achieve a residential density in keeping with a compact urban form which reflects the character and function of the locality, having regard to the need to make the most efficient use of land and transport investment.	+/-	++	++	0	++	0	+/-	++
Objective RS 7	Seek to achieve the densities provided for in the Preferred Density Masterplan Figure 4D.1. In any event, a minimum of 38 dwellings per hectare (net density) shall be required in each residential block.	+/-	++	++	0	++	0	+/-	++
Objective RS 8	Require, generally, a minimum net residential density of 50 units per hectare within the proposed village centre and along the northern boundary with Racecourse Park subject to appropriate design and amenity standards.	+/-	++	0	0	++	0	+/-	++

Section 4D Residential Development, Density & Heights cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective RS 9	Ensure the development of sustainable residential communities through the promotion of innovative, high quality building design and layouts that prioritise non-car based movement and provide for a high level of permeability, accessibility and connectivity to the existing built environment, services and facilities.	+/-	++	0	0	++	0	0	++
Objective RS 10	Ensure that future residential development proposals are in accordance with the principles set out in the DoEHLG document 'Sustainable Residential Development in Urban Areas' 2009 and its companion document 'Urban Design Manual: A Best Practice Guide for Planning Authorities 2009, or any updated version of these documents published during the lifetime of this Plan.	++	++	0	++	++	++	0	++
Objective RS 11	Ensure general compliance with the parameters and detail set out in the LAP within Section 5 Urban Design.	++	++	++	++	++	++	++	++
	Heights								
Objective RS 12	Require buildings to conform to the heights set out in Figure 4D.2 Heights map.	0	++	0	0	++	0	+/-	0

Section 4E Community and Education		Strategic Environmental Objectives							
		BFF	PHH	S	W	AQ/C	CH	L	MA
Community Facilities and Services									
Objective CI 1	Ensure that the community needs of residents within The Coast can be provided for and that future development in Baldoyle-Stapolin will be accompanied by a corresponding expansion of these facilities and amenities.	0	++	0	0	++	++	0	++
Objective CI 2	Support and encourage an appropriate mix of community services and facilities including health centres, facilities for older people and community halls/meeting rooms primarily within the village centre.	0	++	0	0	++	++	0	++
Objective CI 3	Investigate the feasibility of providing community facilities which meet with identified needs within existing vacant commercial/retail buildings within the plan lands.	0	++	0	0	++	++	0	++
Objective CI 4	Seek to cluster or link together community facilities wherever they are complementary and it is practicable to do so, to allow for shared and multi-purpose use and adaptability, within the village centre or other agreed accessible location subject to demand and resources.	0	++	0	0	++	++	0	++

Section 4E Community and Education cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective CI 5	Support the principles of social inclusion and universal access, to ensure that all individuals have access to goods, services and buildings in order to assist them to participate in and contribute to life within Baldoyle-Stapolin.	0	++	0	0	++	++	0	++
Objective CI 6	Provide an adaptable, integrated and accessible living environment for all sectors of the population offering every resident a sense of dignity, respect and security, in the built and natural environment, irrespective of age.	+/-	++	0	0	++	0	0	++
Childcare and Children at Play									
Objective CI 7	Require the development of a childcare facility in the village centre and, where required, a second childcare facility shall be provided within the village centre or other suitable location as deemed necessary by the Planning Authority.	0	++	0	0	++	0	0	++
Objective CI 8	Seek the creation of safe and usable open spaces throughout the LAP land for play through overlooking and passive surveillance.	+/-	++	0	0	++	0	+/-	++

Section 4E Community and Education cont'd	**BFF**	**PHH**	**S**	**W**	**AQ/C**	**CH**	**L**	**MA**
Educational Facilities								
Objective CI 9 Support the provision of, or access to, adequate educational facilities for the local community including primary, post primary, third level outreach programmes and other training facilities in order to meet the needs of the widest range of residents within Baldoyle-Stapolin and its environs.	0	++	0	0	++	++	0	++
Objective CIX 10 Support the provision of multi-use community facilities for the local community as part of any school provision in line wit the Fingal Schools Model, if the requirement for such facilities remains outstanding at the time.	0	++	0	0	++	++	0	++

Section 4F Retail and Employment		Strategic Environmental Objectives							
		BFF	PHH	S	W	AQ/C	CH	L	MA
A New Village Centre									
Objective RE 1	Provide a vibrant and well designed village centre, adjacent to Clongriffin train station, that will form the heart of the new community and will be easily accessible by pedestrian, cyclists and public transport from within the development and from surrounding communities.	0	++	0	0	++	0	0	++
Objective RE 2	Ensure that new development located within the village centre incorporates a range of uses that contribute towards the creation of a sustainable community and a vibrant urban area.	0	++	0	0	++	++	0	++
Objective RE 3	Support the development of residential/office over retail/ commercial units within the village centre.	0	++	0	0	++	0	0	++
Objective RE 4	Ensure that the scale of retail proposed is appropriate to a local centre and does not have a material adverse impact on the vitality and viability of existing centres within the area.	0	++	0	0	++	0	0	0

Section 4F Retail and Employment cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective RE 5	Ensure that new childcare facilities within the village centre are designed and located so as not to cause undue nuisance by virtue of car-parking, traffic and noise generation to existing or future residents of the surrounding area.	+/-	++	0	0	++	0	0	0
	Local Employment								
Objective RE 6	Facilitate the provision of flexible use units including live-work units within and adjacent to the village centre.	0	++	0	0	++	0	0	++
Objective RE 7	Facilitate employment and training uses to include for microenterprise and start-up units, where appropriate, within the proposed village centre or at locations adjoining Grange Road. Any such units and their uses must be appropriate in scale to the wider residential nature of the lands.	0	++	0	0	++	0	0	++
Objective RE 8	Permit home based employment in residential areas where it can be demonstrated that the employment activity will not have adverse impacts on residential amenity.	0	++	0	0	++	0	0	++

Section 4F Retail and Employment cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective RE 9	Encourage developers and other providers to take account of the possibilities of home-working in the design of new houses and the layout of housing areas.	0	++	0	0	++	0	0	++

Section 4G Sustainable Development Framework		Strategic Environmental Objectives							
		BFF	PHH	S	W	AQ/C	CH	L	MA
Introduction									
Objective SF 1	Promote the incorporation of sustainable urban design principles, design and construction techniques in all development within Baldoyle-Stapolin having due regard to the sustainability framework set out in this section of the plan.	++	++	++	++	++	0	+/-	++

Section 5 Urban Design		Strategic Environmental Objectives							
		BFF	PHH	S	W	AQ/C	CH	L	MA
Using this Design Guidance									
Objective UD 1	Ensure general compliance with the urban design framework set out in this Section of the LAP	+/-	++	0	++	++	++	+/-	++

Section 6 Sequencing and Phasing of Development		Strategic Environmental Objectives							
		BFF	PHH	S	W	AQ/C	CH	L	MA
Interim Measures									
Objective SP 1	Require all planning applications within the LAP lands to include clear measures for the treatment of interim sites on lands within the ownership of the applicant/developer.	+	+	0	0	+	0	+	0
Objective SP 2	Ensure that the delivery of measures to deal with undeveloped or interim sites within the LAP lands are included by way of condition in any grant of planning permission.	+	+	0	0	+	0	+	0

Map Based Local Objectives		Strategic Environmental Objectives							
		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective 1	Facilitate and encourage community facilities which allow for shared and multi-purpose use and adaptability, within the village centre or other agreed location subject to demand and resources.	0	++	0	0	++	++	0	++
Objective 2	Provide for at least one crèche facility within the village centre area as part of the phasing requirements set out in Section 6 and as required by Section 4E of the Local Area Plan.	0	++	0	0	++	0	0	++

Map Based Local Objectives cont'd		BFF	PHH	S	W	AQ/C	CH	L	MA
Objective 3	Require high quality design and finish to any development at these important gateway nodes to the LAP lands.	0	++	0	0	0	++	0	++
Objective 4	Provide for a public park and sensitively designed retirement village subject to screening for assessment under the Habitats Directive as per Local Objective 469 in the 2011-2017 Fingal Development Plan or as may be revised in any future Development Plan.	+/-	++	0	+/-	++	0	+/-	++

Section 8 Mitigation

8.1 Introduction

Mitigation measures are required to eliminate/remediate/reduce significant negative environmental impacts. Based on the source/pathway/receptor concept where an environmental burden (e.g. water pollution, air pollution) can impact on a receptor e.g. human, water, biodiversity or landscape via particular pathways these significant impacts can be mitigated either at:

• Source e.g. avoid the impacts at source
• Pathway e.g. reduce the magnitude of the impact
• Receptor e.g. compensate for the impact by providing an alternative

A number of the International and National environmental policies, for example, the Habitats Directive and the Water Framework Directive, have listed appropriate mitigation measures to minimise impacts on the environment. Many of the mitigation measures, particularly for water, will be driven by the Water Framework Directive and the requirement to meet good quality status by 2015. To negate or minimise these impacts, mitigation measures are set out in Section 6.2.

8.2 Mitigation Measures

During the development of the LAP, the SEA process has identified several additional measures needed to be included in the LAP. These measures have come about through scoping consultation and responses received from the EPA, the NTA and the Appropriate Assessment process and through assessment of the proposed objectives and policies by the SEA team. Mitigation measures identified through the AA process are indicated within the Natura Impact Report.

8.2.1 Water Quality

The Mayne River within the high amenity area of the Plan lands is classified as being of "poor" status under the Water Framework Directive and is identified as being of "moderate" quality (Q3 in 2010) by the EPA. In this context, it was important to incorporate the Eastern River Basin Management Plan and associated Programme of Measures into the Plan to ensure the protection and improvement of water quality.

Measures to improve and to ensure that there was no worsening of the water quality of the Mayne River were incorporated into the Plan through several water services and green infrastructure objectives; namely:

- Implement the ERBMP and associated measures and programs
- Improve the quality of the water in the River Mayne
- Seek the rehabilitation of the Mayne River to good water status
- Require that where SuDS features are connected to the Mayne River best practice will apply and consultation with the relevant national bodies such as the National Parks and Wildlife Service and Inland Fisheries Ireland will take place to agree on the methodology for such works.

These objectives are sufficient together with the biodiversity objectives to protect the surface water quality and the Mayne River. There are no further recommended mitigation measures.

8.2.2 Flooding

FEMFRAMS flood mapping indicates that the lands within the High Amenity zoning of the LAP are prone to flooding and along the River Mayne include a flood plain. A Strategic Flood Risk Assessment was carried out, in accordance with the Flood Risk Management Guidelines 2009 (OPW/DoECLG) as part of the draft LAP process. Recommendations arising from that report have been incorporated into the LAP objectives as follows:

- Implement the EU Flood Risk Directive and have regard to the relevant Flood Risk Management Plan and any recommendations arising from it.
- Implement the Flood Risk Management Guidelines 2009 (OPW/DoECLG)
- Require all planning applications for residential or commercial floorspace on sites in areas at risk of flooding to be accompanied by a Flood Risk Assessment in accordance with the Flood Risk Management Guidelines.
- Ensure that any proposals for basements are included in a site specific flood risk assessment.
- Require all planning applications to submit details of compliance with the SuDS Strategy for the LAP including runoff rates from sites, protecting the water quality and flow regime of the River Mayne

These objectives are sufficient together with the SuDS objectives to protect limit the risk of flooding in areas zoned for development. In the main areas prone to flooding in the LAP lands are within the regional park which is to be managed to protect the qualifying habitat and associated species of Baldoyle Bay SAC and SPA. This will allow natural flooding to continue to occur on the existing floodplain. There are no further recommended mitigation measures.

8.2.3 Protection of Designated Sites

The LAP is immediately adjacent to Baldoyle Bay. Baldoyle Bay is a Natura 2000 site and is designated as a Special Protection Area and a Candidate Special Area of Conservation under the Birds and Habitats Directives respectively. A small area of SAC lies within the Plan lands to the northeast of the site where the River Mayne approaches the estuary.

Baldoyle Bay/Estuary is also a Ramsar site recognised as being a wetland of international importance. Nationally it is a proposed Natural Heritage Area. It is also a statutory Nature Reserve.

In formulating policies and objectives for the LAP, EU Habitats and Birds Directives and national environmental legislation were key influencers in deriving policy. An Appropriate Assessment (AA) was carried out in tandem with the preparation of the LAP for Baldoyle-Stapolin and influenced the required mitigation measures.

The Fingal Development Plan identifies Racecourse Park as an Ecological Buffer Zone to protect the ecological integrity of the nationally and internationally designated sites by providing suitable habitat for key species such as birds and by providing for compatible land-uses around the designated sites. The LAP seeks to strike a balance to allow for Racecourse Park to provide for recreational uses while protecting the important role of the area in providing flood protection and protecting biodiversity in this environmentally sensitive area. A Landscape Masterplan has been prepared as part of the LAP to guide the management of the sensitive landscape and associated designations. Relevant mitigation objectives include:

- Maintain or restore the favourable conservation condition of Annex 1 habitat(s) and/or the Annex II species for which the Baldoyle cSAC has been selected:

[1140] Mudflats and sandflats not covered by seawater at low tide
[1310] Salicornia and other annuals colonizing mud and sand
[1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
[1410] Mediterranean salt meadows (*Juncetalia maritimi*)

- Maintain qualifying interest habitats and species within the Baldoyle Bay SPA and SAC at favourable conservation condition to ensure the ecological integrity of Baldoyle Bay and further ensure that the LAP lands continue to provide supporting function for the Qualifying Interest species.

- Ensure that sufficient information is provided as part of development, plan or project proposals to enable Appropriate Assessment screening to be undertaken and to enable a fully informed assessment of impacts on biodiversity to be made.

- Ensure compliance with the landscape masterplan for Racecourse Park and the Portmarnock South LAP lands contained within this LAP which incorporates mitigation measures for any loss of habitat for the conservation interests of Baldoyle Bay.

- Promote opportunities for the enhancement of local biodiversity features including the creation of new habitats through managed spaces and new water features such as pools and ponds in order to promote wildlife use associated with the existing designated sites.

These objectives are in addition to objectives for SuDS features in the form of attenuation ponds to be designed in such a way as to include appropriate planting to encourage biodiversity, the planting of non-invasive species only, green links to include measures to shield pedestrians/cyclists from qualifying interest species of birds where applicable and surface water measures to ensure protection of water quality. In combination, these objectives should ensure sufficient mitigation measures are implemented and no further measures are recommended.

8.2.4 Green Infrastructure and Green Links

The inclusion of a green infrastructure strategy recognises the need for sustainable development across the Plan lands and in particular the often competing requirements of expanding populations with the natural and sensitive surrounding environment. The strategy included in the LAP focuses on the following key areas: the conservation and enhancement of biodiversity; the provision of accessible parks, open spaces and recreational facilities; the sustainable management of water; and the maintenance of sensitive landscapes. It contains overarching green infrastructure objectives for the LAP lands based on Protecting, Creating, Enhancing and achieving Connectivity between and within the overall Green Infrastructure network in the area. Green links along the Mayne River corridor to the Clongriffin lands on the western side of the railway track, links throughout the development to the surrounding lands, and a section of the Fingal coastal way to link to cycle and pedestrian paths from Swords to Sandcove, encourage walking and cycling and connectivity between the different communities within the area. The green infrastructure strategy includes a number of objectives which seek to protect the natural environment and allow managed human interaction and recreation within and adjacent to it. An example of some of these includes:

- Creating high-quality, well-connected and sustainable natural environment of green spaces and watercourses that are rich in biodiversity and promote active and healthy lifestyles.

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

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

- Providing for the protection, conservation and enhancement of wildlife habitats and natural resources, including the existing watercourses on site and features such as ecologically important hedgerows and mature trees within the LAP area.

- Developing and enhancing existing green infrastructure, creating new habitats where any are lost, improving physical and habitat linkages between the adjoining Baldoyle-Stapolin, Portmarnock and Clongriffin LAP lands and developing a new high quality well landscaped public realm, connecting into the wider green network.

- Complying with all of the policies of the current Fingal Development Plan relating to open space, biodiversity and green infrastructure and open space provision.

There is a strong green infrastructure strategy included in the Plan which takes as its base the GI policies of the Fingal Development Plan. The objectives strive to provide a balance between the need to protect the sensitive surrounding environment and the needs of the growing population. No further mitigation measures are recommended.

8.2.5 Sustainable Development – Land use and transportation

The location of the LAP lands, alongside an existing railway station at Clongriffin and part of Baldoyle urban consolidation area within the Metropolitan area of Dublin indicates that higher-density, mixed used development is appropriate, in accordance with the Sustainable Residential Development in Urban Areas Guidelines 2009, to make most use of existing infrastructure and the provision of future infrastructure and opportunities for walking and cycling to locally provided services, commercial and retail facilities. The LAP has included a Preferred Density Masterplan which encourages mixed densities and dwelling type across the site, with higher densities within the village centre adjacent to the railway station. A minimum density of 50 units/hectare is set for the village centre area. However, the LAP has also had cognisance to the economic uncertainty and the stated market preference for own door, own garden houses. In this regard, the preferred Masterplan provides for the earlier phases of development to accommodate a density of between 38-42 units per hectare. This would encourage the early recommencement of development on the Plan lands while maintaining the compact urban form already present in the existing built form.

Sequencing and phasing of development is set out in Section 6 of the LAP and requires the delivery of open space and connections to the village centre and station as a key prerequisite of any development. The sequencing of development is contingent on connectivity to the village centre from any new development and to the delivery of key elements of the village centre including the main civic space and links to the station and to Clongriffin. As part of the second phase of the village centre a bus link over the railway line to the adjoining Clongriffin lands is required. This will mirror and join with the bus route on the Clongriffin side which currently terminates at Clongriffin.

No part of the residential area of the LAP is more than 600m from Clongriffin station. The Plan gives high priority to cycle and pedestrian routes and the importance of permeability both within the Plan lands and from the lands to the surrounding areas, see paragraph above detailing green infrastructure objectives. Relevant objectives for land use and transportation and the achievement of sustainable densities and appropriate sequencing of development and delivery of infrastructure include the following:

- Achieve a residential density in keeping with a compact urban form which reflects the character and function of the locality, having regard to the need to make the most efficient use of land and transport investment.

- Seek to achieve the densities provided for in the Preferred Density Masterplan Figure 4D.1. In any event, a minimum of 38 dwellings per hectare (net density) shall be required in each residential block.

- Require, generally, a minimum net residential density of 50 units per hectare within the proposed village centre and along the northern boundary with Racecourse Park subject to appropriate design and amenity standards.

- Ensure the development of sustainable residential communities through the promotion of innovative, high quality building design and layouts that prioritise non-car based movement and provide for a high level of permeability, accessibility and connectivity to the existing built environment, services and facilities.

- Provide a vibrant and well designed village centre, adjacent to Clongriffin train station that will form the heart of the new community and will be easily accessible by pedestrian, cyclists and public transport from within the development and from surrounding communities.

- Ensure that new development located within the village centre incorporates a range of uses that contribute towards the creation of a sustainable community and a vibrant urban area.

- Ensure the early provision of permanent access arrangements for pedestrians, cyclists and those with disabilities to Clongriffin train station and the developing areas of Clongriffin-Belmayne though the provision of access via the new public realm at Station Square as the first phase of the village centre.

- Ensure the provision of a bus ramp to connect Baldoyle- Stapolin to Clongriffin-Belmayne as part of the delivery of the second phase of the village centre or earlier as required.

- Provide, as part of the Fingal Coastal Way, an agreed and appropriately designed combined pedestrian and cycle route, of no wider than 3m, through the eastern edge of Racecourse Park, minimising access points and signage to avoid disturbance and ensuring the integrity of the protected habitats and species within Baldoyle Bay and Racecourse Park.

- Work in association with Dublin City Council to secure, with the agreement of Iarnroid Eireann or other relevant 3rd parties, a pedestrian and cycle link under the railway line via the existing arched bridge underpass in the northwestern corner of Racecourse Park.

- Facilitate, with residents' support, the upgrading of existing cul-de-sacs and areas of open space by opening them up to allow pedestrian and cyclist access where it significantly shortens trips to community facilities, schools, open spaces, shopping facilities or public transport stops for future and existing residents.

Sustainable development through the means of cycling, walking and public transport and through mixed dwelling type and densities has been a central tenet of the LAP policy. No further mitigation measures are considered necessary.

8.2.6 Appropriate Assessment

An appropriate assessment process was undertaken as part of the development of the draft LAP and the draft plan will be accompanied by a Natura Impact Report in addition to this Environmental Report. The recommendations of, and learning from, the appropriate assessment process fed into the mitigation measures and resultant LAP objectives. Those objectives within the designated sites paragraphs of the Green Infrastructure strategy were particularly influenced by AA recommendations but all of the LAP objectives were assessed as part of the process. An overarching appropriate assessment objective has been included in the LAP and where considered applicable, objectives included a protection that AA would be required for certain works, plans or projects. Examples of such objectives are as follows:

- Promote opportunities for the enhancement of local biodiversity features including the creation of new habitats through managed spaces and new water features such as pools and ponds in order to promote wildlife use associated with the existing designated sites. Such proposals may be subject to an Appropriate Assessment of the likely significant effects on European sites due to the proximity of urban centres to European sites.

- Ensure that sufficient information is provided as part of development, plan or project proposals to enable Appropriate Assessment screening to be undertaken and to enable a fully informed assessment of impacts on biodiversity to be made.

- Maintain or restore the favourable conservation condition of Annex 1 habitat(s) and/or the Annex II species for which the Baldoyle cSAC has been selected:
- [1140] Mudflats and sandflats not covered by seawater at low tide
- [1310] Salicornia and other annuals colonizing mud and sand
- [1330] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- [1410] Mediterranean salt meadows (*Juncetalia maritimi*)

- Maintain qualifying interest habitats and species within the Baldoyle Bay SPA and SAC at favourable conservation condition to ensure the ecological integrity of Baldoyle Bay and further ensure that the LAP lands continue to provide supporting function for the Qualifying Interest species.

- Require that where SuDS features are connected to the Mayne River best practice will apply and consultation with the relevant national bodies such as the National Parks and Wildlife Service and Inland Fisheries Ireland will take place to agree on the methodology for such works. In any event, the design of SuDS features shall not conflict with conservation managment objectives.

- Require Appropriate Assessment (AA) Screening for any development, including changes to the landscape, within Racecourse Park. This will include any changes to existing or future layout, materials or surfaces of pitches.

- Provide, as part of the Fingal Coastal Way, an agreed and appropriately designed combined pedestrian and cycle route, of no wider than 3m, through the eastern

edge of Racecourse Park, minimising access points and signage to avoid disturbance and ensuring the integrity of the protected habitats and species within Baldoyle Bay and Racecourse Park.

8.2.7 Summary

The LAP has put green infrastructure and sustainable development at the core of its policies and objectives. These have been informed by the SEA and AA processes and by the responses to the scoping report sent to the prescribed bodies. Objectives have been revised in the drafting of the LAP accordingly. No further mitigation measures are recommended subject to any further input which may be required as a response of the display of the Draft Local Area Plan and submissions made.

Section 9 Monitoring

9.1 Introduction

Under Article 10 and Section (i) of Schedule 2B of the SEA Regulations, monitoring is required in order to identify at an early stage any unforeseen adverse effects caused by the Plan. This allows remedial action to be taken. Monitoring allows the actual impacts of the Plan to be measured against those that were predicted. It allows major problems to be identified and dealt with in a timely fashion, and environmental baseline information to be gathered for future Plan reviews. It also ensures that proposed mitigation measures are carried out and that no unforeseen impacts occur (Therivel, 2004). The methodology used in the development of the monitoring programme for the Baldoyle-Stapolin Local Area Plan is based on the use of indicators and targets and the assignment of responsibilities. Monitoring is carried out by reporting on the set of indicators and targets drawn up for the various environmental objectives and used to describe future trends in the baseline, which enable positive and negative impacts on the environment to be measured. The indicators that are used show changes that would be attributable to implementation of the Plan. In particular, the indicators can also in certain circumstances act as an early warning system should unforeseen impacts occur or conditions deteriorate further or faster than anticipated. For example, water quality indicators will allow for the identification of improvements or deterioration in water quality. If quality targets are not being reached and water is seen to be unexpectedly deteriorating immediate investigation will be required to assess the source of such deterioration.

9.2 Monitoring Programme

Monitoring will focus on aspects of the environment that are likely to be significantly impacted by the Plan. Indicators and targets have been identified for the main environmental issues in the study area, namely population and human health, water, biodiversity, climatic factors and landscape. Much of the indicator information required is already being actively collected and reported at a level sufficient to meet the needs of this Plan. The frequency of monitoring is set by relevant legislation.

9.3 Responsibilities

Fingal County Council is responsible for the implementation of the monitoring programme in relation to the Plan.

9.4 Sources of information

The indicators chosen are at a level, which is relevant to the Plan, and are collated and reported on by a variety of Government Agencies, such as EPA, OPW, National Parks and Wildlife Services, CSO and different sections within Fingal County Council. Table 5.4 *Strategic Environmental Objectives, Targets and Indicators* in Section 5 of this report sets out the format for the monitoring programme for this Plan, detailed in relation to relevant indicators and targets. To avoid repetition, the table is not repeated in this section. Based on the information above it can be seen that most of the indicator information required is already being actively collected and reported at a level sufficient to meet the needs of this Plan.

9.5 Frequency of Reporting

It is recommended that Fingal County Council carry out a mid-term review of performance against SEA Objectives. This would occur in 2016 and would use information in the most recent information from the EPA State of the Environment Report. It is further recommended that reporting on the overall monitoring of the Plan is made to the EPA SEA Section.

Appendix 1

Fingal County Council

Scoping Report for Draft Baldoyle - Stapolin Local Area Plan

2012-2018

February 2012

Table of Contents

Section 1 - Introduction

1.1 Background to SEA

On the 5th June 2001, the European Council adopted Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment (the SEA Directive) which took effect in member states on the 21st July 2004. The Directive was transposed into Irish Law through two sets of Regulations:

- European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2011 (S.I. 200 of 2011) amending the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435 of 2004); and

- Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011 (S.I. 201 of 2011) amending the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. 436 of 2004).

The Planning and Development (Strategic Environmental Assessment) Regulations 2004 (as amended) require SEA to be carried out in respect of local area plans with a population or target population over 5,000 persons, or where the area covered by the plan is greater than 50 square kilometres, or where the local area plan is being prepared for a town and its wider environs. Where the population is less than 5,000 SEA must be carried out where it is considered that the plan would be likely to have significant effects on the environment.

Following an assessment of the key objectives of the plan against the criteria set out in Schedule 2A of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (as amended), it was concluded that the implementation of the proposed Baldoyle Local Area Plan (LAP) has the potential to have significant effects on the following elements of the receiving environment:

- Biodiversity, Flora & Fauna
- Water Quality
- Flooding and Climate Change
- Material Assets
- Human Beings

Accordingly it was recommended that an SEA should be carried out in conjunction with the preparation of the LAP.

1.2 What is SEA?

SEA is a formal process that is carried out in parallel with the preparation of the LAP. It is a valuable tool that influences decision-making at each stage in the plan process, to improve the environmental sustainability of the plan and to raise awareness of the potential environmental consequences of its implementation so that these consequences may be mitigated or avoided altogether. It also gives the public and other interested parties an opportunity to comment and to be kept informed on decisions that may impact on the environment.

The steps involved in the SEA process for land-use plans include:

- Preparation of an Environmental Report where the likely significant environmental effects of implementing the Draft Plan are identified and evaluated;
- Consultation with the public, environmental authorities, and any EU Member State affected on the Environmental Report and the Draft Plan;
- Taking account of the findings of the report and the outcome of these consultations in deciding whether to adopt or modify the Draft Plan;
- Making known the decision on adoption of the plan and outlining how the SEA influenced its outcome.

1.3 Background to and Purpose of the Scoping Report

The purpose of the scoping report is to assist the planning authority and to facilitate consultation with the prescribed environmental authorities in relation to the preparation of the Environmental Report for the Draft Baldoyle - Stapolin LAP. The scoping report determines the range of environmental issues within the plan area and aims to ensure that any significant environmental issues are appropriately addressed in the Environmental Report. The Scoping Report will also identify information sources as well as areas that require more information to determine environmental implications.

This report is based upon the criteria set down in article 13M(2)(c) of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (as amended) and the SEA Guidelines[1], in particular: -

- The current knowledge and methods of assessment
- The contents and level of detail in the plan
- The stage of the plan in the decision making process
- The extent to which certain matters are more appropriately assessed at different levels in the decision making process in order to avoid duplication of the environmental assessment

The EPA's SEA Pack (Version 24/01/2012) was also used as a source of information.

The Scoping Report: -

- Identifies the study area and the likely scale of development on the lands

[1] Implementation of SEA Directive (2001/42/EC): Assessment of the effects of Certain Plans or Programmes on the Environment, Guidelines for Regional and Planning Authorities, Department of Environment, Heritage and Local Government, November 2004

- Provides a basis for consultation with environmental authorities
- Identifies plans and programmes which are relevant to the Baldoyle-Stapolin Local Area Plan
- Assesses the Baseline Environment
- Identifies the key environmental issues arising from the baseline data

This Scoping Issues Paper will form the basis for discussions with the key stakeholders. The findings of the scoping exercise will inform the preparation of the Environmental Report and the draft Baldoyle-Stapolin Local Area Plan.

1.4 Consultation with Environmental Authorities

Article 5(4) of the SEA Directive and Article 13M (2) of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 as amended, require that the prescribed Environmental Authorities be consulted when deciding on the scope and level of detail to be included in the Environmental Report.

Environmental authorities have been designated under the terms of Article 13A (4) of the Planning and Development Regulations 2001 (as inserted by article 7 of S.I. No. 436 of 2004 and as amended by S.I. 201 of 2011) as follows: -

For the purposes of SEA the Environmental Authorities are prescribed as the following:

- Environmental Protection Agency
- Department of Environment, Community and Local Government
- Department of Communications, Energy and Natural Resources
- Dept of Agriculture, Food and the Marine
- Department of Arts, Heritage and the Gaeltacht
- Adjoining Planning Authorities

1.5 Environmental Report

The purpose of the Environmental Report is to identify, evaluate and describe the likely significant effects on the environment of implementing the plan. The effects to be considered include secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative. The purpose of this is to inform the Elected Members of Fingal County Council of the environmental consequences of making the plan and to make the environment a central focus of the decision-making process.

The contents of the report are specified in Article 5 and Annex 1 of the SEA Directive and include the following:

- An outline of the contents and main objectives of the plan, and of its relationship with other relevant plans and programmes;
- A description of relevant aspects of the current state of the environment and the evolution of the environment without implementation of the plan;
- A description of the environmental characteristics of areas likely to be significantly affected;

- Identification of any existing environmental problems which are relevant to the plan, particularly those relating to European protected sites;
- A list of the environmental protection objectives at international, EU and national level, which are relevant to the plan and a description of how they have been taken into account in the formulation of the plan;
- A description of the likely significant effects on the environment (biodiversity, human health, cultural heritage, air, soil, water etc);
- Mitigation measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment caused by implementing the plan;
- An outline of the reasons for selecting the alternatives considered and a description of how the assessment was undertaken including any difficulties;
- A description of proposed monitoring measures;
- A non-technical summary of the above information.
- The Environmental Report must be reviewed where amendments are made to the Draft Plan.

The Draft Environmental Report of the SEA and the Draft Local Area Plan will be produced as part of an iterative process in which the SEA and the Appropriate Assessment (AA) required under the Habitats Directive inform the drafting of the LAP. The Draft Environmental Report will indicate the likely significant effects on the environment of implementing the plan. This report will, in addition to other regulatory requirements, take account of the submissions and observations received from the environmental authorities. An Appropriate Assessment of the draft LAP will also be prepared as part of the iterative process.

1.6 SEA Statement

Following adoption of the plan a SEA Statement must be prepared. The SEA Statement will give a summary of how environmental considerations and the Environmental Report were factored into the plan, how submissions and consultations were taken into account and the reasons for choosing the plan as adopted in light of other reasonable alternatives considered. It will also outline a list of monitoring measures to be carried out during the plan period. The purpose of the SEA Statement is to provide accountability, by informing the public of how environmental effects were considered in the decision making process.

Section 2 – Local Area Plan

2.1 Introduction

The Baldoyle-Stapolin Local Area Plan 2012 – 2018 will provide a blueprint for the development of the Baldoyle Stapolin Area for the period 2012 – 2018. This strategy will facilitate the planned, integrated and sustainable development of the area so that growth can take place in a co-ordinated manner, while protecting and preserving the area's character, heritage and amenity and making a positive contribution to the population's quality of life. Though the plan will include policies and objectives for the development of the area over the six years, the development strategy will provide the foundations that will shape the future development of the area beyond 2018. The Local Area Plan will be underpinned by the principles of sustainable development, climate change adaptation, social inclusion and high quality design. These four strands will permeate the Local Area Plan at every level and will be considered when framing each policy.

Sustainable Development – the concept of sustainable development can be defined as 'development that meets the needs of today without compromising the ability of future generations to meet their own needs'. An important element of the sustainable development thread in the Baldoyle Stapolin Local Area Plan 2012 – 2018 is the Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA).

These assessments are required under legislation and seek to provide for a high level of protection of the environment. The Local Area Plan will adopt the principle of sustainable development by promoting and encouraging the integration of economic, environmental, social and cultural issues into local policies and programmes.

Climate Change – CO2 emissions from the combustion of fossil fuels is recognised as the greatest contributor to climate change. The effects of climate change include rising sea levels, flooding and drought. The National Climate Change Strategy 2007-2012 has set a target to cut emissions by at least 20% by 2020. The main areas where this can be achieved are energy, planning, transport, waste management and biodiversity.

Social Inclusion – Social inclusion affects the well being of individuals, families, social groups and communities. Creating a more socially inclusive society by alleviating social exclusion, poverty and deprivation is a major challenge. Steps towards achieving a more socially inclusive society include the provision of community infrastructure and improving access to information and resources. The Local Area Plan will seek to increase social inclusion at both preparation and operational stages of the development plan.

High Quality Design – Good design adds quality to the places we live, work and enjoy. Ensuring high quality design adds value to our towns, villages and countryside and improves our quality of life. The Local Area Plan will promote high quality design by encouraging its integration into every aspect of the plan.

2.2 Structure of Local Area Plan

The LAP will comprise of a Written Statement, map/series of maps and a set of Appendices. The written element is the main document of the plan. It sets out the aims and objectives for the plan lands under a range of headings which will most likely include housing, employment and economic activity, retail and commercial development, local centre development, community and educational facilities, green infrastructure, recreation and open space, and heritage. The map gives visual representation to the policies and objectives of the plan. The Environmental Report will be contained in the Appendices.

2.3 Geographical Area of the Plan

The Baldoyle-Stapolin Local Area plan lands comprise of lands with the following zoning objectives in the Fingal Development Plan:

- c. 35 hectares of land zoned Objective RA – 'Provide for new residential communities in accordance with approved local area plans and subject to the provision of the necessary social and physical infrastructure'. This area includes the existing residential communities of Myrtle and Red Arches.
- c. 81 hectares of land zoned Objective HA – 'Protect and enhance high amenity areas'.

The plan lands are located in the Metropolitan Area of Dublin, on the southern boundary of Fingal, where it meets the administrative area of Dublin City along the Dublin – Belfast railway. To the west of the railway lies the developing mixed use area of Clongriffin within Dublin City Council's wider North Fringe Area encompassing Northern Cross/Clare Hall to Clongriffin. This, along with Stapolin, is one of Dublin's larger new development areas and, when completed, will have approximately 10,000 new homes as well as new retail and commercial areas. Dublin City Council is currently preparing a Local Area Plan for the North Fringe Area which will replace the North Fringe Action Area Plan 2000. The local authorities, i.e. Fingal and Dublin City, intend to run the Local Area Plan processes for both Baldoyle-Stapolin and the North Fringe area concurrently.

The High Amenity (HA) lands are designated as an ecological buffer zone in the Fingal Development Plan and also include a section of the larger surrounding EU designated Special Areas of Conservation and Special Protection Area at Baldoyle Bay. These High Amenity lands will form the large regional park to serve the development when completed. (For the exact boundaries of the plan area see Figures 1 & 2 at the rear of the document).

2.4 Key Objectives of the Plan

The LAP will be based on a number of key objectives as follows:

- To set a framework for and highlight opportunities and constraints associated with this development;

- To outline future housing requirements and the manner in which it is to be provided;
- To provide opportunities for improved urban design and form;
- To develop policies to encourage and support economic development;
- To ensure that transport and land use planning is fully integrated to produce a sustainable working, school and living environment
- To create a compact and Local Centre to serve the local population;
- To ensure necessary supporting physical and social infrastructure is provided in a timely manner;
- To provide for the conservation of the natural and built heritage;
- To support sustainable development practices, including public transport, sustainable urban drainage systems (SuDs);
- To inform and guide those planning on investigating in future commercial or residential development, infrastructure or services;
- To successfully integrate Baldoyle-Stapolin through the provision of the necessary road, pedestrian and cycle linkages;
- To facilitate the provision of high quality public open spaces and recreational facilities within the plan area;
- To promote the sustainable development of tourism and recreational facilities in the plan area;
- To conserve and protect the environment including the archaeological and natural heritage and EU designated sites;
- To have regard to coastal zone areas designated under the Fingal Development Plan 2011-2017.

2.5 Potential Capacity of LAP lands

The plan lands will cater primarily for residential development, a local centre (including retail and commercial facilities) and access to coastal recreational amenities.

The 2001 Baldoyle Action Area Plan provided for approximately 2,600 homes on the Plan lands which it was envisaged would equate to a population of 7,600. As of June 2011 c. 540 units are completed and occupied with 94 units completed and vacant and a further 205 units under construction. Planning permission exists for 1,289 residential units which have not yet started. The majority of the permissions which have not started are apartment developments. At this time, only one sector of the original plan lands does not have planning permission. The area zoned for residential development is the same as that considered in the 2001 Action Area Plan. However; the type and quantum of housing will be reviewed as part of the new LAP.

While there have been some changes in market conditions with the recent downturn in the economy, the potential population and density of development in this area will still need to be optimised given the proximity of the lands to the Clongriffin railway station. Other considerations include the mix of house type required to cater for diverse needs.

In addition to the residential component of the development the previous Action Area Plan provided for c. 10,000 sq. m. of commercial and retail space which was to be based in a new urban quarter around the railway station. Additional smaller retail/corner shop units were to be dotted throughout the residential areas of the development. While it is unlikely that the quantum of retail and commercial development proposed under the previous plan will be provided for under the new LAP for the area there will be some commercial/retail development around the town centre albeit at a reduced scale.

2.6 Relationship/Compatibility with Other Relevant Plans/Programmes

The environmental report will provide information on (inter alia): -

"*the relationship (of the plan…) with other relevant plans and programmes"* (Annex 1(a) of the Directive); and

"the environmental protection objectives, established at international, (European) Community or (national) level, which are relevant to the plan… and the way those objectives and any environmental considerations have been taken into account during its preparation" (Annex I (e)).

The scoping stage has a role in identifying the plans and programmes that will be relevant to the Baldoyle-Stapolin Local Area Plan.

The LAP should also be consistent National, Environmental, Regional and Local Plans and Guidelines including the following: -

National Plans, Policy and Legislation

- National Spatial Strategy 2002–2020
- Transport 21, 2006-2015
- Delivering Homes, Sustaining Communities, 2007
- Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas, and accompanying document Urban Design Manual – A Best Practice Guide, 2009
- Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities, 2007
- Retail Planning Guidelines for Planning Authorities, 2005
- The Planning System and Flood Risk Management, Guidelines for Planning Authorities, November 2009

Regional Planning Context

- Regional Planning Guidelines for the Greater Dublin Area 2010-2022
- Retail Strategy for the Greater Dublin Area, 2008-2016
- National Transport Agency - A Greater Dublin Area: Draft Transport Strategy 2011-2030
- Greater Dublin Strategic Drainage Study (GDSDS)
- Eastern River Basin Management Plan 2009-2015

- Waste Management Plan for the Dublin Region 2005-2010 (currently under review)
- Flood Risk Management Plans (Eastern FRAMS and FEMFRAMS)
- River Basin Management Plans

Local Planning Context

- Fingal Development Plan 2011-2017
- Adjoining Local Area Plans
- Fingal Biodiversity Action Plan

A comprehensive list of policies and objectives in relation to the local planning context are listed in Appendix A. Such policies and objectives are in compliance with higher order plans.

Immediately Adjoining Developments

In addition to the aforementioned Plans and Strategies it is important to note that new LAP's are being prepared for residentially zoned (RA) lands at Portmarnock, which lies c. 800 metres to the north of the subject site and also for a large mixed use area to the west of the subject site within Dublin City Council's administrative area.

The Portmarnock LAP (86ha) lands are located between Station Road and Mayne Road in Portmarnock, to the east of the railway line. The lands are primarily zoned:

- Objective RA (41ha) in the Fingal Development Plan – *provide for new residential communities in accordance with approved local area plans and subject to the provision of the necessary social and physical infrastructure*.
- Objective OS (32ha), the objective of which is to *preserve and provide for open space and recreational amenities*.

Additional pockets of land in proximity to the RA and OS zoned lands will be considered fully in the context of the LAP, namely the HA zoned area (*protect and enhance high amenity areas*), RS lands (*provide for residential development and protect and improve residential amenity*) and RC lands (*provide for small scale infill development serving local needs while maintaining the rural nature of the cluster*).

The existing Portmarnock LAP (2006) provided for approximately 1,400 new residential units on the Plan lands which, depending on the occupancy rate, could accommodate up to 4,000 persons. It is envisaged that the number of units proposed under the new LAP for this area will remain in and around this figure, with no significant increase or reduction likely. Given the scale of the proposed development on these lands and their proximity to the Baldoyle-Stapolin LAP lands it is considered essential that the cumulative effect of the development of these lands be assessed in the course of the preparation of an SEA for the area. The Portmarnock LAP is under review and a separate scoping document is being sent to the prescribed authorities.

In addition to the Portmarnock LAP lands, the Baldoyle- Stapolin LAP lands adjoin, and are functionally related to, the developing mixed use area of Clongriffin within Dublin City Council's wider North Fringe Area encompassing Northern Cross/Clare

Hall to Clongriffin to the west. This area, along with Stapolin, is one of Dublin's larger new development areas and, when completed, will have approximately 10,000 new homes as well as new retail and commercial areas. Dublin City Council is currently preparing a Local Area Plan for the North Fringe Area which will replace the North Fringe Action Area Plan 2000. The local authorities, i.e. Fingal and Dublin City, intend, insofar as is possible, to run the Local Area Plan processes for both Baldoyle-Stapolin and the North Fringe area concurrently. As with Portmarnock it is considered essential that the cumulative effect of the development of these lands be assessed in the course of the preparation of an SEA for the area.

Section 3 – Key Environmental Issues

3.1 Introduction

In order to identify, describe and evaluate the likely significant environmental effects of implementing the LAP, relevant aspects of the current state of the environment and existing environmental problems relevant to the plan area need to be identified. This information is outlined under the headings below. There is a large body of research and baseline data available from sources such as statutory agencies, internal departments within Fingal County Council, local publications, planning applications and EIS relating to major developments in the area.

Key Environmental Issues to be considered in the LAP/SEA Process
The broad categories of components in the environment, derived from paragraph (f) of Annex 1 of the Directive, to be assessed as part of the LAP/SEA process are as follows:

- Biodiversity/Flora and Fauna
- Population and Human Health
- Soil
- Water
- Air & Climatic Factors
- Material Assets (including transportation)
- Cultural Heritage
- Landscape
- Identified data gaps in scoping document

Each component will be investigated in greater detail during the preparation of the Environmental Report, with particular focus on those key issues where there are likely to be significant environmental effects. The key issues represent: -

- Aspects of the environment that will need careful consideration; and/or
- Opportunities to optimise the contribution that the LAP makes to securing sustainable development.

As stated in section 1.1, it is anticipated that the **key issues** relate to:

- Biodiversity, Flora and Fauna – potential impacts on Baldoyle Estuary
- Water Quality and SuDS
- Flooding and Climate Change –and Flood Risk Assessment
- Material Assets – The Transportation Network in the area

While all of the broad categories listed above will be dealt with below, those four which have been identified as the key issues will be dealt with first with the remaining following.

Given the potential for cumulative impacts of developing the Baldoyle – Stapolin LAP lands and the proximate residentially zoned (RA) lands at Portmarnock, this SEA will consider both the development of the Portmarnock LAP and the Baldoyle-Stapolin LAP lands in terms of the likely significant environmental issues, as listed above, for both land banks. Similarly, cumulative impacts arising from the development of adjoining lands within the Dublin City Council administrative lands will also be considered.

Baseline information exists and specific studies have been undertaken in relation to these issues. In this way the planning authority will ensure no negative direct or indirect environmental impacts on the LAP lands, as well as on the wider area, as a result of developing the LAP lands. While it is possible to address the issues of cumulative impacts in the environmental report in terms of the key issues, it will only be practicable to assess detailed development options in relation to the Baldoyle-Stapolin LAP lands.

3.2 Biodiversity, Flora and Fauna

Designated Sites

Natura 2000 is the European Union-wide network of protected areas, recognised under the EC Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora). These sites consist of Special Areas of Conservation (SACs) for habitats and species, Special Protection Areas (SPAs) for birds and Ramsar wetland sites.

The purpose of SEA Assessment and Appropriate Assessment of land use plans is to ensure that protection of the integrity of European sites is a part of the planning process at a regional and local level.

The following SAC's and SPA's are located within a 15km zone of influence to the proposed development (see Figure 3)

Special Areas of Conservation (SAC's)	**Special Protection Areas (SPA's)**
000199 - Baldoyle Bay SAC	004006 - North Bull Island SPA
000202 - Howth Head SAC	004015 - Rogerstown Estuary SPA
000204 - Lambay Island SAC	004016 - Baldoyle Bay SPA
000205 - Malahide Estuary SAC	004025 - Broadmeadow/Swords Estuary SPA
000206 - North Dublin Bay SAC	004069 - Lambay Island SPA
000208 - Rogerstown Estuary SAC	004113 - Howth Head Coast SPA
002193 - Ireland's Eye SAC	004117 - Ireland's Eye SPA

Baldoyle Estuary is the closest Natura 2000 site to the proposed Baldoyle-Stapolin LAP area, located adjoining and partially within the plan lands. The Baldoyle Estuary is covered by a number of national and international conservation designations due to the important habitats, species of birds, animals and plants that occur within the site. Primarily it is a Special Area of Conservation (SAC) and a Special Protection Area (SPA) for birds. (See appendix B for further details).

In terms of the Baldoyle Bay SPA, the main reason for the designation is the presence of internationally important numbers of Pale-bellied Brent Geese (*Branta bernicla hrota*). The geese are present from October to April, with overall counts indicating that numbers are increasing. Feeding takes place in the inner estuary and outer bay: green algae (mostly *Enteromorpha* spp. and *Ulva lactuca*) growing on the intertidal flats dominates the diet until mid-winter, after which the geese switch to grazing grass in adjacent fields and golf courses.

In addition to hosting several Annex I bird species, Baldoyle Bay is also an important coastal site for wintering waterfowl. The estuary complex provides good habitat for a range of species. A number of migratory bird species attain nationally important status including Bar-tailed Godwit (*Limosa lapponica*) and Golden Plover (*Pluvialis apricaria*) (both Annex I species under the E.U. Directive); Shelduck (*Tadorna tadorna*), Pintail (*Anas acuta*), Ringed Plover (*Charadrius hiaticula*) and Grey Plover (*Pluvialis squatarola*). Additional species such as Dunlin (*Calidris alpina*), Oystercatcher (*Haematopus ostralegus*), Black-tailed Godwit (*Limosa limosa*) and Redshank (*Tringa totanus*) attained nationally important status for some of this period. There are fairly extensive intertidal flats used by feeding waders and dabbling duck and geese. At high tide, the salt marshes and sandy beaches provide suitable roost sites.

In addition to being an SAC and SPA Baldoyle Bay is also a Ramsar site recognised as being a wetland of international importance. Nationally it is a proposed Natural Heritage Area. It is also a statutory Nature Reserve.

The following is a synopsis of the Conservation Objectives for the Baldoyle Bay cSAC and SPA as set out by the NPWS:

Baldoyle Estuary cSAC (candidate Special Area of Conservation)	
Conservation Objectives	**Objective 1:** To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status: Mudflats and sandflats not covered by seawater at low tide; *Salicornia* and other annuals colonising mud and sand; Atlantic salt meadows (*Glauco- Puccinellietalia maritimae*); Mediterranean salt meadows (*Juncetalia maritimi*). **Objective 2:** To maintain the extent, species richness and biodiversity of the entire site. **Objective 3:** To establish effective liaison and co operation with landowners, legal users and relevant authorities.
Proposed Special Conservation Interests for Baldoyle Bay SPA (4016)	
Bird and plant species listed in for this Natura 2000 site (Qualifying interests)	Light-bellied Brent Goose Ringed Plover Bar-tailed Godwit **Additional Special Conservation Interests:** Great Crested Grebe Shelduck Pintail Red-breasted Merganser Oystercatcher Golden Plover Grey Plover

	Knot Dunlin Bar-tailed Godwit Redshank Wetland & Waterbirds
Main Conservation Objective SPA: To maintain the special conservation interests for this SPA at favourable conservation status: Light-bellied Brent Goose, Ringed Plover, Bar-tailed Godwit, Shelduck, Golden Plover, Grey Plover, Wetland & Waterbirds.	
Draft Conservation Objectives as per National Parks & Wildlife Service, 2010	

Other Natura 2000 sites in the vicinity include Irelands Eye SAC/SPA/pNHA, Howth Head SAC/pNHA, Howth Head Coast (SPA), North Dublin Bay (SAC/pNHA), North Bull Island (SPA) and Sluice River (pNHA). These estuaries are important bird sites, providing both feeding and roosting areas for a range of wintering wildfowl. The estuaries hold internationally important numbers of light-bellied Brent Geese and Black-tailed Godwit and nationally important populations of at least another twelve species. Many of the wetland birds of the Baldoyle Estuary commute between these four estuaries. This shows that birds can move to an alternative estuarine site if there is disturbance in one of the above sites. However, the habitat quality and carrying capacity of each estuary must be protected to maintain the overall population of bird species that rely on these sites for feeding, roosting and breeding.

EU Shellfish Waters Directive (2006/113/EC)

The aim of the Shellfish Waters Directive is to protect or improve shellfish waters in order to support shellfish life and growth. It is designed to protect the aquatic habitat of bivalve and gastropod molluscs, which include oysters, mussels, cockles, scallops and clams.

The designated shellfish area at Malahide Bay is 36.3 km^2 in area and extends from Lambay Island to Portmarnock. Balbriggan/Skerries shellfish area is situated in adjacent tidal waters. The contributing catchment is 376.66 km^2 in area and drains number of rivers including the Mayne and the Sluice.

On foot of the legislation the Malahide Pollution Reduction Programme came into effect from the 22nd of December 2009.

Main Issues

Increased development pressures and an increase in population associated with the Baldoyle and Portmarnock LAPs may impact upon the designated sites. Baldoyle and Portmarnock are set to grow with several thousand people under the proposed LAPs. Other large scale housing developments are underway further inland at Balgriffin and along the Mayne River in the Dublin City area.

In addition, the development of the Racecourse Park (open space area associated with the LAP) can affect the SAC and SPA lands by increased numbers of visitors that may cause disturbance to birds and trampling of the vegetation. Inappropriate management may cause damage to the habitats and species present within the SAC area to the landward side of the road.

However, the policies and objectives of the plan will seek to ensure that there will be no adverse impact on the designated sites from development within the plan boundary. Furthermore, as part of these developments a walkway is planned along the Mayne River towards the coast. This means that in the future more visitors will make their way to the coast. It is imperative that this flow of people be facilitated and controlled in such a manner that the conservation objectives for the Baldoyle Estuary are not compromised.

In terms of the Designated Shellfish Waters the policies and objectives included in the proposed LAP will ensure that the requirements of the Shellfish Directive (2006/113/EC), statutory regulations are complied with pursuant to the Shellfish Directive and the Department of the Environment, Heritage and Local Government's Pollution Reduction Programme for the Malahide Shellfish Area (2009).

In overall terms, with regard to the future development of the Baldoyle-Stapolin LAP lands, an Appropriate Assessment will be undertaken in conjunction with the SEA Environmental Report to ensure that development will not have significant adverse direct, indirect or secondary impacts on the integrity of the adjoining Natura 2000 sites. The Habitats Directive will be complied with and the requirements of the recent European Communities (Birds and Natural Habitats) Regulations 2011, (S.I. No. 477 of 2011) will be taken into account. Nationally designated habitats and species will be assessed in addition to the Natura designated sites.

Flora and Fauna on Site

Habitats and Flora

As part of the Appropriate Assessment for the Proposed Coastal Pathway Portmarnock-Baldoyle at Baldoyle Bay cSAC and SPA an ecological assessment was carried out by Hans Visser, Biodiversity Officer, Fingal County Council and Dr Roger Goodwillie along the eastern perimeter of the LAP lands. Details of existing Flora and Fauna are also available from the Environmental Impact Assessments that have been submitted with various planning applications the site. Based on these sources it can be concluded that the overall site consists of a mix of farmland interspersed with hedges to demarcate field boundaries. In addition to the existing residential units that have been constructed on the southernmost and eastern section of the residentially zoned area of the plan lands, certain preliminary works have been carried out on the remaining sections of residentially zoned lands in association with permitted development for drainage and access. These areas are now a mixture of stubble field, bare trackways and piles of topsoil in storage from elsewhere.

In terms of Fossitt (2000) these habitats would be classified as spoil and bare ground (ED2) or recolonising bare ground (ED3). There are also fields that were previously planted with wheat up until 2004 but the stubble has now been replaced naturally by a grassy community corresponding to dry meadows and grassy verges (GS2). Lengths of hedgerow (WL1) are also found around the edges as are treelines (WL2) at certain locations. Sections of the site, for instance to the northeast of the old

house are more permanent grasslands where small trees are established in dry calcareous and neutral grasslands (GS1).

An area of brackish march occurs along the Mayne River at the northeastern corner of the site. This brackish marsh is a result of tidal water entering the Mayne River and forms part of the designated SAC due to the presence of two protected plants namely; Borrer's saltmarch grass *Pucinellia fasciculate* and meadow barley *Hordeum scalinum*. However, neither of these species has been seen recently despite repeated searches as the tidal influence has declined over the last couple of years after the upgrading of the Mayne River at the estuary.

Fauna

In terms of the Baldoyle Bay SPA, the main reason for the designation is the presence of internationally important numbers of Pale-bellied Brent Geese (*Branta bernicla hrota*). The geese are present from October to April, with overall counts indicating that numbers are increasing. Feeding takes place in the inner estuary and outer bay: green algae (mostly *Enteromorpha* spp. and *Ulva lactuca*) growing on the intertidal flats dominates the diet until mid-winter, after which the geese switch to grazing grass in adjacent fields and golf courses.

In addition to hosting several Annex I bird species, Baldoyle Bay is also an important coastal site for wintering waterfowl. The estuary complex provides good habitat for a range of species. A number of migratory bird species attain nationally important status including Bar-tailed Godwit (*Limosa lapponica*) and Golden Plover (*Pluvialis apricaria*) (both Annex I species under the E.U. Directive); Shelduck (*Tadorna tadorna*), Pintail (*Anas acuta*), Ringed Plover (*Charadrius hiaticula*) and Grey Plover (*Pluvialis squatarola*). Additional species such as Dunlin (*Calidris alpina*), Oystercatcher (*Haematopus ostralegus*), Black-tailed Godwit (*Limosa limosa*) and Redshank (*Tringa totanus*) attained nationally important status for some of this period. There are fairly extensive intertidal flats used by feeding waders and dabbling duck and geese. At high tide, the salt marshes and sandy beaches provide suitable roost sites.

In terms of the subject site itself, the southeastern section, which has been largely developed as open space/playing pitches for the plan lands, is recognised as being an important feeding ground for the Pale-bellied Brent Geese. Elsewhere on the site there is evidence of brown rat and fox. It is expected that there are also pygmy shrew. Badgers signs have not been encountered and it is unlikely that they have occurred recently. The same applies to bats: an EIS completed for a recent planning application on the plan lands indicates that suitable habitat and potential breeding sites are now limited around the remains of Stapolin House (located in the southeastern section of the plan lands) and it is unlikely that there are significant numbers in the immediate area.

The bird species noted are mainly associated with the open fields and hedgerows which they require for cover and nesting. Large species seen on site were woodpigeons, feral pigeons, jackdaw, magpie, pheasant, dunnock with black headed gulls flying over head and probably using the site at times. Meadow pipit, stonechat

skylark, goldfinch and the occasional whitethroat were flushed from the fields while surveys also identified the presence of linnet, greenfinch house sparrow, robin, blackbird and wren in hedgerows along the perimeters of the site.

At the Mayne River redshank, curlew, wigeon, mallard (2) and dunlin are the most frequent species, sometimes with black-tailed godwits, shelduck, wigeon or teal or individual little egret or greenshank. On a visit in January (2009) an egret was fishing close to the road bridge and there was also a kingfisher that flew over the estuary from the Mayne River before returning upstream.

Butterflies encountered were holly blue, meadow brown, small white green-veined white and small tortoiseshell.

Main Issues

The issue of biodiversity and protection of the Designated Site will be covered in more detail in the LAP and Environmental Report. Retention of existing trees and hedgerows will be supported where feasible and the introduction of new open spaces within the residential element will contribute toward the improvement of biodiversity in the area. Requirements for a landscaping strategy will be included in the LAP.

Birdwatch Ireland is currently undertaking surveys in the area to ascertain the extent of use of the lands by birds from the estuary.

3.3 Water

Hydrology

The plan area is located within the Eastern River Basin Management Plan area. The Mayne River runs through the northern section of the plan area, from east to west, before discharging to Baldoyle Bay at the junction of Mayne Road and Strand Road (R106). The Mayne River rises near Dublin Airport and drains a substantially rural catchment. In general the river slopes uniformly from an elevation of 64.0 m O.D. at the upstream end to 0.0 m O.D. at the outfall. The lowest reaches of the river which traverse the plan lands are relatively flat with the section of the plan lands forming a natural floodplain.

The Racecourse Stream is a tributary of the Mayne River, and flows from the south, draining the catchment of Baldoyle and Seagrange.

Water Framework Directive

The Water Framework Directive (WFD) 2000/60/EC establishes a framework for the community action in the field of water policy and was transposed into Irish Law in 2003. This Directive aims to maintain and improve the aquatic environment in European Communities. It requires Member States to manage all of their waters and ensure that they achieve at least 'good status' by 2015.

Baldoyle is located within The Eastern River Basin Management Plan (ERBM) area. The ERBMP (2009-2015) identifies the condition of waters in the Eastern River

Basin District (ERBD). This Eastern River Basin Management Plan (RBMP) (2009-2015) identifies the condition of waters in the Eastern River Basin District (SERBD). This is in the form of an interim status assessment carried out by the EPA, which is based on the results of monitoring up to 2008. The interim assessment classifies the surface waters according to their ecological and chemical status while groundwater is classified based on a system combining chemical and quantitative status. Under the Water Framework Directive, in terms of chemical status, the River Mayne has a "poor" status. However, under the EPA quality value system the Mayne River was classified as being of "poor" status in 2008 and was identified as being of "moderate" quality in Q3 in 2010.

The Mayne River along with the Sluice River, which runs to the north of the Portmarnock South LAP lands, are part of the Santry Mayne Sluice Water Management Unit.

In Santry Mayne Sluice Management Unit the problems which are preventing the achievement of 'Good Status' can be attributed to

- High Nutrients (Phosphorus)
- Oxygen Demand
- Low Ecological Rating
- Inferior Habitat

In the Santry Mayne Sluice management unit the principal pressures identified are wastewater and industrial discharges and in Dublin misconnected foul sewers from houses and businesses, combined sewer overflows (wastewater discharges) and urban area pollution are principal pressures. A Programme of Measures (POM) is set out to address these issues and must be implemented before 2015. The POM is made up of key priority actions drawn from legislative laws and additional required actions. Notwithstanding this the WFD recognises that in some cases it may not be possible to achieve all core objectives by 2015.

In the Santry Mayne Sluice Management Unit preventing achievement of Good Status is urban point and diffuse pollution. Full implementation of the measures is expected to correct this; however recovery time will mean that the larger rivers will not achieve Good Status before 2015. It is likely that the rivers in this management unit will attain "Good Status" by 2027.

Hyrdogeology

Hydrogeology is the study of groundwater and the prevention of hazards within the groundwater system. Groundwater is stored in the void spaces in underground layers of rock, or aquifers. These aquifers are permeable allowing both the infiltration of water from the soils above them and the yielding of water to surface and coastal waters. The GSI rates the aquifers of Ireland according to their productivity and their vulnerability to pollution.

The site is underlain by the Boston Hill Formation (also referred to as the Malahide Formation on the GSI website). This consists of muddy limestone and shale. The plan area is covered by two designations on the National Draft Bedrock Aquifer Map.

Specifically, the northern half of the plan lands are identified as being Dinantian Lower Impure Limestones which is classified as (LI) - Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones. The southern half of the lands are categorised as being Dinantian Upper Impure Limestones which is classified as (PI) - Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones.

Groundwater vulnerability in the area is mainly classified as being low with only the eastern sections of the land, closest to the Baldoyle Bay being classified as having high vulnerability.

Bathing Water

While the nearby Portmarnock Velvet Strand beach is classified by the EPA as having 'good' water quality in 2010, Sutton Burrow beach to the south is classified as having 'poor' water quality due to the presence of microbiological parameter faecal coliforms. Overflows from local pumping stations may have been the cause. Uncontrolled factors such as the weather resulting in overflows from septic tanks and onsite treatment plants may have contributed. Fingal County Council has recently completed a new pumping station at Sutton "as part of the Dublin Bay Contract 5" with foul drainage from the area now being transferred to the regional sewage plant at Ringsend. It is envisaged that on foot of these works there will be a significant improvement in Bathing Water Quality at Burrow Beach going forward.

Main Issues

Maintaining and improving water quality is a key consideration in development of the lands and will be addressed in detail in the Environmental Report and LAP, as well as in the Appropriate Assessment. The LAP will aim to achieve and maintain required standards for ecological, biological and chemical water quality of existing rivers and streams, particularly those entering the estuaries. It will be important to ensure no pollution and contamination of water sources as a result of ground water run off.

The LAP will contain policies to support the implementation of the ERBMP and the Santry Mayne Sluice Management Unit Programme of measures and to increase public awareness of water quality issues and the measures required to protect, reduce demand and improve the quality of all waters.

As discussed above under section 3.2 an Appropriate Assessment will be undertaken in conjunction with the SEA Environmental Report to ensure that development will not have significant adverse direct, indirect or secondary impacts on the integrity of the Natura 2000 sites.

Water Supply

Presently, the water supply serving Baldoyle comes from the Liffey at its abstraction point at Leixlip and is fed by the North Fringe Water Supply Scheme via the Ballycoolin Reservoir. Plans for a substantial upgrade to the Leixlip plant to increase output are well advanced and are expected to be complete by end of 2013. It is

considered that the existing network is adequate to meet the anticipated development needs for the lifetime of the Plan.

Main Issue
Development of the LAP lands will only be allowed where the water supply network is secure and the LAP will promote sustainable water use based on a long-term protection of available water resources.

Surface Water
The receiving environment for surface water arising from the development of the Baldoyle/Stapolin LAP lands is the Mayne River which runs along the northern boundary of the site. This in turn drains to the Baldoyle Estuary and the Irish Sea. As part of the original Action Area Plan on site a SuDS Strategy was drawn up which included the provision of an attenuation pond in the High Amenity lands along the eastern portion of the site.

Main Issue
The proposed development will result in increased impact on surface water runoff, which could potentially impact on Baldoyle Estuary. As discussed above under section 3.2 an Appropriate Assessment will be undertaken in conjunction with the SEA Environmental Report to ensure that development will not have significant adverse direct, indirect or secondary impacts on the integrity of the Natura 2000 sites.

The LAP lands will be required to incorporate SUDS principles and a SUDS strategy will be undertaken as part of the LAP process. This will be addressed in detail in the Environmental Report.

Wastewater
The North Fringe Interceptor Sewer will be the receiving environment for any future development on the Baldoyle-Stapolin LAP. The North Fringe Interceptor Sewer runs along the northern and eastern boundary of the lands. The sewer in this area is a 1600mm GRP pressure pipe and is connected to the Sutton Pumping Station. It generally flows under gravity except for specific flow and overflow conditions that could arise if the Sutton Pumping Station is out of commission. From the Sutton Pumping Station the wastewater will be discharged to the Waste Water Treatment Plant at Ringsend.

Within the site a foul sewer pipe network will be constructed to serve any future development. This network will be connected to a Pumping Station and a rising main. This rising main will connect to the North Fringe Interceptor Sewer.

Main Issue
The Baldoyle-Stapolin LAP will examine waste water capacity requirements necessary to develop the lands and development will only be allowed where capacity is available and foul drainage infrastructure is adequate.

All foul infrastructure will be designed and constructed in accordance with the Greater Dublin Regional Code of Practice for Drainage works and should comply with the Greater Dublin Strategic Drainage Study (GDSDS).

An Appropriate Assessment will be undertaken in conjunction with the SEA Environmental Report to ensure that development will not have significant adverse direct, indirect or secondary impacts on the integrity of the Natura 2000 sites.

3.4 Flood Extent

The Planning System and Flood Risk Management – Guidelines for Planning Authorities (2009), which must be implemented by planning authorities, ensure that flood risk is a key consideration in preparing development and Local Area Plans and in the assessment of planning applications.

The core objectives as they apply to the Baldoyle Local Area Plan are to: -

- Avoid new developments increasing flood risk elsewhere, including that which may arise from surface water run-off;
- Improve the understanding of flood risk among relevant stakeholders;
- Ensure that the requirements of EU and national law in relation to the natural environment and nature conservation are complied with at all stages of flood risk management.

The Plan lands are covered by a number of flood studies. The Dublin Region Coastal Protection Project which extended from the city boundary to North Portmarnock identified a number of flood risk locations in Sutton, Howth, Baldoyle and Portmarnock. The Irish Coastal Protection Strategy Study identifies locations along the east coast at risk of coastal flooding and coastal erosion. C-FRAMS (Catchment flood risk assessment management studies) are also being prepared under the EU Floods Directive. The Plan lands are covered by the Draft Fingal East Meath FRAMS study, recently completed www.fingaleastmeathframs.ie and by the Eastern FRAMS which is only starting.

Main Issue
Fingal County Council is currently carrying out the Fingal East Meath Flood Risk Assessment and Management Study (FEMFRAMS), in conjunction with Meath County Council and Office of Public Works. This is a catchment-based flood risk assessment and management study of rivers and streams within the county area. The Mayne and Sluice Rivers form a part of this study and coastal flooding has also been taken into account.

A Strategic Flood Risk Assessment is required as part of the preparation of the LAP and the LAP will fully consider and accord with the results of the FEMFRAM study.

3.5 Material Assets

Material assets are taken to include infrastructure and utilities including water supply, and the transportation network in the area. The issues of water supply and

wastewater treatment facilities have been addressed in section 3.3. In terms of transportation the area is served in the following ways:

- **Existing Road Network**

The main road network in the immediate vicinity of the LAP lands includes Grange Road which runs to the south of the plan lands. Grange Road provides the strategic link to the N32, Malahide Road, and M50 to the west and to the R106 Stand Road/Coast Road to the east. The Coast Road/Strand Road, runs along the eastern perimeter of the plan lands and links the northern villages of Portmarnock and Malahide, via Baldoyle, with Sutton Cross and the Dublin Road (Howth – Clontarf) and onwards to the city centre. The Mayne Road, which runs to the north of the site, also provides an access westwards towards the Malahide Road and the M50 Motorway.

Within the site a number of internal roads have been constructed to serve the existing residential units. These include an access off the Coast/Strand Roads and the Grange Road respectively.

- **Proposed Road Improvements: Fingal Development Plan 2011-2017**

There is a local objective within the LAP lands for a realignment/upgrade of the existing Mayne Road – listed in the Fingal Development Plan 2011-2017 as 'R123 Moyne Road Upgrade'. There is also an objective for a cycle/pedestrian route in the vicinity of the lands, along Strand Road linking through the Main Street of Portmarnock town centre to the north and to the Dublin Road, Sutton to the south.

- **Public Transport**

The main Dublin-Belfast railway line lies immediately to the west of the site and provides DART and suburban rail services to Malahide and the City Centre from the newly constructed Clongriffin Station which is located centrally along the western boundary of the RA (residentially) zoned land.

The area is also served by Dublin Bus scheduled services most of which provide links to Dublin City Centre. These include the following routes:-
- 32/32A/32B Malahide - Baldoyle - City Centre
- 32X Estuary Road - Baldoyle - City Centre - UCD
- 102 - Sutton Dart Station via Baldoyle to Dublin Airport

Main Issue

The Baldoyle – Stapolin LAP will consider fully as part of the transport assessment for the plan lands, any necessary road network improvements required to support development as well as improvements to cycle and pedestrian routes linking the lands safely to the existing DART/Commuter Station and the surrounding area. The LAP will incorporate the planned walkway/cycleway to the east of the residential portion of the LAP lands, for which an AA has been undertaken. The LAP will include a phased approach to development to ensure that capacity exists in the network to accommodate the development of Baldoyle – Stapolin and the adjoining development lands within Dublin City's North Fringe Area to the west.

3.6 Population and Human Health

Population

The Electoral Division covering the Plan lands is Baldoyle ED. It includes all lands within an area along the rail line from Howth Junction to Sutton Station, north to Mayne road and follows the Mayne River to the Belfast rail line. From 1996-2006 there was a steady decrease in population in this ED. This was most likely because this is largely a settled area with older households and was borne out by the fact that the proportion of the population aged between 55 and 64 in the area tripled in the past 20 years. Preliminary data from the 2011 Census however shows an increase in population of 928 persons (15.6%). A significant portion of this increase is most likely attributable to the recent residential development on the Baldoyle-Stapolin LAP lands. The reasons for this population increase in will have to be further examined as further details of the Census are released during this year.

Table 1: Population Change 1991-2011

Baldoyle ED	**1991**	**1996**	**2002**	**2006**	**2011**
Population	6272	6,731	6,374	5,942	6,870
% Change	-1%	7%	- 5%	-7%	15.6%

Source: CSO

Baldoyle-Stapolin forms part of the wider developing area of Clongriffin-Belmayne which is located on the North Fringe of Dublin City Council. Similar to the Baldoyle Action Area Plan, an Action Area Plan for the North Fringe Area was prepared in 2000 and is currently being reviewed. It was planned that the wider area would form one of the major new suburbs of Dublin City with both Plans providing for a population of approximately 35,000 residents to join the existing residential population of Baldoyle, Balgriffin and Donaghmede.

Current Situation

The 2001 Baldoyle Action Area Plan provided for approximately 2,600 homes on the Plan lands which it was envisaged would equate to a population of 7,600. As of June 2011 c. 540 units are completed and occupied with 94 units completed and vacant and a further 205 units under construction. Planning permission exists for 1,289 residential units which have not yet started. The majority of the permissions which have not started are apartment developments. At this time, only one sector of the original plan lands does not have planning permission.

Development on the site is now almost at a standstill. While the new railway station that was planned to serve the development has been constructed, and is operational, the delivery of many of the original key design elements such as the commercial area adjacent to the railway station, the civic area and the main boulevards have not been delivered due to the current economic climate and financial limitations on both the public and private sectors. Vacant sites bounded by hoarding now separate the development from the larger, as of yet, undeveloped site.

It is likely that the residential densities and the number of units on the subject site will reduce slightly under the proposed new LAP for the area and consequently the projected population will also be reduced somewhat.

Human Health

Human Beings clearly comprise one of the most important elements of the "environment" and any potential impact on the status of humans by a plan of programme must be comprehensively addressed. The principal concern in this respect is that human beings experience no significant diminution in any aspect or aspects of "quality of life" as a consequence of the construction and completion of a proposed development.

A shortfall in amenities and infrastructure to serve the local community can all go towards decreasing the perceived and actual health of the general population. Baldoyle is already relatively well serviced by a range of community facilities, a good water supply and wastewater treatment infrastructure. However, there is scope to improve these facilities though the development of the Baldoyle-Stapolin LAP lands with positive implications for human health.

Another key area for the consideration of human health is the relationship between health and water quality/ air quality/ climatic factors such as flood risk. These issues are discussed further in sections 3.3 and 3.8.

Lands will be reserved under the LAP for the provision of new roads within the plan area. New link roads will also be required which will, in the short and long term, give rise to increased traffic in the plan area.

Main Issues

A key consideration in the Environmental Report will be the impacts of an increased population on human health and quality of life. The plan will aim to conserve and enhance human health and to improve quality of life through the promotion of high quality sustainable environments.

It will also be important to avoid affects on the existing and new population associated with noise, vibration and emissions to air during both construction and operational phases at Baldoyle-Stapolin.

3.7 Geology and Soil

Geology

The geology of the area consists of a thick argillaceous (muddy) bioclastic (contains fossils) limestone comprising medium to dark grey calcarenites interbedded within thin calcareous shales locally containing oolitic (small round fossil) beds. The glacial overburden is generally relatively thin and is greater than 3 metres in depth.

The Geological Survey of Ireland classifies the hydrogeology as LL – locally important aquifer. This equates to bedrock which is moderately productive in localised zones. The impure nature of the argillaceous bioclastic limestone means

that it is not as brittle as pure limestone and therefore will deform more readily. Deformation of the rock tends to seal fractures and inhibit water movement.

Maps produced by the Radiological Protection Institute of Ireland indicate that 1-5% of the houses in the Baldoyle area are predicted to have radon levels in excess of the 200 Bq/m^3 reference level. This is the second lowest range of radon levels.

Groundwater was encountered at varying depths in all Boreholes and a number of Trial Pits.

Soils

Three ground investigations are known to have been carried out on the Plan lands over the period 2000-2005 in addition to a walkover survey of the site which was undertaken in 2007. These former investigations consisted of field work, cable percussive boreholes and trial pits with routine sampling and in-situ testing followed by laboratory testing and factual reporting.

Based on the available records of the ground investigations carried out on the plan lands the ground conditions would appear to generally consist of topsoil overlaying Glacial till. Made ground and/or possible alluvium were also recorded locally above the Glacial Deposits.

The Glacial Deposits within the study area were seen to generally consist of sandy gravely silt and/or clay with a variable amount of coarse constituents and grading locally to granular material (TP10 from ground level to 2.2 metres). The consistency of the cohesive glacial deposits was described as being firm to stiff through to very stiff to hard. It was seen to be weathered (brown in colour, firm to stiff) towards the surface to depths of 0.8 metres to 2.9 metres overlaying fresher deposits (dark grey, very stiff to hard).

Glacial Deposits are expected to significant depth and none of the exploratory holes available proved the base of these deposits. From available records, the maximum depth reached by the boreholes was 10 metres but bedrock was not encountered.

Main Issues

It is considered that there will not be a significant impact on soils from implementation of the LAP. Due regard will be had to the ongoing CFRAMS and it is considered that there is a requirement for a site specific flood risk assessment to be carried out as part of the LAP process which should mitigate against run-off and siltation in alluvial areas.

Furthermore, policies in the LAP will ensure that the impacts on soils will be minimal within the urbanized area and will ensure that the amount of waste is minimised.

3.8 Air & Climatic Factors

The Air Framework Directive deals with each EU member state in terms of "Zones" and "Agglomerations". For Ireland, four zones are defined in the Air Quality

Regulations (2002), amended by the Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Regulations (2009). Baldoyle – Stapolin and the surrounding area is located within Air Quality Zone A: Dublin Conurbation.

There are no coal restrictions within or surrounding the plan area and there are no IPPC licences (which could include conditions regarding air quality monitoring) registered at present.

Main Issues
There is a need to minimise emissions of greenhouse gases associated with transport and buildings. A sustainability framework will form a key part of the LAP, with a focus on integrating land use and transportation and promoting modal shift from car to public transport, in particular the DART, which will aid in the reduction of emissions. The LAP will ensure that there are also objectives in place in relation to air and climatic factors.

3.9 Cultural Heritage

The LAP will take into account any known architectural and archaeological heritage in the area and also the potential for the presence of hitherto unknown sub-surface archaeological remains.

Archaeology
There are no recorded archaeological sites within the proposed development area. The nearest archaeological sites are mounds which lie to the western side of the railway track. While none of these sites and monuments will be directly affected by the proposed development, their presence in the vicinity gives an indication of the archaeological activity in the area.

The overall plan lands have been the subject of a series of progressive desk studies, surveys and on-site investigations as part of the previous planning applications and were submitted for development on the site under the previous Area Action Plan in consultation with the Department of Arts, Heritage & the Gaeltacht.

Architectural Heritage
There are no recorded Protected Structures within the plan lands. However, the ruins of Stapolin House, and the remains of its tree-lined driveway lie at the centre of the plan lands, adjacent to the abandoned racecourse.

Main Issue
It is important that known archaeology is protected as part of the Plan and that the land's archaeological heritage is recognised and promoted. The LAP and SEA will address the detail of the archaeological requirements of the area.

With regard to archaeological heritage, this will be protected and incorporated within green spaces in accordance with the requirements, as previously established, by the Department of Arts, Heritage & Gaeltacht Affairs.

3.10 Landscape

In terms of landscape, the Fingal Development Plan classifies landscapes according to their landscape types, values and sensitivity. Baldoyle Bay enjoys an Estuary Character Type which is categorised as having an exceptional value. The aesthetic quality of the estuaries is also rated as outstanding. Racecourse Park and the northernmost half of the residentially zoned lands within the LAP boundary are also determined as being highly sensitive to development which may have implications for the scale, form and height of development in this area.

The Fingal coastline is the county's most important wildlife resource with most of the protected sites and protected wildlife species found along the Fingal shores. The coastline of Fingal is characterised by the three large estuaries of Rogerstown, Malahide and Baldoyle. Balydoyle Estuary (see section 3.2 above) is located to the east of the LAP lands and is a designated Natura 2000 site, being a cSAC and SPA. The Mayne River Marsh is associated with the Baldoyle Estuary on the northern perimeter of the LAP lands.

Main Issue
The LAP will ensure any issues in relation to the landscape setting of the LAP lands and views from the site are protected and valued.

Section 4 – Next Steps

4.1 Preparation of Environmental Report

Following consultation with the Environmental Authorities an Environmental Report will be carried out in parallel with the preparation of the LAP. In addition to broadening the baseline information contained in Section 3 above, the Environmental Report will include:

- A list of Environmental Protection Objectives (EPOs) relevant to the plan, derived from international and national policy documents, strategies, guidelines, directives and conventions;
- An outline of the reasonable alternatives considered taking into account the higher level strategic policy and the geographical scope of the plan,
- An evaluation of these alternatives against the EPOs, and the reason for choosing the preferred alternative in light of the other alternatives considered;
- A description of the likely significant effects on the environment of implementing the policies and objectives of the LAP;
- A description of any measures envisaged to prevent, reduce or offset any significant adverse environmental effects of implementing the plan;
- A description of the proposed monitoring measures; and
- A non-technical summary.

4.2 Monitoring

Objectives, targets and indicators will be included as part of the Draft SEA Report for the purposes of monitoring the LAP. The objectives, targets and indicators will broadly follow those adopted in the Fingal Development Plan 2011-2017 but with local adaptations where appropriate and where local data is available for capture.

4.3 Public Consultation

In accordance with S.20 (3) of the Planning and Development Act 2000, as amended, and Article 14E(1) of the Planning and Development (Strategic Environmental Assessment) Regulations, 2004 (as amended) the Draft LAP and the Environmental Report will be placed on public display for a period of not less than six weeks during which time submissions or observations may be made to the Planning Authority. Any submissions or observations in relation to the Draft LAP or Environmental Report received during this period will be taken into consideration before the making of the plan.

4.4 SEA Statement

Following the making of the plan a SEA Statement will be prepared which will give a summary of how environmental considerations and the Environmental Report were factored into the plan, how submissions and consultations were taken into account and the reasons for choosing the plan as adopted in light of other reasonable alternatives considered. It will also outline a list of monitoring measures to be carried out during the plan period. The purpose of the SEA Statement is to provide

accountability, by informing the public of how environmental effects were considered in every step of the decision-making process.

APPENDIX A: Fingal Development Plan 2011-2017

1.0 Local Context: Fingal Development Plan 2011-2017

Fingal Development Plan 2011-2017 sets out its strategic policy for the next 6 years. One of the policies, which specifically relates to Baldoyle, is as follows:

> Consolidate the development and protect the unique identities of the settlements of Howth, Sutton, Baldoyle, Portmarnock, Malahide, Donabate, Lusk, Rush and Skerries.

In terms of Fingal's settlement hierarchy (in compliance with Regional Planning Guidelines), Baldoyle is identified as an area within the Metropolitan Area requiring consolidation.

The development plan identifies Baldoyle as a suburb within the Metropolitan Area, which has a well-established identity and community. It has a range of urban services such as schools, retail facilities, medical and community facilities to meet the needs of the existing and expanding populations. Baldoyle core is designated as an ACA and Baldoyle Estuary is designated as a Special Area of Conservation (SAC) and a Special Protection Area (SPA). Unlike other established settlements in the area it also provides a significant, dedicated employment base in the form of the Baldoyle Industrial Estate and lands around the rail line.

1.1 Development Strategy

The Development Strategy identified for the town is as follows:
Improve, strengthen and consolidate the role of the existing centre while promoting the provision of a range of facilities to support the existing and new populations making full use of sustainable transport practices.

The following Objectives are identified for Baldoyle

Objective BALDOYLE 1
Ensure the viability of the visual break on lands between Baldoyle and Portmarnock urban areas by locating appropriate outdoor sport and recreation opportunities which respect the character, sensitivity and natural heritage designations of the existing landscape subject to Appropriate Assessment Screening and full Appropriate Assessment if required.

Objective BALDOYLE 2
Prepare an Urban Centre Strategy for Baldoyle.

1.2 Zoning Objectives and Local Objectives

The Baldoyle-Stapolin Local Area Plan lands comprise of lands with the following zoning objectives in the Fingal Development Plan:

- c. 35 hectares of land zoned Objective RA – 'Provide for new residential communities in accordance with approved local area plans and subject to the provision of the necessary social and physical infrastructure'. This area includes the existing residential communities of Myrtle and Red Arches.
- c. 81 hectares of land zoned Objective HA – 'Protect and enhance high amenity areas'.

The area zoned for residential development in the Fingal County Development Plan 2011-2017 contain the following Local Objective within its boundaries:

Objective 459 Ensure that the visual impact of any development on the green belt will be minimised by its siting, design and planting.

There is also an objective to provide a 'Local Centre' on the western section of the residentially zoned lands, adjacent to the railway line, and an objective to provide for a 'School' on the centre of the site.

The area designated as Public Open Space for this residential area lies adjacent and to the east of the subject site and is zoned 'HA' – "Protect and improve high amenity areas" in the Fingal Development Plan and is subject to the following local objectives:

Objective 467 Develop the Racecourse Park.

Objective 469 Provide for a public park and sensitively designed retirement village subject to screening for assessment under the Habitats Directive.

Objective 471 Within the 250/270 acres (102/109 hectares) of open space to provide for (a) a millennium park of at least 100 acres (40.74 hectares) with 22 acres (8.96 hectares) of playing pitches, natural areas to ensure conservation, cycle/walkways towards Portmarnock, landscape walkways suitable for wheelchairs with benches called after jumps/fences of the old racecourse and dry land for pitches, the public park to be provided in phase 1 of the development (b) a golf course (c) parkland in tandem with housing development in the area.

Both the 'High Amenity 'HA'' and the 'Residentially 'RA' zoned lands are bisected by a road proposal which runs in an east – west direction and links the Strand Road and the new railway station at Clongriffin.

Finally, the northern half of the residentially zoned (RA) lands and the entire area of the 'High Amenity' lands to the east are covered by a 'Sensitive Landscape' Designation.

Baldoyle Estuary, which bounds the LAP lands to the east, is a Natura 2000 site and is designated as a cSAC (candidate Special Area of Conservation) and SPA (Special Protection Area) under the EU Habitats Directive and Birds Directive respectively. The Estuary is also designated as a Ramsar Conservation Wetland and Statutory Nature Reserve. A portion of the HA zoned lands east of Strand Road is within Baldoyle cSAC and SPA and is part of an Annex I habitat. The area of HA zoning, to the west of Strand Road (adjoining the residentially zoned lands) and south of Mayne Road, is identified on the Green Infrastructure Map as being part of the ecological buffer zone of Baldoyle Estuary.

There is an objective for a cycle/pedestrian route in the vicinity of the lands, along Strand Road, linking through to Portmarnock, continuing north along the coast. There is an additional objective to preserve views along Strand Road.

The development plan indicates that consideration will be given to the establishment of Landscape Conservation Areas under the Planning and Development Acts and the extension of the Liffey Valley SAAO during the lifetime of the Development Plan. To this end, the following objective applies:

Objective SA07
Consider Baldoyle jointly with Portmarnock for a Special Amenity Order.

1.3 Green Infrastructure (See Figure 4)

The Fingal Development Plan 2011-2017 identifies a number of key themes which the Green Infrastructure Strategy addresses. These are:
_ Biodiversity
_ Parks, Open Space and Recreation
_ Sustainable Water Management
_ Archaeological and Architectural Heritage
_ Landscape

Under each of these headings the Council has identified and mapped the key elements of the County's strategic green infrastructure on the Development Plan maps, under each of the five GI themes.

The following overarching objectives in relation to Green Infrastructure apply to the Baldoyle-Stapolin LAP:

Objective GI10
Require all Local Area Plans to protect, enhance, provide and manage of green infrastructure in an integrated and coherent manner addressing the five GI themes set out in the Development Plan – Biodiversity, Parks, Open Space and Recreation, Sustainable Water Management, Archaeological and Architectural Heritage, and Landscape.

Objective GI11
Require all new development to contribute to the protection and enhancement of existing green infrastructure and the delivery of new green infrastructure, as appropriate.

Objective GI12
Require all new development to address the protection and provision of green infrastructure for the five GI themes set out in the Development Plan (Biodiversity, Parks, Open Space and Recreation, Sustainable Water Management, Archaeological and Architectural Heritage, and Landscape) in a coherent and integrated manner.

Objective GI13
Require all proposals for major developments to submit a green infrastructure plan as an integral part of a planning application except where green infrastructure is dealt with as part of Objective UD01.

APPENDIX B: Baldoyle Bay/Estuary, Natura 2000 Site

SITE NAME: BALDOYLE BAY

SITE CODE: 000199

SITE SYNOPSIS

Baldoyle Bay extends from just below Portmarnock village to the west pier at Howth, Co. Dublin. It is a tidal estuarine bay protected from the open sea by a large sand-dune system. Two small rivers, the Mayne and the Sluice, flow into the bay. The site contains four habitats listed on Annex I of the EU Habitats directive: *Salicornia* mud, Mediterranean salt meadows, Atlantic salt meadows and Tidal mudflats.

Large areas of intertidal flats are exposed at low tide. These are mostly sands but grade to muds in the inner sheltered parts of the estuary. Extensive areas of Common Cord-grass (*Spartina anglica*) occur in the inner estuary. Both the Narrow-leaved Eelgrass (*Zostera angustifolia*) and the Dwarf Eelgrass (*Z. noltii*) are also found here. During summer, the sandflats of the sheltered areas are covered by mats of green algae (*Enteromorpha* spp. and *Ulva lactuca*).

The sediments have a typical macrofauna, with Lugworm (*Arenicola marina*) dominating the sandy flats. The tubeworm *Lanice conchilega* is present in high densities at the low tide mark and the small gastropod *Hydrobia ulvae* occurs in the muddy areas, along with the crustacean *Corophium volutator*.

Areas of saltmarsh occur near Portmarnock Bridge and at Portmarnock Point, with narrow strips along other parts of the estuary. Species such as Glasswort (*Salicornia* spp.), Sea-purslane (*Halimione portulacoides*), Sea Plantain (*Plantago maritima*) and Sea Rush (*Juncus maritimus*) are found here. Portmarnock Spit formerly had a well-developed sand dune system but this has been largely replaced by golf courses and is mostly excluded from the site. A few dune hills are still intact at Portmarnock Point, and there are small dune hills east of Cush Point and below the Claremont Hotel. These are mostly dominated by Marram (*Ammophila arenaria*), though Lyme-grass (*Leymus arenarius*) is also found.

The site includes a brackish marsh along the Mayne River. Soils here have a high organic content and are poorly drained, and some pools occur. Rushes (*Juncus* spp.) and salt tolerant species such as Common Scurvygrass (*Cochleria officinalis*) and Greater Sea-spurrey (*Spergularia media*) are typical of this area. Knotted Hedge-parsley (*Torilis nodosa*), a scarce plant in eastern Ireland, has been recorded here, along with Brackish Water-crowfoot (*Ranunculus baudotti*), a species of brackish pools and ditches which has declined in most places due to habitat loss.

Two plant species, legally protected under the Flora (Protection) Order, 1999, occur in the Mayne marsh: Borrer's Saltmarsh-grass (*Puccinellia fasciculata*) and Meadow Barley (*Hordeum secalinum*).

Baldoyle Bay is an important bird site for wintering waterfowl and the inner part of the estuary is a Special Protection Area under the EU Birds Directive as well as being a Statutory Nature Reserve. Internationally important numbers of Pale-bellied Brent Geese (418) and nationally important numbers of two Annex I Birds Directive species - Golden Pover (1,900) and Bar-tailed Godwit (283) - have been recorded. Four other species also reached nationally important numbers: Shelduck (147), Pintail (26), Grey Plover (148) and Ringed Plover (218) - all figures are average peaks for four winters 1994/95 to 1997/1998. Breeding wetland birds at the site include Shelduck, Mallard and Ringed Plover. Small numbers of Little Tern, a species listed on Annex I of the EU Birds Directive, have bred on a few occasions at Portmarnock Point but not since 1991.

Because the area surrounding Baldoyle Bay is densely populated, the main threats to the site include visitor pressure, disturbance to wildfowl and dumping. In particular, the dumping of spoil onto the foreshore presents a threat to the value of the site.

Baldoyle Bay is a fine example of an estuarine system. It contains four habitats listed on Annex I of the EU Habitats Directive and has two legally protected plant species. The site is also an important bird area and part of it is a Special Protection Area under the EU Birds Directive, as well as being a Statutory Nature Reserve. It supports internationally important numbers of Brent Geese and nationally important numbers of six other species including two Annex I Birds Directive species.

15.2.2000
(Source: NPWS.ie)

LAP Context Map
Figure 1

Legend

- Portmarnock South Local Area Plan Lands
- Baldoyle Stapolin Local Area Plan Lands
- County Boundary

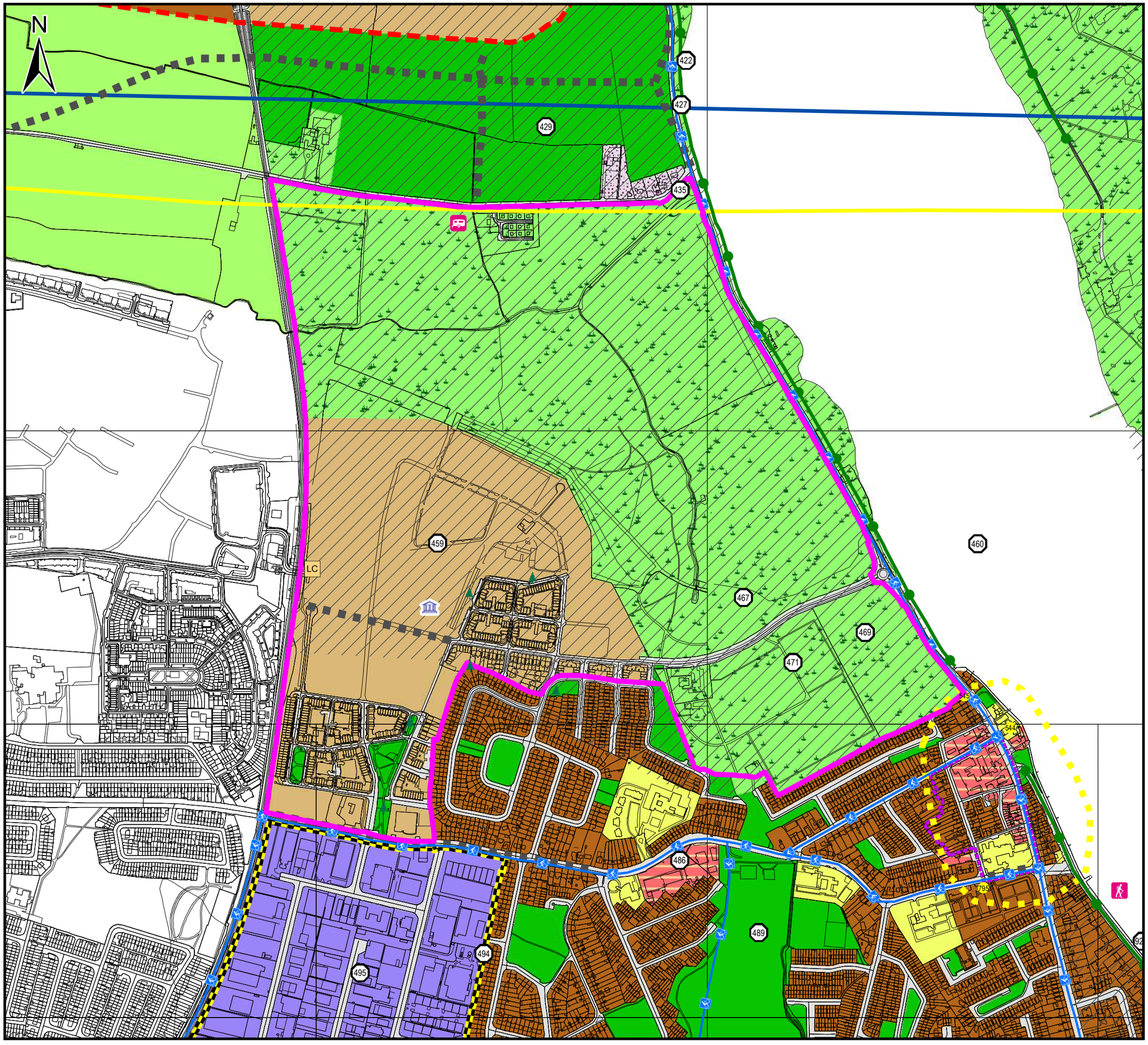
Swords
Malahide
Cloghran
Portmarnock
Kinsaley
Dardistown
Clonsagh
Santry
Baldoyle
Sutton
Howth
IRISH SEA
Muir Éireann

Comhairle Contae Fhine Gall
Fingal County Council

Planning Department, County Hall, Main Street, Swords

Date: January 2012 Prepared By: A Grogan Drawn By: CJ Scale @ A3: 1:50,000

Development Plan Extract
Baldoyle - Stapolin
Figure 2



Legend

- Local Area Plan Lands
- Provide for and protect civic, religious, community, education, health care and social infrastructure
- Provide opportunities for general enterprise and employment
- Protect and provide for a Greenbelt
- Protect and enhance high amenity areas
- Preserve and provide for open space and recreational amenities
- Provide for new residential communities in accordance with approved local area plans and subject to the provision of the necessary social and physical infrastructure
- Provide for small scale infill development serving local needs while maintaining the rural nature of the cluster
- Provide for residential development and protect and improve residential amenity
- Protect and enhance the special physical and social character of town and district centres and provide and/or improve urban facilities
- Highly Sensitive Landscape
- Urban Centre Strategy/Study Area
- Inner Airport Noise Zone
- Outer Airport Noise Zone
- Outer Public Safety Zone
- Development Boundary
- Indicative Cycle/Pedestrian Route
- Road Proposal
- Proposed School
- Preserve Views
- Protect & preserve trees woodlands and hedgerows
- Coastal walk
- LC — Provide for a Local Centre
- 473 — Protected Structure
- Recorded Monument
- CP — Car Park
- 355 — Local Objective

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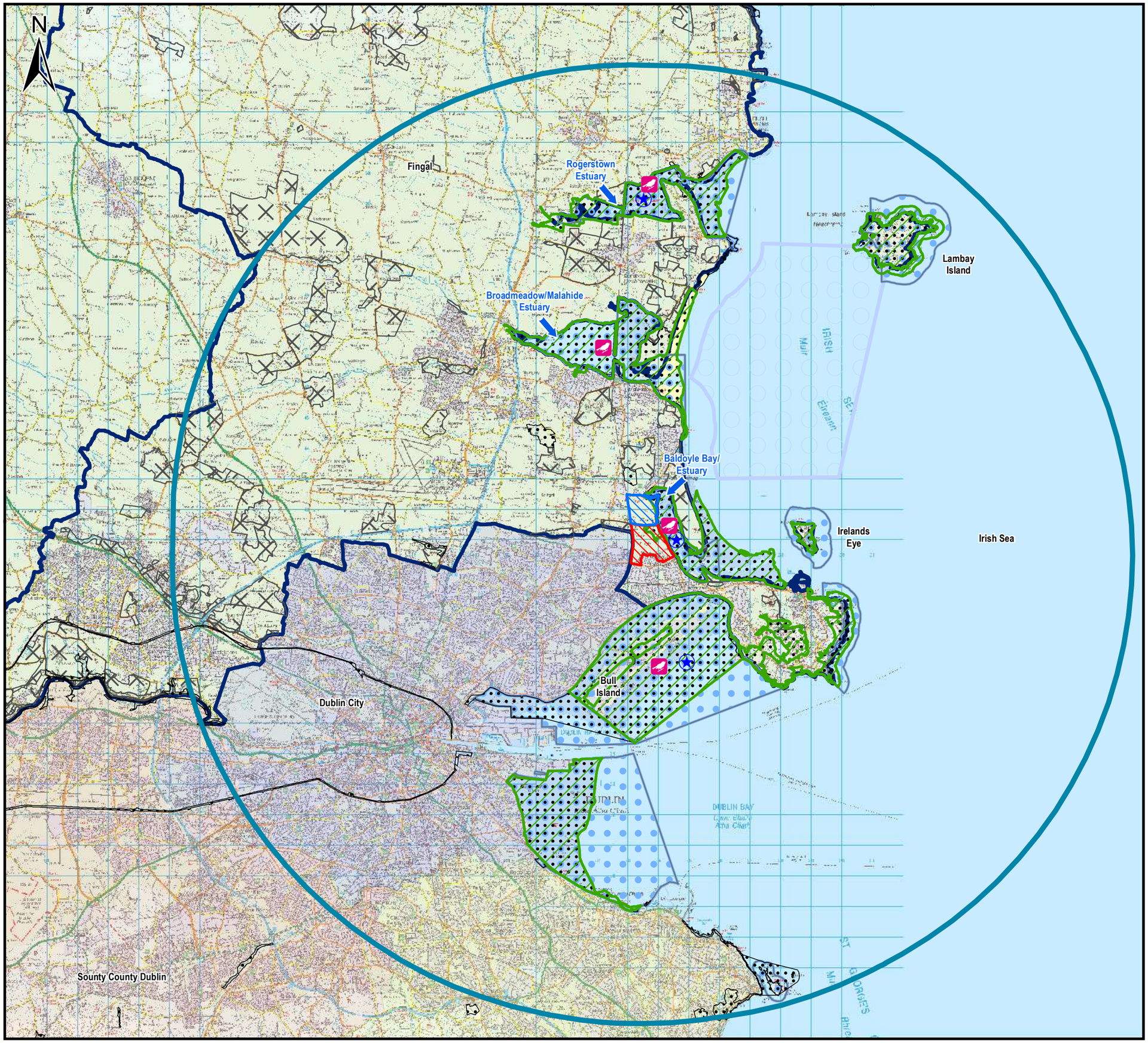

Designated Sites
Figure 3

Legend

- **Portmarnock South Local Area Plan Lands**
- **Baldoyle Stapolin Local Area Plan Lands**
- **County Boundary**
- Designated Shellfish Waters
- 15km Buffer Line

Fingal Ecological Network:

- Special Areas of Conservation SAC
- Special Protection Area SPA
- Natural Heritage Area pNHA/NHA*

*Note: Skerries Islands are the only NHA Designation in Fingal

- Ramsar Conservation Wetland
- Statutory Nature Reserve
- Nature Development Area

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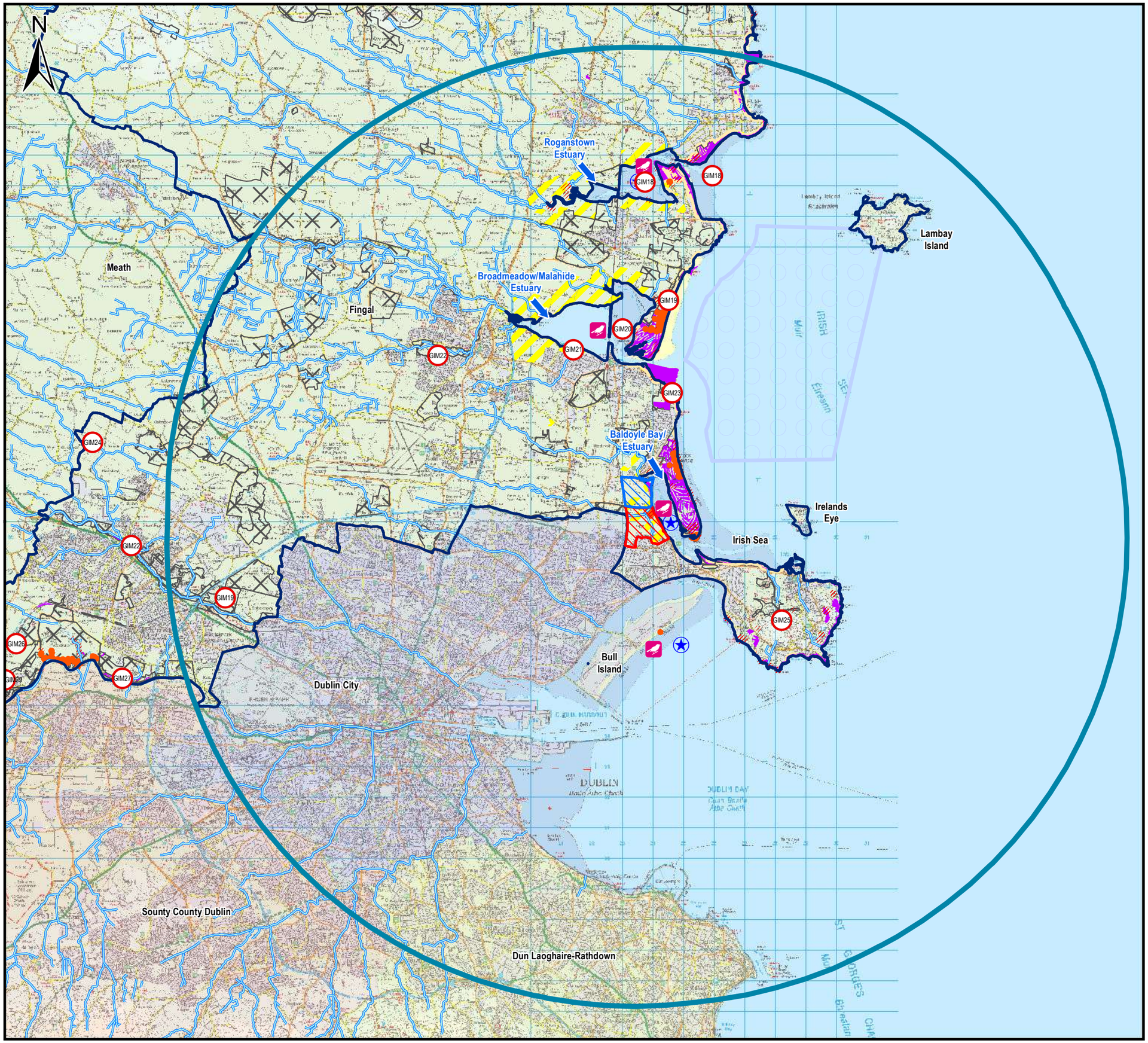
Green Infrastructure
Figure 4



Legend

- Portmarnock South Local Area Plan Lands
- Baldoyle Stapolin Local Area Plan Lands
- County Boundary
- 15km Buffer Line
- Area within 100m of Coastline Vunerable to Erosion

Fingal Ecological Network:

- Ramsar Conservation Wetland
- Statutory Nature Reserve
- Annex I Habitat
- Flora Protection Order (1999) Site
- Fingal Rare Flora Site
- Ecological Buffer Zone
- Nature Development Area
- River
- Ecological Corridors along Rivers
- GIM15 — Green Infrastructure Objectives

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Planning Department, County Hall, Main Street, Swords

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Appendix 2

ENVIRONMENTAL REPORT - Addendum 1

Report on the Proposed Amendments

to the

DRAFT BALDOYLE – STAPOLIN LOCAL AREA PLAN

STRATEGIC ENVIRONMENTAL ASSESSMENT
Fingal County Council

April 2013

Addendum to the Environmental Report of the Draft Baldoyle-Stapolin LAP Strategic Environmental Assessment.

1.0 Introduction

The purpose of this Report is to provide an environmental assessment of the Proposed Amendments to the Draft Baldoyle-Stapolin Local Area Plan following the public display of the Draft LAP and the submission of the Manager's Report to the Elected Members.

This is an addendum to the Environmental Report of the Strategic Environmental Assessment (SEA) of the proposed Draft Baldoyle-Stapolin Local Plan 2013-2019. In accordance with the provisions of the SEA Directive (Directive 2001/42/EC) and the SEA Planning and Development Regulations transposing the Directive into Irish Law, this document identifies the environmental consequences of the Proposed Amendments to the Draft Plan arising from a public display of the draft, submission of observations and subsequent manager's recommendations to make amendments to the policies and objectives of the Draft LAP. It should be noted that changes are not made to the original Environmental Report; this Addendum forms part of the documentation of the ongoing SEA/Plan-making process. The Addendum supplements and should be read in conjunction with the Environmental Report.

On adoption of the Draft LAP, this and any other addendums to the Environmental Report which arise during the LAP preparation, consultation and making process, will be consolidated into a Final Environmental Report which will be made available alongside the adopted LAP.

In accordance with Section 20 of the Planning & Development Act 2000 (as amended), the proposed Draft Baldoyle/Stapolin Local Area Plan was on public display from Wednesday 6th February, 2013 to Wednesday 20th March, 2013, at Fingal County Council Offices, County Hall, Swords, and Grove Road, Blanchardstown, Baldoyle Library, Strand Road, Baldoyle and the Council's website at www.fingalcoco.ie

A total of twenty one no. submissions were received during the public display of the Draft Baldoyle-Stapolin Local Area Plan. An additional observation was received outside the submission period and has, in the interests of completeness, been included in the Manager's Report. All submissions have been given careful and serious consideration. Proposed amendments to the published Plan relate to the text and map.

A Managers Report was prepared on the submissions received providing a response and recommendation on each proposed amendment to the Draft LAP. The recommendations the inclusion of four new Objectives in the text, one in the Green Infrastructure Section, one in the Community and Education Section and two within the Sequencing and Phasing Section. Seven existing objectives were also recommended for amendments. An additional maps based objective is also proposed.

2.0 Proposed Amendments to the Policies and Objectives of Draft LAP

A summary of the amendments to the objectives is provided in the table below:

Table 1: Summary of Proposed Amendments to the Objectives of the Draft Baldoyle-Stapolin LAP

New Objectives	
Map Objective 5	Ensure that key services such as local and primary health care facilities, public house, and crèche are provided within the village centre to ensure the appropriate mix of community services and facilities, the vitality of the Village Centre and to encourage the use of sustainable modes of transport
Objective GI 27	Ensure that green roofs are incorporated into the design of all new commercial buildings on the Plan lands
Objective CI 3	Encourage the provision of health care services within the Village Centre to cater for the needs of the existing and future population of the growing neighbourhood and to co-ordinate with the HSE, through the implementation of the LAP, on the future planning for such facilities under HSE investment plans*.*
Objective SP 1	Completion of the apartment blocks is required or a new development permitted and commenced on the apartment block site prior to the completion of more than 50 units in Growth Area 3.
Objective SP 3	Ensure that construction takes place in a sequential manner within the phasing of each Growth Area 1, 2 or 3 in order to avoid areas of new development leap-frogging unfinished phases of development within each of those Growth Areas. Internal phasing arrangements within each Growth Area 1, 2 or 3 will be required and conditioned as part of planning applications.

Amended Objectives	
Map Objective 1	Facilitate and encourage community facilities which allow for shared and multi-purpose use and adaptability, within the village centre **or for non-commercial or small scale community facilities** other agreed locations **may be considered** subject to demand and resources.
Objective TM 2	Place strong emphasis on sustainable forms of transport such as walking cycling and public transport, particularly for short trips, **and seek to achieve transport modal split targets that meet or exceed those set out in Department of Transport's 'Smarter Travel, A Sustainable Transport Future 2009-2020.**
Objective TM 8	Ensure that the phasing of development within the LAP lands has regard to the capacity of the road network and to public transport provision **informed by North East Transportation Study.**
Objective TM 14	Provide a clear, safe and legible network of cycling and pedestrian routes within the LAP lands that will link key destinations, including the village centre, **local schools**, Clongriffin train station and other important local destinations **and which will also provide linkages to the GDA Cycle Network.**
Objective RS 7	**Seek** to achieve the densities provided for in the Preferred Density Masterplan Figure 4D.1in order to **ensure the population catchments and critical mass necessary to support more services, justify existing and future investment in high quality public transport and community facilities and generate the conditions for lively streets and open spaces**. In any event, a minimum of 38 dwellings per

	hectare (net density) shall be required in each residential block.
Objective RE 4	Ensure that the scale of retail proposed is appropriate to a local centre and does not have a material adverse impact on the vitality and viability of existing centres within the area **and that retail floorspace provision is in compliance with current Retail Planning Guidelines.**
Objective RS8	Require, generally, a minimum net residential density of 50 units per hectare within the proposed village centre and along the northern boundary with Racecourse Park subject to appropriate design and amenity standards. **This will be reflected within the village centre by the provision of between 120 – 190 residential units.**
Objective TM 26	Require that, in line with the need to promote increased densities in Growth Areas 2 and 3 and the likelihood that a greater quantum of apartment units will be provided particularly along the Parkland edge to the north of the site, **with the exception of on-street visitor parking,** car parking be provided off-street in either underground or podium type parking arrangements.

3.0 Strategic Environmental Assessment of the Proposal

The policies and objectives of the Draft LAP were assessed against a set of environmental protection objectives that were devised during the early stages in the SEA and LAP preparation process. Each policy and objective of the Draft LAP was assessed within a matrix for its impact on the environment in line with the requirements of the SEA Directive.

Table 5.1 Strategic Environmental Objectives

Strategic Environmental Objective and SEA Topic Area	Detailed Assessment Criteria
Objective 1 **Biodiversity Flora and Fauna (BFF)** Protect and where appropriate, enhance biodiversity, particularly protected areas and protected species	• Provide effective protection of international, national and local "protected areas" and "rare and distinctive species" • Provide effective protection of biodiversity in the wider landscape including species and habitats protected by law • Contribute to the Fingal Biodiversity Action Plan objectives
Objective 2 **Population, Human Health (PHH)** Provide high-quality residential, working and recreational environments and sustainable transport	• Reduce population exposure to high levels of noise, vibration and air pollution • Increase modal shift to public transport • Contribute to the co-ordination of land use and transportation • Improve access to recreation opportunities • Contribute to the mitigation of floods and droughts
Objective 3 **Soil (S)** Protect the function and quality of the soil resource in Fingal	• Re-use of brownfield lands, rather than developing Greenfield lands • Safeguard soil and geological quality, quantity and function
Objective 4 **Water (W)** Protect and where necessary improve water quality and the management of watercourses and groundwater to comply with the standards of the Water Framework Directive objectives and measures and all water, habitat and fisheries based legislation including the Urban Wastewater Treatment Directive, the Freshwater Fish Directive, the Shellfish Waters Directive, etc.	• Improve water quality in rivers, lakes, estuaries and groundwater • Promote sustainable drainage practices to improve water quality and flow and to enhance opportunities for biodiversity • Reduce the impacts from point source pollution, diffuse source pollution, abstraction and flow regulation and morphological alterations • Ensure flow regulation is appropriate • Prevent deterioration of water bodies from morphological alterations • Promote sustainable use of water and water conservation
Objective 5 **Air Quality and Climatic Factors (AQ/C)** Contribute to mitigation of, and adaptation to, climate change and air quality issues	• Reduce levels of air pollution • Minimise emissions of greenhouse gases • Reduce waste of energy, and maximise use of renewable energy sources • Ensure that all new housing is energy efficient • Ensure flood protection and management

	• Restrict development in flood plains • Reduce vulnerability to the effects of climate change
Objective 6 **Cultural Heritage (CH)** Protect and, where appropriate, enhance the character, diversity and special qualities of cultural, architectural and archaeological, heritage	• Improve protection for areas of archaeological potential and for undiscovered archaeology • Promote a better understanding of sensitive environments and human interaction with those environments
Objective 7 **Landscape (LH)** Protect and, where appropriate, enhance the character, diversity and special qualities of landscapes in Fingal	• Improve protection for landscapes and seascapes of recognised quality • Ensure that landscape character is considered in the development process • Maintain clear urban/rural distinctions • Enhance provision of, and access to, green space in urban areas
Objective 8 **Material Assets (MA)** Make best use of existing infrastructure and promote the sustainable development of new infrastructure	• Improve availability and accessibility of commercially provided facilities and public services • Protect Greenfield land and promote the use of brownfield sites • Increase local employment opportunities • Improve efficiencies of transport, energy and communication infrastructure • Ensure sufficient waste water treatment infrastructure • Provide drinking water supply and water conservation measures • Reduce the generation of waste and adopt a sustainable approach to waste management

Symbol	Impact on the Environment
++	Long term/ permanent positive impact
+	Short term positive impact
--	Long term/ permanent negative impact
-	Short term negative impact
+/-	Potential for both positive and negative impacts in the long and short term
0	Insignificant impact or no relationship

The amended objectives of the Draft LAP have been assessed following this same criteria and set of environmental protection objectives. The Evaluation Matrix is set out in Appendix A.

In summary, the amendments have been found to have a significant beneficial impact on:

- Biodiversity, flora and fauna (BFF) for new Objectives GI 27, Objective SP 1 and SP 3 and potentially for amended Objectives TM 14, RS 7 and RS 8.
- Population and human health (PHH) for all amendments.
- Water (W) for new Objective GI 27 and amended Objectives TM 2, RS 7 and RS 8.
- Air Quality and Climate for all amendments.
- Landscape (L) for new Objective GI 27, amended Objective GI 26 and SP 1.
- Cultural Heritage (CH) no additional impact.
- Material Assets (MA) for new Map Objective 5, new Objective GI 21 and amended Objectives TM 2, TM 8, TM 14, TM 26, RS 7, CI 3 and SP 1 and SP 3.

Amendments to the wording of existing and assessed policies and objectives did not alter the impact on the environmental receptor. All other impacts were deemed insignificant. There were no significant adverse impacts found.

Strengthening Mitigation

Policies and objectives with sustainability at their core allow them to act as mitigation measures to offset any potential adverse impacts on the environment as a result of implementing the LAP. Mitigation in the form of polices and objectives serve to formalise the mitigation measures and fully integrates them into the LAP process.

The new and amended policies and objectives of the Draft LAP reinforce mitigatory measures to offset any potential impacts on the environmental receptors.

The proposed new Objective GI 27, in Section 4A Green Infrastructure, will ensure that green roofs are incorporated into the design of all new commercial buildings on the Plan lands. This will help to provide green stepping stones within the residential areas and will aide the creation of a strong green network across the lands. It is considered that they will have the potential to provide potential habitats for flora and fauna in addition to their function in helping to sustainable manage surface water run-off from the site. The proposed Objective will help to strengthen the proposed Green Infrastructure Strategy that is set out in the Draft Plan and will help to balance the needs to protect the environment and the needs of the growing population.

The amendments to Objectives TM 2, TM 8 and TM 24 in the Transport and Movement Section of the LAP will have the impact of more tightly linking new development to the phasing of important infrastructure in the surrounding area as well as providing for improve linkages and sustainable travel patterns. This will further address and mitigate against the impact of development on the transport network serving Baldoyle-Stapolin and ensure sustainable transport patterns are achieved. The proposed changes will therefore be likely to have positive environmental effects with regard to protecting the landscape, maintaining ecological connectivity, reducing car dependency, reducing fuel use and minimising increases in transport related greenhouse gas emissions.

The amendments to Objectives RS 7, RS 8, Map Objectives 5 and Objective CI 3 will further address and mitigate against the impact of development on the transport network serving Baldoyle-Stapolin by ensuring that the necessary services and facilities are available within the LAP lands to serve the needs of the existing and future populations reducing the need to residential to make unnecessary and unsustainable car based

journeys. The proposed changes would therefore be likely to have positive environmental effects with regard to reducing car dependency, reducing fuel use and minimising increases in transport related greenhouse gas emissions. The amendments will strengthen the mitigation measures identified in the Environmental Report and included in the LAP and are beneficial to the environmental protection objective PHH "to provide high-quality residential, working and recreational environments and sustainable transport".

Finally, the proposed new Objectives SP 1 and SP 3 will ensure that development occurs in a sequential manner and in tandem with services and facilities within the site. This will have a beneficial for the residents of the development by ensuring that the development around them is finished in a timely manner. Therefore, in a similar manner to amendments Objectives RS 7, RS 8, Map Objective 5 and Objective CI 3 detailed above, these new Objectives will strengthen the mitigation measures identified in the Environmental Report and included in the LAP and are beneficial to the environmental protection objective PHH "to provide high-quality residential, working and recreational environments and sustainable transport".

Conclusion

In conclusion it is apparent from the assessment of amendments to the policies and objectives of the Draft LAP that the amendments provide additional mitigatory measures to offset any potential impacts on the environmental receptors. No additional mitigation measures were considered necessary in relation to any of the environmental receptors.

Objectives with sustainability at their core allow them to act as mitigation measures to offset any potential adverse impacts on the environment as a result of implementing the plan. Mitigation in the form of polices and objectives serve to formalise the mitigation measures and fully integrates them into the LAP process.

Appendix A

Evaluation of the Amended Draft Baldoyle-Stapolin Local Area Plan Objectives

Map Objectives	BFF	PHH	S	W	AQ/C	CH	L	MA
Map Objective 1 Facilitate and encourage community facilities which allow for shared and multi-purpose use and adaptability, within the village centre **or for non-commercial or small scale** community facilities other agreed location **may be considered** subject to demand and resources.	0	++	0	0	++	++	0	++
Map Objective 5 Ensure that key services such as local and primary health care facilities, public house, and crèche are provided within the village centre to ensure the appropriate mix of community services and facilities, the vitality of the Village Centre and to encourage the use of sustainable modes of transport.	0	++	0	0	++	0	0	++

Section 4A Green Infrastructure	BFF	PHH	S	W	AQ/C	CH	L	MA
Objective GI 27 Ensure that green roofs are incorporated into the design of all new commercial buildings on the Plan lands	++	++	0	++	++	0	++	++

Section 4B Transport and Movement	BFF	PHH	S	W	AQ/C	CH	L	MA
Objective TM 2 Place strong emphasis on	++	++	0	++	++	++	+/-	++

sustainable forms of transport such as walking cycling and public transport, particularly for short trips, **and seek to achieve transport modal split targets that meet or exceed those set out in Department of Transport's 'Smarter Travel, A Sustainable Transport Future 2009-2020.**								
Objective TM 8 Ensure that the phasing of development within the LAP lands has regard to the capacity of the road network and to public transport provision **having particular regard to the North East Transportation Study.**	0	++	0	0	++	0	0	++
Objective TM 14 Provide a clear, safe and legible network of cycling and pedestrian routes within the LAP lands that will link key destinations, including the village centre, **local schools**, Clongriffin train station and other important local destinations **and which will also provide linkages to the GDA Cycle Network.**	+/-	++	0	0	++	++	+/-	++
Objective TM 26 Require that, in line with the need to promote increased densities in Growth Areas 2 and 3 and the likelihood that a greater quantum of apartment units will be provided particularly along the Parkland edge to the north of the site, **with the exception of on-street visitor parking,** car parking be provided off-street in either underground or podium type parking arrangements.	0	++	+/-	+/-	+/-	0	++	++

Section 4D Residential Development and Density	BFF	PHH	S	W	AQ/C	CH	L	MA
Objective RS 7 **Seek** to achieve the densities provided for in the Preferred Density Masterplan Figure 4D.1 in order to **ensure the population catchments and critical mass necessary to support more services, justify existing and future investment in high quality public transport and community facilities and generate the conditions for lively streets and open spaces**. In any event, a minimum of 38 dwellings per hectare (net density) shall be required in each residential block.	+/-	++	++	0	++	0	+/-	++
Objective RS 8 Require, generally, a minimum net residential density of 50 units per hectare within the proposed village centre and along the northern boundary with Racecourse Park subject to appropriate design and amenity standards. **This will be reflected within the village centre by the provision of between 120 – 190 residential units.**	+/-	++	0	0	++	0	+/-	++

Section 4E Community and Education	BFF	PHH	S	W	AQ/C	CH	L	MA
Objective CI 3 Encourage the provision of health care services within the Village Centre to cater for the needs of the existing and future population of the growing neighbourhood and to	0	++	0	0	++	0	0	++

co-ordinate with the HSE, through the implementation of the LAP, on the future planning for such facilities under HSE investment plans.								

Section 4F Retail and Employment	BFF	PHH	S	W	AQ/C	CH	L	MA
Objective RE 4 Ensure that the scale of retail proposed is appropriate to a local centre and does not have a material adverse impact on the vitality and viability of existing centres within the area **and that retail floorspace provision is in compliance with current Retail Planning Guidelines.**	0	++	0	0	++	0	0	0

Section 6 Sequencing and Phasing	BFF	PHH	S	W	AQ/C	CH	L	MA
Objective SP 1 Completion of the apartment blocks is required or a new development permitted and commenced on the apartment block site prior to the construction of more than 50 units in Growth Area 3.	+	+	0	0	+	0	+	+
Objective SP 3 Ensure that construction takes place in a sequential manner within the phasing of each Growth Area 1, 2 or 3 in order to avoid areas of new development leap-frogging unfinished phases of development within each of those Growth Areas. Internal phasing arrangements within each Growth Area 1, 2 or 3 will be required and conditioned as part of planning applications.	+	+	0	0	+	0	0	+