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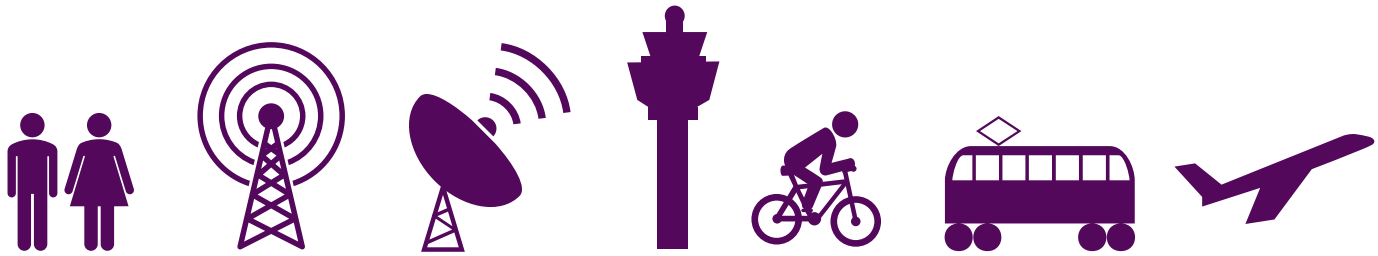
DRAFT DUBLIN AIRPORT LOCAL AREA PLAN

Appendix 4: Strategic Environmental Assessment Environmental Report

SEPTEMBER 2019



SEA ENVIRONMENTAL REPORT

FOR THE

DRAFT
DUBLIN AIRPORT
LOCAL AREA PLAN 2020-2026

Fingal County Council

County Hall

Swords

County Dublin

Comhairle Contae Fhine Gall

Fingal County Council

September 2019

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List of Abbreviations

AA	Appropriate Assessment
AEP	Annual Exceedance Probability
ACA	Architectural Conservation Area
ATMs	Air Traffic Movements
BER	Building Energy Rating
CFRAM	Catchment Flood Risk Assessment and Management
COMAH	Control of Major Accident Hazards Involving Dangerous Substances
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
daa	Dublin Airport Authority
DAP	Drainage Area Plan
DCCAE	Department of Communications, Climate Action and Environment
DCHG	Department of Culture, Heritage and the Gaeltacht
DTTAS	Department of Transport, Tourism and Sport
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
EQS	Environmental Quality Standards
FCC	Fingal County Council
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
ECCP II	The Second European Climate Change Programme
ERBD	Eastern River Basin District
ETS	Emissions Trading Scheme
EU	European Union
FRAM	Flood Risk Assessment and Management
FTEs	Full-Time Equivalent jobs
GSI	Geological Survey of Ireland
GVA	Gross Value Added
ICAO	International Civil Aviation Organization
MCC	Meath County Council
mppa	million passengers per annum
NHA	Natural Heritage Area
NIAH	National Inventory of Architectural Heritage
NTA	National Transport Authority
OPW	Office of Public Works
OSPAR	Oslo and Paris Commissions
PAS	Priority Action Substances
PFRA	Preliminary Flood Risk Assessment
POP	Persistent Organic Pollutant
pNHA	Proposed Natural Heritage Area
RAL	Remedial Action List
RBD	River Basin District
RMP	Record of Monuments and Places
RPA	Register of Protected Areas
RPS	Record of Protected Structures
RBMP	River Basin Management Plan

SAC	Special Area of Conservation
SDGs	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SEO	Strategic Environmental Objective
SI No.	Statutory Instrument Number
SPA	Special Protection Area
TII	Transport Infrastructure Ireland
WFD	Water Framework Directive
WHO	World Health Organisation
WMU	Water Management Units

Glossary

Appropriate Assessment

The obligation to undertake Appropriate Assessment (AA) derives from Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC. AA is a focused and detailed impact assessment of the implications of a strategic action (such as a plan or programme) or project, alone and in combination with other strategic actions and projects, on the integrity of a European Site in view of its conservation objectives.

Biodiversity and Flora and Fauna

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

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

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

Environmental Problems

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

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

Environmental Vectors

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

Mitigate

To make or become less severe or harsh.

Mitigation Measures

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

Protected Structure

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

Recorded Monument

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

Scoping

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

Strategic Actions

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

Strategic Environmental Assessment (SEA)

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

Strategic Environmental Objective (SEO)

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies which generally govern environmental protection objectives established at international, Community or Member State level and are used as standards against which the provisions of the Draft Plan and the alternatives can be evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if - in the case of adverse effects - unmitigated.

Section 1 SEA Introduction and Background

1.1 Introduction and Terms of Reference

This is the Strategic Environmental Assessment (SEA) Environmental Report for the Dublin Airport Local Area Plan 2020-2026. The SEA is being undertaken by CAAS Ltd. on behalf of Fingal County Council.

1.2 SEA Definition

Environmental assessment is a procedure that ensures that the environmental implications of decisions are taken into account before such decisions are made. Environmental Impact Assessment (EIA) is generally used for describing the process of environmental assessment for individual projects, while Strategic Environmental Assessment (SEA) is the term that has been given to the environmental assessment of plans and programmes, which help determine the nature and location of individual projects taking place. SEA is a systematic process of predicting and evaluating the likely significant environmental effects of implementing a proposed plan or programme, in order to ensure that these effects are adequately addressed at the earliest appropriate stages of decision-making in tandem with economic, social and other considerations.

1.3 SEA Directive and its transposition into Irish Law

Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27th June 2001, on the Assessment of the Effects of Certain Plans and Programmes on the Environment, referred to hereafter as the SEA Directive, introduced the requirement that SEA be carried out on plans and programmes which are prepared for a number of sectors, including land use planning.

The SEA Directive was transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (Statutory Instrument Number (SI No. 435 of 2004) and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004). Both sets of Regulations became operational on 21st July 2004. The Regulations have been amended by the European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011 (SI No. 200 of 2011) and the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011 (SI No. 201 of 2011).

1.4 Implications for the Local Area Plan and the Planning Authority

Fingal County Council have considered whether or not implementation of the Plan would be likely to have significant effects on the environment, taking account of relevant criteria set out in Schedule 2A. As the Plan was determined to have the potential to result in significant environmental effects on multiple environmental components, SEA is required to be undertaken on the Plan as per the provisions of the Planning and Development (SEA) Regulations 2004 (as amended). An SEA Determination is provided at Appendix I. This SEA Environmental Report provides the findings of the SEA to date and should be read in conjunction with the Draft Plan.

This report will be placed on public display alongside the Draft Plan and will be updated to take account of any changes that are made to the Draft Plan on foot of submissions. Elected Members of Fingal County Council are required to take into account the findings of this report and other related SEA output during their consideration of the Draft Plan and before its adoption. An SEA Statement summarising how environmental considerations have been integrated into the Plan will be prepared at the end of the process to accompany the adopted Plan.

Section 2 The Draft Local Area Plan

2.1 Introduction

Fingal County Council is preparing a Draft Local Area Plan (LAP) for Dublin Airport, under Section 20 of the Planning and Development Act 2000 (as amended). The Plan sets out an overall strategy for the proper planning and sustainable development over the years 2020-2026.

2.2 Purpose of the Plan

The LAP presents an opportunity to provide an updated strategy for the continued growth of Dublin Airport in line with relevant aviation, planning and environmental policy within the context of a sustainable growth framework. The planning policy supporting the continued growth of Dublin Airport is outlined in Chapter 2 of the LAP and sets the context against which the LAP is framed.

The LAP will be in effect for a period of 6 years following its adoption, unless otherwise extended, as provided for under Section 19 of the Planning and Development Act 2019.

Specifically, the LAP provides a detailed planning framework to:

- Facilitate the capacity enhancements and operational improvements that are required within the short to medium term for Dublin Airport to:
    - Continue to operate safely and efficiently;
    - Keep pace with the anticipated growth in demand; and
    - Develop as a secondary European hub;
- Outline the community, environmental and supporting infrastructure and surface access measures necessary to support the airport's growth, consistent with:
    - Sustainable development principles;
    - Appropriate noise and environmental measures designed to protect public health; and
    - Ensuring high quality surface transport access to the airport.

The LAP specifically considers the environmental effects associated with airport growth at global level (the need to reduce emissions, tackle climate change and build resilience to the impacts of climate change) and at local level (noise, air quality, water quality, waste, traffic, natural and built heritage and community). The LAP recognises that uncongested surface access and increased use of public transport greatly reduces the environmental impacts of airports and are essential to their sustainable growth. The LAP also includes measures intended to mitigate and manage environmental effects.

The South Fingal Transport Study 2019 was carried out on behalf of Fingal County Council to inform the LAP process in accordance with the requirements of the Fingal Development Plan. This study seeks to aid the proper planning and sustainable development of the South Fingal area including Dublin Airport lands through providing a coherent sustainable transport and smarter travel approach. The study identifies the key transport infrastructural requirements needed to facilitate the planned growth of the airport to 2027. The Dublin Airport LAP is underpinned and informed by the findings and recommendations of the study.

2.3 Content of the Draft Plan

The Draft Plan comprises a Written Statement (including written policies and objectives) and associated maps (including land use zoning).

The following chapters set out the context for the LAP and the key policies and objectives that are required to support the continued sustainable development of Dublin Airport:

- Chapter 1 Introduction
- Chapter 2 Dublin Airport in Context
- Chapter 3 Forecasts and Capacity Constraints
- Chapter 4 Vision and Strategic Objectives
- Chapter 5 Transition to a Low Carbon Economy

- Chapter 6 The Economic Impact of Dublin Airport
- Chapter 7 Airport Infrastructure
- Chapter 8 Surface Access and Transport
- Chapter 9 Environment and Community
- Chapter 10 Next Steps

Appendices include this SEA Environmental Report, an Appropriate Assessment Screening and a Strategic Flood Risk Assessment.

2.4 Strategic Vision

The Vision for the Plan is to:

'To facilitate and manage the sustainable growth of Dublin Airport in a manner that reflects its status as Ireland's premier aviation gateway whilst safeguarding the core operational function of the Airport and supporting neighbouring communities, the economy and the environment.'

2.5 Relationship with other relevant Plans and Programmes

The Draft Plan sits within a hierarchy of strategic actions such as plans and programmes and is subject to a number of high-level environmental protection policies and objectives with which it must comply. Environmental policy objectives include those relating to noise and climate mitigation and adaptation.

Objective DAO2 of the Fingal Development Plan 2017-2023 seeks to *'Prepare and implement a new Local Area Plan for Dublin Airport which will accommodate the future sustainable growth and development of the airport lands while also facilitating the efficient and effective operation of Dublin Airport in accordance with the requirements of the Local Area Plan and proper planning and sustainable development'*.

There is a robust policy framework in place at national, regional and local level[1] supporting the continued growth of Dublin Airport, including for the first time its development as a secondary European hub airport. This policy framework is described in full in Chapter 2 of the Plan.

The National Aviation Policy and the National Planning Framework both emphasise the importance of the airport for the future prosperity of Ireland, as well as the Dublin City Region. Data from 2018 indicated that the airport reached 31.5 million passengers, with growth rates expected to continue to rise over the next 10 to 25 years. The consistent growth in passengers that Dublin Airport has witnessed over the last decade has brought its own challenges.

These include capacity considerations associated with runway and aircraft parking stands, and a cap of 32 million passengers per annum which was a requirement of planning permission for Terminal 2. Identified issues which require remedy as part of the LAP include aircraft parking stands, terminal processing capacity and the need to enhance surface access links. These matters are most effectively dealt with as policy within the Local Area Plan. Addressing capacity constraints at Dublin Airport is required to enable continued growth in line with supporting government policy for the benefit of Ireland's economic prosperity.

In addition to addressing capacity constraints, a new LAP can help to address changes in legislation and policy related to sustainable development, environmental protection and environmental management that have occurred since the adoption of previous Plan in 2006.

Further detail on plans, programmes, environmental protection objectives, etc. relevant to the Plan are provided throughout this report, including at Sections 4, 5, 6.2 and 9 and at Appendix II, which includes legislation, plans and programmes relevant to the Plan.

[1] National Aviation Policy, Project Ireland 2040 - National Planning Framework underpinned by a 10 year National Development Plan, a Regional Spatial Economic Strategy for the mid-east region and the Fingal Development Plan 2017-2023.

Section 3 SEA Methodology

3.1 Introduction to the Iterative Approach

Figure 3.1 provides an overview of the integrated Plan preparation, SEA, Appropriate Assessment (AA) Screening and Strategic Flood Risk Assessment (SFRA) processes. The preparation of the Draft Plan and associated environmental assessment processes have taken place concurrently and the findings of these processes have informed the Draft Plan.

The process is currently at a stage where the findings of this SEA Environmental Report will be placed on public display as part of the required statutory public consultations. SFRA and Screening for AA documents will also accompany the Draft Plan on public display. Submissions made on the Draft Plan and associated documents, including SEA, AA and SFRA documents, will be responded to and updates made to the documents where relevant. Proposed material alterations will be subjected to SEA and Screening for AA and full SEA/Stage 2 AA where relevant. Modifications will be examined to ensure that they would not be likely to affect the Natura 2000 network of designated ecological sites and to ensure that they would not be likely to result in significant environmental effects.

On finalisation of the Plan, an SEA Statement will be prepared that will summarise, inter alia, how environmental considerations have been integrated into the Plan. The Plan will be implemented and environmental monitoring will be undertaken.

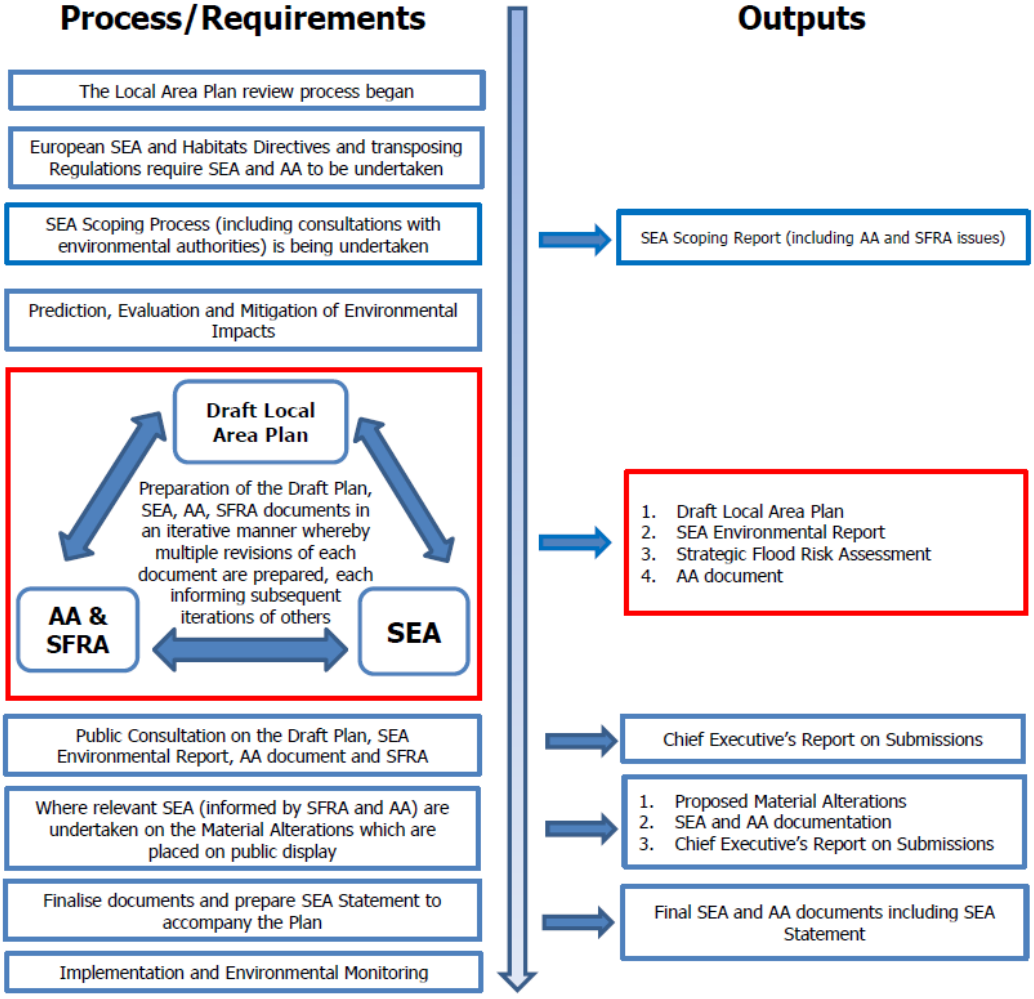

Figure 3.1 Overview of the SEA Process in the Review and Preparation of the Plan

3.2 Appropriate Assessment and Integrated Biodiversity Impact Assessment

3.2.1 Screening for Appropriate Assessment

Screening for Appropriate Assessment is being undertaken alongside the preparation and adoption of the Draft Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC).

The emerging conclusion of the Screening for AA is that that the Draft Plan will not give rise to any effect on the ecological integrity of any European Sites, alone or in combination with other plans or projects.

The preparation of the Draft Plan and Screening for AA has taken place concurrently and the findings of the Screening for AA have informed the SEA.

3.2.2 Integrated Biodiversity Impact Assessment

Many elements of Integrated Biodiversity Impact Assessment as detailed in the EPA's (2013) Practitioner's Manual have been aligned with in the undertaking of the SEA for the Draft Plan. These include:

Scoping

- Biodiversity-relevant issues were identified for consideration at scoping stage and these are now detailed in Section 4.5.
- Reference to a zone of influence is provided at Section 4.5.

Baseline

- Biodiversity data sources relevant for this local level assessment have been identified and datasets collated/gathered.
- The biodiversity baseline addresses designated sites and other habitats and species of ecological value.
- Screening for AA information has been incorporated into the SEA baseline.

Alternatives

- Impacts upon biodiversity are considered under each of the alternatives and potential conflicts can be mitigated.

Impact assessment

- Effects on biodiversity are identified and assessed and the Screening for AA considers the interrelationship between biodiversity and potential effects on European Sites.

Mitigation and monitoring

- Taking into account all measures contained within the Plan, all the proposed mitigation measures deriving from the various processes were generally consistent and compatible.
- Indicators and associated targets have been included in SEA for monitoring European Sites.

Reporting

- This SEA Environmental Report addresses all biodiversity-related considerations relevant for this local level assessment.
- This SEA Environmental Report contains all biodiversity-relevant information, data, figures and maps relevant for this local level assessment.
- This SEA Environmental Report has been informed by the findings of the Screening for AA.

Communication and consultation

- Submissions received have been taken on board.
- The preparation of the Draft Plan, SEA and Screening for AA has taken place concurrently and the findings of the AA have informed the SEA.

3.3 Strategic Flood Risk Assessment

A Strategic Flood Risk Assessment (SFRA) is being undertaken alongside the Draft Plan. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of Environment, Heritage and Local Government and Office of Public Works, 2009).

The preparation of the Draft Plan, SEA and SFRA has taken place concurrently and the findings of the SFRA have informed both the Draft Plan and the SEA.

3.4 Scoping

3.4.1 Introduction

In consultation with the relevant authorities, the scope of environmental issues to be dealt with by the SEA together with the level of detail to which they are addressed was broadly decided upon taking into account the collection of environmental baseline data and input from environmental authorities. Scoping allowed the SEA to become focused upon key issues

relevant to the environmental components that are specified under the SEA Directive[2].

As the Plan is not likely to have significant effects on the environment in another Member State transboundary consultations as provided for by Article 7 of the SEA Directive were not undertaken.

3.4.2 Scoping Notices

Relevant environmental authorities[3] identified under the SEA Regulations as amended, were sent SEA scoping notices by the Council indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the Environmental Report could be made to the Council.

3.4.3 Scoping Submissions

Submissions were made by the Department of Culture, Heritage and the Gaeltacht, Environmental Protection Agency, Inland Fisheries Ireland (operating under the Department of Communications, Climate Action and Environment) and Meath County Council during the SEA Scoping/ Draft Plan preparation process. Responses to these submissions and how they are being taken into account during preparation of the SEA is provided at Appendix III to this SEA Environmental Report.

3.5 Environmental Baseline Data

The SEA process is informed by the environmental baseline (i.e. the current state of the environment) to facilitate the identification and evaluation of the likely significant environmental effects of implementing the provisions of the Plan and the alternatives and the subsequent monitoring of the effects of implementing the provisions of the Plan as adopted.

3.6 Alternatives

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment. In accordance with this requirement, alternatives for the Plan are examined in Section 7.

3.7 The SEA Environmental Report

In this SEA Environmental Report, which is placed on public display alongside the Draft Plan, the likely environmental effects of the Draft Plan and the alternatives are predicted and their significance evaluated.

The Environmental Report provides the Council, stakeholders and the public with a clear understanding of the likely environmental consequences of implementing the Draft Plan.

Mitigation measures to prevent or reduce significant adverse effects posed by the Draft Plan are identified in Section 9.

This Environmental Report will be updated in order to take account of recommendations contained in submissions and in order to take account of changes that are made to the original, Draft Plan that is being placed on public display. Changes to the Draft Plan will be examined for the need to undertake SEA and AA.

This Environmental Report contains the information specified in Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004) as amended (see Table 3.1).

[2] These components comprise biodiversity, fauna, flora, population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

[3] The following authorities were notified: Environmental Protection Agency; Department of Communications, Climate Action and Environment; Department of Agriculture, Food and the Marine; Department of Culture, Heritage and the Gaeltacht; Meath County Council; Kildare County Council; South Dublin County Council; Dublin City Council.

3.8 The SEA Statement

On the making of the Plan by the Council, an SEA Statement will be prepared which will include information on:

- How environmental considerations have been integrated into the Plan, highlighting the main changes to the Plan which resulted from the SEA process;
- How the SEA Environmental Report and consultations have been taken into account, summarising the key issues raised in consultations and in the Environmental Report indicating what action was taken in response;
- The reasons for choosing the Plan in the light of the other alternatives, identifying the other alternatives considered, commenting on their potential effects and explaining why the Plan as adopted was selected; and
- The measures decided upon to monitor the significant environmental effects of implementing of the Plan.

3.9 Difficulties Encountered

The degree to which effects can be fully determined at this level of decision-making is limited, as the Plan will be implemented through lower tier decision-making and associated environmental assessments, where relevant. Nonetheless, a comparative evaluation of the various alternatives and a robust assessment of Plan provisions against Strategic Environmental Objectives, taking into account the existing environment and policy framework, can be provided.

The degree to which the evolution of the existing environment in the absence of the LAP can be fully determined is also limited due to uncertainty as to whether or not the existing planning framework would change to compensate for the absence of the LAP. Notwithstanding this uncertainty, such a description can be provided while acknowledging this uncertainty.

Table 3.1 Checklist of Information included in this Environmental Report

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

Section 4 Environmental Baseline

4.1 Introduction

Reflecting the specifications in the SEA Directive, the relevant aspects of the current state of the environment are identified in this section.

4.2 National Reporting on the Environment

The Environmental Protection Agency's (EPA's) *"Ireland's Environment - An Assessment 2016"* report provides an integrated assessment of the overall quality of Ireland's environment, the pressures being placed on it and the societal responses to current and emerging environmental issues. This report has informed various parts of the environmental baseline provided below. The key environmental challenges or messages identified by the report are:

Environment and Health and Wellbeing
Recognising the benefits of a good quality environment to health and wellbeing.

Climate Change
Accelerating mitigation actions to reduce greenhouse gas emissions and implement adaptation measures to increase resilience in dealing with adverse climate impacts.

Implementation of Legislation
Improving the tracking of plans and policies and the implementation and enforcement of environmental legislation to protect the environment.

Restore and Protect Water Quality
Implementing measures that achieve ongoing improvement in the environmental status of water bodies from source to the sea.

Sustainable Economic Activities
Integrating environmental sustainability ideas and performance accounting across economic sectors and sectoral plans should be a key policy for growth.

Nature and Wild Places
Protecting pristine and wild places that act as biodiversity hubs, contributing to health and wellbeing, and providing tourism opportunities

Community Engagement
Informing, engaging and supporting communities in the protection and improvement of the environment.

4.3 Sustainable Development Goals

Implementation of the Plan will contribute towards efforts to achieve a number of the 17 Sustainable Development Goals of the 2030 Agenda for Sustainable Development, which were adopted by world leaders in 2015 at a United Nations Summit and came into force in 2016. These Goals include:

- Goal 3. Ensure healthy lives and promote well-being for all at all ages.
- Goal 6. Ensure availability and sustainable management of water and sanitation for all.
- Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all.
- Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable.
- Goal 12. Ensure sustainable consumption and production patterns.
- Goal 13. Take urgent action to combat climate change and its impacts.
- Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
- Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.

4.4 Likely Evolution of the Environment in the Absence of the Plan

The LAP provides an updated strategy for the continued growth of Dublin Airport in line with relevant aviation, planning and environmental policy within the context of a sustainable growth framework.

The degree to which the evolution of the existing environment in the absence of the LAP can be fully determined is limited due to uncertainty as to whether or not the existing planning framework would change to compensate for the absence of the LAP, through, for example, varying the Fingal Development Plan. In addition it is uncertain as

to what changes to the planning framework would occur, if any, in the absence of the LAP.

In the absence of the LAP, the continued development, growth and expansion of Dublin Airport, would be likely to occur at the LAP lands. However, responses to constraints such as surface access infrastructure capacity issues would be less coordinated and more uncertain and difficult to predict. Nonetheless, there already exists a robust policy framework at national, regional and local level, supporting the continued development, growth and expansion of Dublin Airport (Section 6.2 provides a description of this framework).

The Draft Plan includes various provisions that would be likely to improve environmental protection and sustainable development. In the absence of the Plan, the framework for environmental protection and sustainable development would be less comprehensive. The positive effects identified by this assessment (see Table 8.3) would not occur as a result of the Plan; however, they may occur as a result of the wider planning framework.

The Draft Plan includes various provisions that would have the potential to result in significant adverse environmental effects, if unmitigated. The potential significant adverse effects identified by this assessment (see Table 8.3) would not occur as a result of the Plan; however, they would remain present as a result of the wider planning framework within which they would be mitigated by parts of that framework relating to sustainable development and environmental protection and management.

4.5 Biodiversity and Flora and Fauna

4.5.1 Key Ecological Sensitivities

There are limited ecological sensitivities within the LAP lands. There is however potential for the LAP to impact upon sensitivities in the wider region, including those downstream, some of which are designated, because of the existence of direct pathways to these designated sensitivities. Provisions contributing towards the protection and management of ecological sensitivities have been integrated into the LAP.

The main airport campus – including Terminals 1 and 2 in the east and the airfield, including runways in the west – and the campus' immediate environs are entirely artificial in character, comprising existing roads, car parks, buildings and landscape planting. There are a number of treelines, hedgerows and some small areas of amenity grassland, all of which are of limited ecological value.

The upstream stretches of a number of streams that drain the LAP lands are found within and adjacent to the LAP area. These streams support aquatic biodiversity, flora and fauna.

There are also various ecological designations within the wider region, including those downstream of the Plan area.

Key ecological sensitivities comprise:

- Aquatic and riverine ecology, including riparian zones[4] of the Mayne River[5], Cuckoo Stream, Ward River[6], Broadmeadow River, Sluice River and Santry River; and
- Coastal areas, marine and transitional waters and associated aquatic ecology of Broadmeadow Estuary (Malahide), Baldoyle Estuary and Bull Island (Dublin Bay).

4.5.2 European Sites

European Sites comprise:

- Special Areas of Conservation[7] (SACs), including candidate SACs; and

[4] Riparian/buffer zone is a vegetated area near a stream, which helps shade and partially protect a stream from the impact of adjacent land uses. It plays a key role in protecting and improving water quality in associated water courses. All of the watercourses within the Plan area are under considerable pressure from urbanisation.

[5] The Mayne River and tributaries including the Cuckoo Stream are currently non-salmonid; however this was historically a salmonid system and lost its status primarily because of poor water quality as a result of urbanisation (source: Inland Fisheries Ireland SEA Scoping Submission).

[6] The Ward River supports populations of Atlantic salmon, sea trout and brown trout (source: Inland Fisheries Ireland SEA Scoping Submission).

[7] SACs have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) due to their conservation value for habitats and species of importance in the European Union. The Habitats Directive

- Special Protection Areas[8] (SPAs).

The SEA uses the same zone of influence that is used by the AA. The Department of the Environment, Heritage and Local Government (2009) Guidance on Appropriate Assessment recommends a 15 km buffer zone be considered around the Plan area.

There are 18 European Sites (10 SACs and 8 SPAs) within 15 km of the Plan boundary and none of them are located within or adjacent to the Plan area.

The nearest European Sites are Malahide Estuary SAC and SPA located c. 3km to the north-east and Baldoyle Bay SAC and SPA located c. 5km to the east, both downstream of the Plan area.

These sites are listed on Table 4.1 and mapped on Figure 4.1.

Table 4.1 European Sites within 15 km of the Plan area

European Sites		
Designation	**Code**	**Site Name**
SAC	000199	Baldoyle Bay
	000202	Howth Head
	000204	Lambay Island
	000205	Malahide Estuary
	000206	North Dublin Bay
	000208	Rogerstown Estuary
	000210	South Dublin Bay
	001398	Rye Water Valley/Carton
	002193	Ireland's Eye
	003000	Rockabill to Dalkey Island
SPA	004006	North Bull Island
	004015	Rogerstown Estuary
	004016	Baldoyle Bay
	004024	South Dublin Bay and River Tolka Estuary
	004025	Malahide Estuary
	004069	Lambay Island
	004113	Howth Head Coast
	004117	Ireland's Eye

For more detail on European Sites please refer to the Screening for AA document that accompanies the Draft Plan and this SEA Environmental Report.

4.5.3 Natural Heritage Areas and Proposed Natural Heritage Areas

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

There are no NHAs and pNHAs occurring inside the Plan boundary. There are 19 pNHAs within 15 km of the Plan area. The closest pNHAs to the Plan area are Santry Demense (c. 1.2 km to the south of the Plan area), Feltrim Hill (c. 1.8 km to the north-east of the Plan area), Malahide Estuary (c. 3.5 km to the east of the Plan area) and Sluice River Marsh (upstream of Baldoyle Estuary, c. 4.4 km to the east of the LAP area). All pNHAs in the vicinity of the Plan area are listed on Table 4.2 below and mapped on Figure 4.2.

Also shown on Figure 4.2 are areas likely to contain Annex I Habitats (see Section 4.5.5 for explanation), however there are no such areas occurring inside the Plan area.

Table 4.2 pNHAs within 15 km of the Plan area

Proposed Natural Heritage Areas		
Designation	**Code**	**Site Name**
pNHA	000128	Liffey Valley
	000178	Santry Demense
	000199	Baldoyle Bay

seeks to establish Natura 2000, a network of protected areas throughout the EU. It is the responsibility of each member state to designate SACs to protect habitats and species, which, together with the SPAs designated under the 1979 Birds Directive, form Natura 2000. The European Communities (Birds and Natural Habitats) Regulations 2011 consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats)(Control of Recreational Activities) Regulations 2010. The Regulations have been prepared to address several judgments of the Court of Justice of the European Union (CJEU) against Ireland, notably cases C-418/04 and C-183/05, in respect of failure to transpose elements of the Birds Directive and the Habitats Directive into Irish law.

[8] SPAs have been selected for protection under the 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC) - referred to as the Birds Directive - due to their conservation value for birds of importance in the EU.

Proposed Natural Heritage Areas		
	000201	Dolphins, Dublin Docks
	000202	Howth Head
	000203	Ireland's Eye
	000204	Lambay Island
	000205	Malahide Estuary
	000206	North Dublin Bay
	000208	Rogerstown Estuary
	000210	South Dublin Bay
	000991	Dodder Valley
	001205	Booterstown Marsh
	001208	Feltrim Hill
	001215	Portraine Shore
	001398	Rye Water Valley/Carton
	001763	Sluice River Marsh
	002103	Royal Canal
	002104	Grand Canal

4.5.4 Habitat Survey[9]

Fields are bounded by hedgerows and treelines that vary in density and diversity. The Environmental Impact Statement that was prepared in for the north runway in 2005 contains information in relation to plant species that occurred at the time in the vicinity of the runway site, together with detailed information on birds, and some information in relation to mammals, amphibians, and invertebrates. This shows, inter alia, that the general area is used by a range of bird species throughout the year including some species of conservation concern. Four bat species were recorded in the survey and a range of mammals including species such as badger, hedgehog and Irish hare, are also present or likely to be present, together with amphibians such as frog and smooth newt. Most of the insects recorded are commonly occurring species although three less common species were also found.

Based on this information it is likely that parts of the remaining area covered by the Plan is similar in nature. With regard to bats, the high levels of street and security lighting throughout the airport at night are likely to render most potential roosting sites, including trees with potential roosting crevices, unusable by bats.

4.5.5 Land Cover Mapping

CORINE[10] land cover mapping for the Plan area is shown on Figure 4.3.

The area covered by the Plan consists of lands within the existing airfield and additional agricultural lands outside the existing airfield. The primary land use adjoining the Airport to the north, south and west is agricultural.

Categories from CORINE mapping that indicate areas likely to contain Annex I habitats[11] include broad-leaved forest, peat bog, natural grassland, water bodies, coastal lagoons, mixed forests, moors and heaths, intertidal flats, beaches dunes sand, inland marshes, stream courses, estuaries, sparsely vegetated areas, burnt areas, salt marshes, bare rocks, transitional woodland scrub and land principally occupied by agriculture with areas of natural vegetation. No such land cover categories are located within the Plan area.

The closest areas likely to contain Annex I habitats include broad-leaved forests (identified in the grounds of Malahide Castle), land principally occupied by agriculture with significant areas of natural vegetation (identified at Elmhurst Cottage Farm in Glasnevin) and sandbanks, estuaries, tidal mudflats, lagoons, large shallow inlets and bays, reefs and drift lines (identified along the Irish Sea coastline, to the east of the Plan area).

4.5.6 Register of Protected Areas

In response to the requirements of the Water Framework Directive a number of water bodies or parts of water bodies that must have extra controls on their quality by virtue of how their waters are used by people and by wildlife have been listed on Registers of Protected Areas (RPAs).

[9] Text from this section is informed by the information contained in the Dublin Airport Local Area Plan 2006 (Fingal County Council)

[10] The CORINE (Co-ordinated Information on the Environment) land cover data series was devised as a means of compiling geo-spatial environmental information in a standardised and comparable manner. CORINE has become a key data source for informing environmental and planning policy on a national and European level. The main land cover type in Ireland is agricultural land including forestry, which accounts for two-thirds of the national landmass. Most of this is permanent grassland pastures. Peatlands and wetlands are the second most widespread land cover type, covering almost one-fifth of the country. While forested areas cover about one-tenth of the country. Despite rapid development in the past two decades, Ireland's landscape is predominantly rural and agricultural.

[11] Annex I habitat types are which may be designated as Special Areas of Conservation.

Groundwater underlying all areas within the country is included on the RPA for Groundwater Drinking Water.

There are number of water bodies in the wider area (Figure 4.7), which are included on the Register of Protected Areas for:

- Rivers in Nutrient Sensitive Areas, such as Gaybrook River (c. 2 km to the north-east of the Plan area) and Santry River (c. 4 km to the south-east of the Plan area);
- Nutrient Sensitive Areas, such as Broadmeadow Water (c. 5 km to the north-east of the Plan area) and Tolka Estuary to the south-east of the Plan area); and
- Shellfish Areas, the area off the coast of Malahide (to the east of the Plan area) is listed under this RPA.

The SACs and SPAs (Table 4.1) and their associated waters are listed on RPAs for water dependent habitats and species.

4.5.7 Other Designations

Other designations mapped on Figure 4.4 include Nature Reserves, Ramsar Sites and Fingal Nature Development Areas.

Nature Reserves are areas of importance to wildlife, which is protected under Ministerial order. There are currently 78 Statutory Nature Reserves in Ireland. Most are owned by the State but some are owned by organisations or private landowners.

Ramsar Sites are designated and protected under the Convention of Wetlands of International Importance, especially as Water Fowl Habitat, which was established at Ramsar in 1971 and ratified by Ireland in 1984. Ireland presently has 45 sites designated as Wetlands of International Importance, with surface areas of 66,994 hectares. The objective of a Ramsar site is the conservation of wetlands for wildfowl. While Ireland ratified the Ramsar Convention in 1984 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 (as amended) or the Birds or Habitats Directives.

Baldoyle Estuary (c. 5 km to the southeast from the Plan area), North Bull Island (c. 6 km to the southeast from the Plan area) and Rogerstown Estuary (c. 7 km from the Plan area) are designated as both Nature Reserves and Ramsar Sites. Ramsar Sites are also designated at Broadmeadow Estuary/Malahide (c. 5 km from the Plan area) and Sandymount Strand/Tolka Estuary (c. 6 km to the south-east of the Plan area), as shown on Figure 4.4.

Fingal Nature Development Areas are designated locations where nature conservation can be combined with existing activities such as farming, forestry, quarrying and recreation (e.g. golf courses). Fingal County Council has identified a number of areas and landuses in the County with potential for biodiversity enhancement. These include:

- Farmland Areas (including farms participating in the Rural Environment Protection Scheme);
- Demesnes;
- Golf courses;
- Parkland;
- Quarries;
- Waterbodies; and
- Areas suitable for new woodland or forestry.

The areas and land-uses have been selected because of their existing or potential value for wildlife. The nature development areas are reservoirs of biodiversity in the wider countryside and together with the corridors and stepping-stones allow species to move through the landscape. The Council aims to ensure that the biodiversity value of these areas is maintained and enhanced. Applications for planning permission must demonstrate how the proposed development will maintain and enhance the biodiversity value of the site.

There are two Nature Development areas adjacent to the south and north of the Plan boundary (as shown on Figure 4.4).

4.5.8 UNESCO Biosphere Designation

The Dublin Bay United Nations Educational, Scientific and Cultural Organization (UNESCO) Biosphere Reserve in North Bull Island was designated as a Biosphere Reserve in 1981 because of its rare and internationally important habitats and wildlife and the designation was extended to the wider Dublin Bay in 2015, reflecting the Bay's significant environmental, economic, cultural and tourism importance, and

extends to over 300 km^2. Over 300,000 people live within the Biosphere.

The Plan area is adjacent to the outer Transition Zone of the Biosphere (this zone comprises 173 km^2 and forms the outer part of the Biosphere, including residential areas, harbours, ports and industrial and commercial areas) and is adjacent to areas that are part of both the Core Zone (this zone comprises 50 km^2 of areas of high natural value with key areas including the Tolka and Baldoyle Estuaries, Booterstown Marsh, Howth Head, North Bull Island, Dalkey Island and Ireland's Eye) and the Buffer Zone (this zone comprises 82 km^2 of public and private green spaces such as parks, greenbelts and golf courses).

4.5.9 Trends[12]

Every six years, Member States of the European Union are required to report on the conservation status of all habitats and species listed on the annexes of the Habitats Directive.

The Overall Assessment Results for the "Status and Trends in Habitats Protected Under the EU Habitats Directive in Ireland 2007-2013" (NPWS) identified that key pressures on Ireland's habitats and species include: changing land use, unsustainable exploitation, direct impact such as water pollution, and indirect impact such as human population growth.

Within the Plan area, the biggest change with respect to biodiversity and flora and fauna has been the start of the construction of the north runway. This change is indicated by comparing the 2012 and 2018 CORINE Land Cover Mapping dataset with the 2018. The lands where the runway is being constructed are identified as artificial surfaces/construction sites in the 2018 dataset while in the 2016 dataset it is identified as pastures. Any losses as a result of the north runway have been permitted in accordance with national and European legislation for the protection of European Sites and wider biodiversity, flora and fauna.

The status of most water bodies has remained the same between the two most recent monitoring periods of 2010-2012 and 2010-2015 however the status of the Ward River has improved from being poor to being good.

4.5.10 Existing Problems

Previous developments within the Plan area have resulted in loss of biodiversity and flora and fauna however legislative objectives governing biodiversity and flora and fauna were not identified as being currently conflicted with.

[12] EPA: *Ireland's Environment: An Assessment 2016*

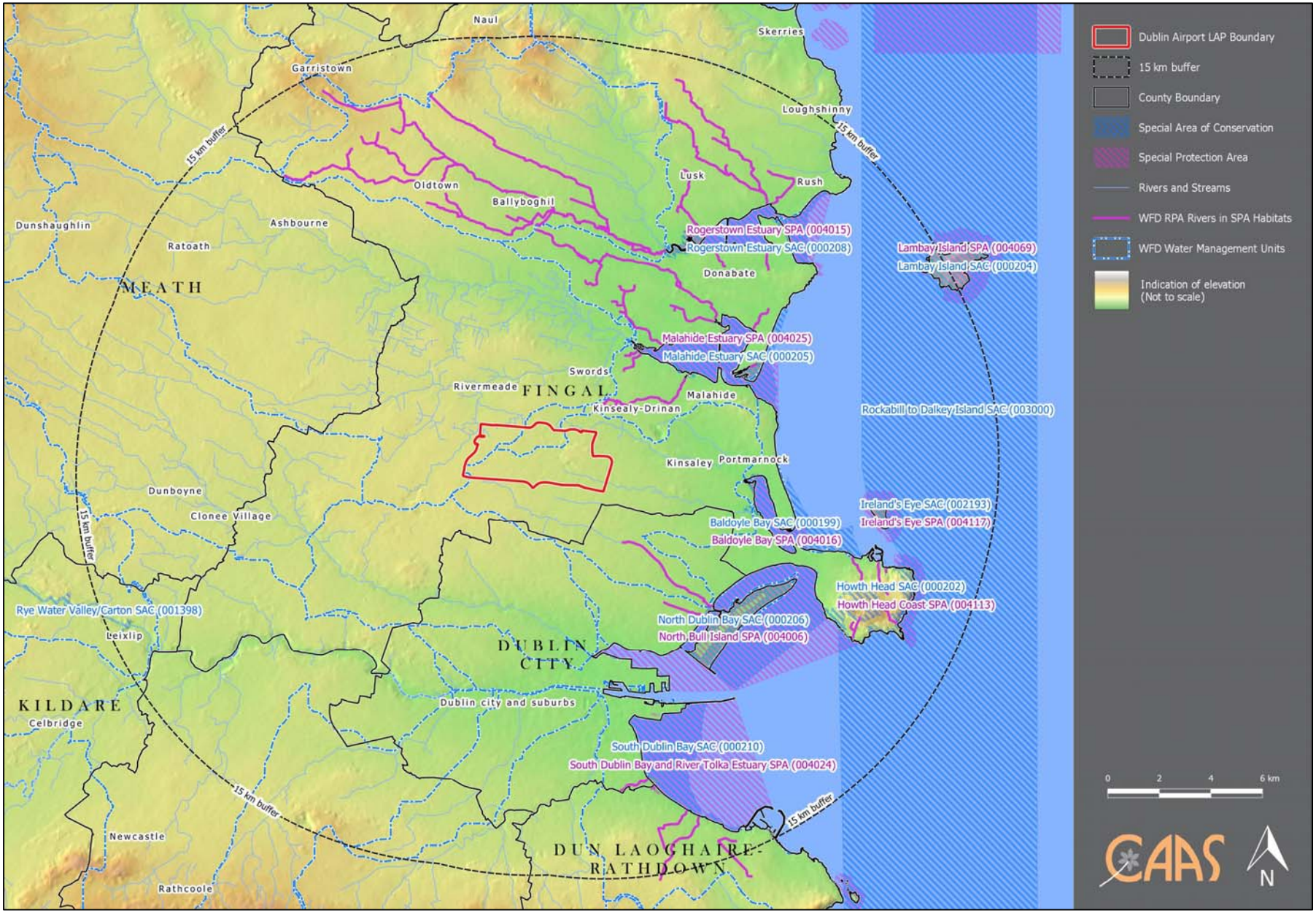

Figure 4.1 European Sites and their sustaining resources within 15 km buffer of Plan area

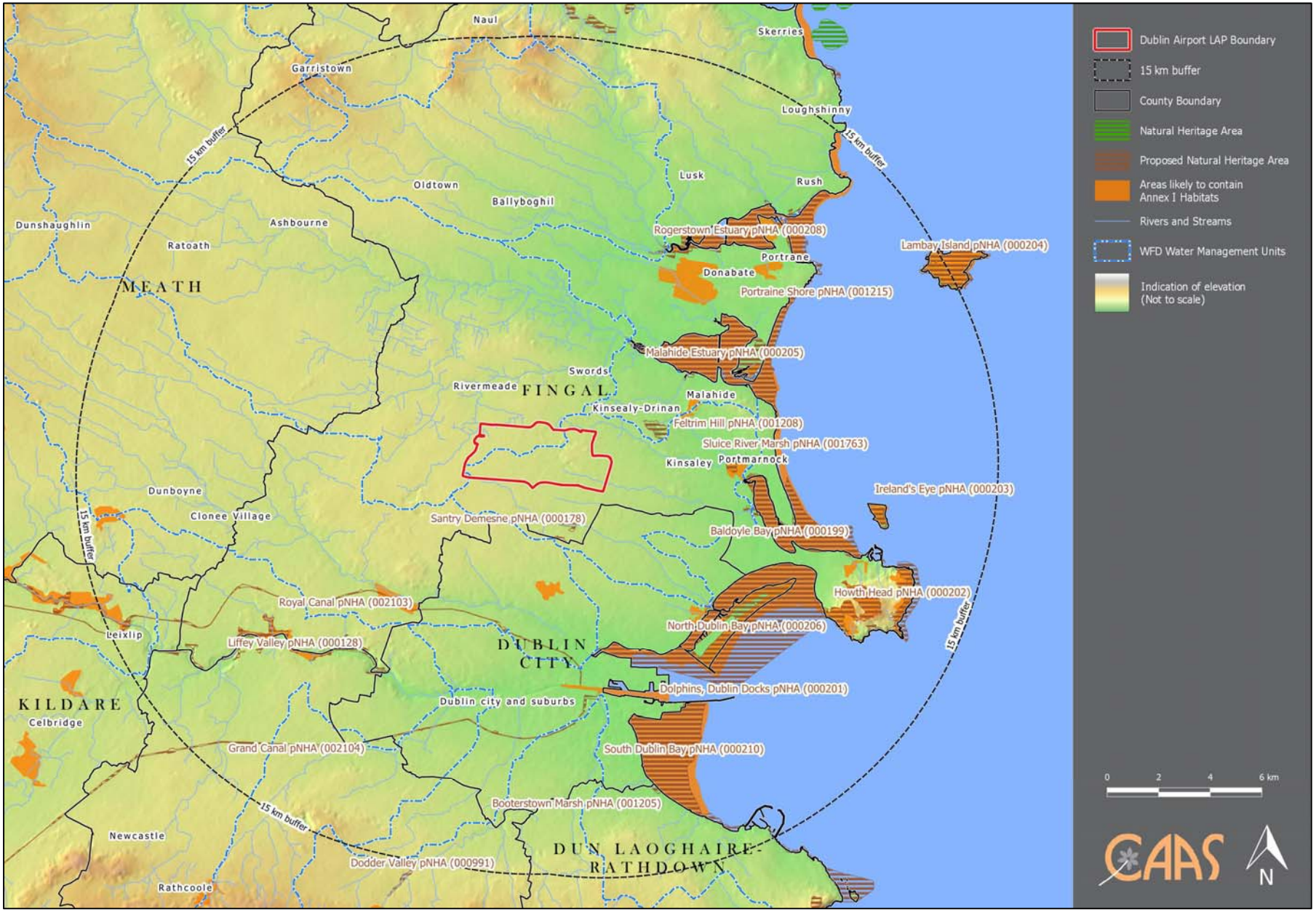

Figure 4.2 Potential Habitat Sensitivity within 15 km of Dublin Airport Plan area

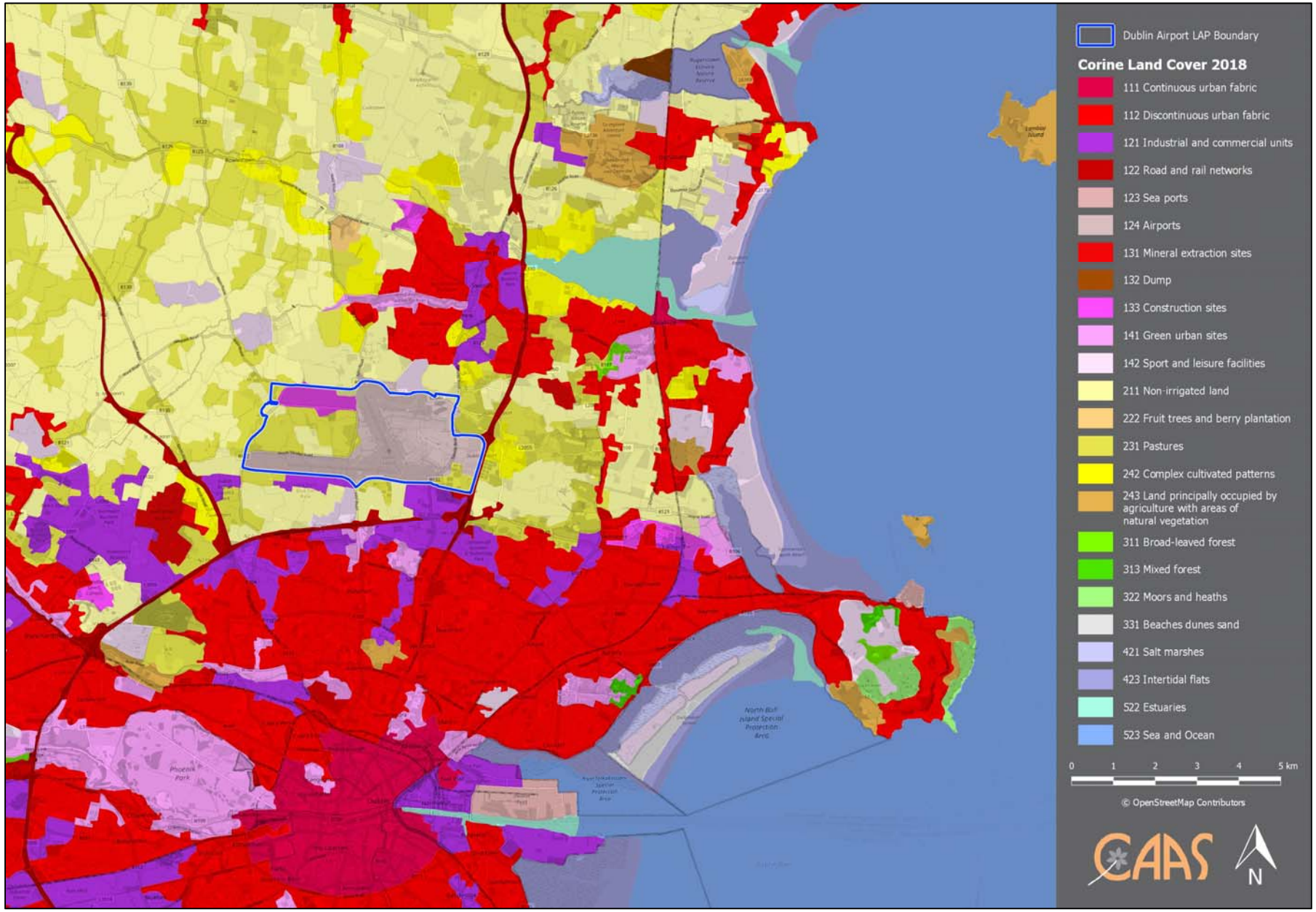

Figure 4.3 CORINE Land Cover Mapping 2018

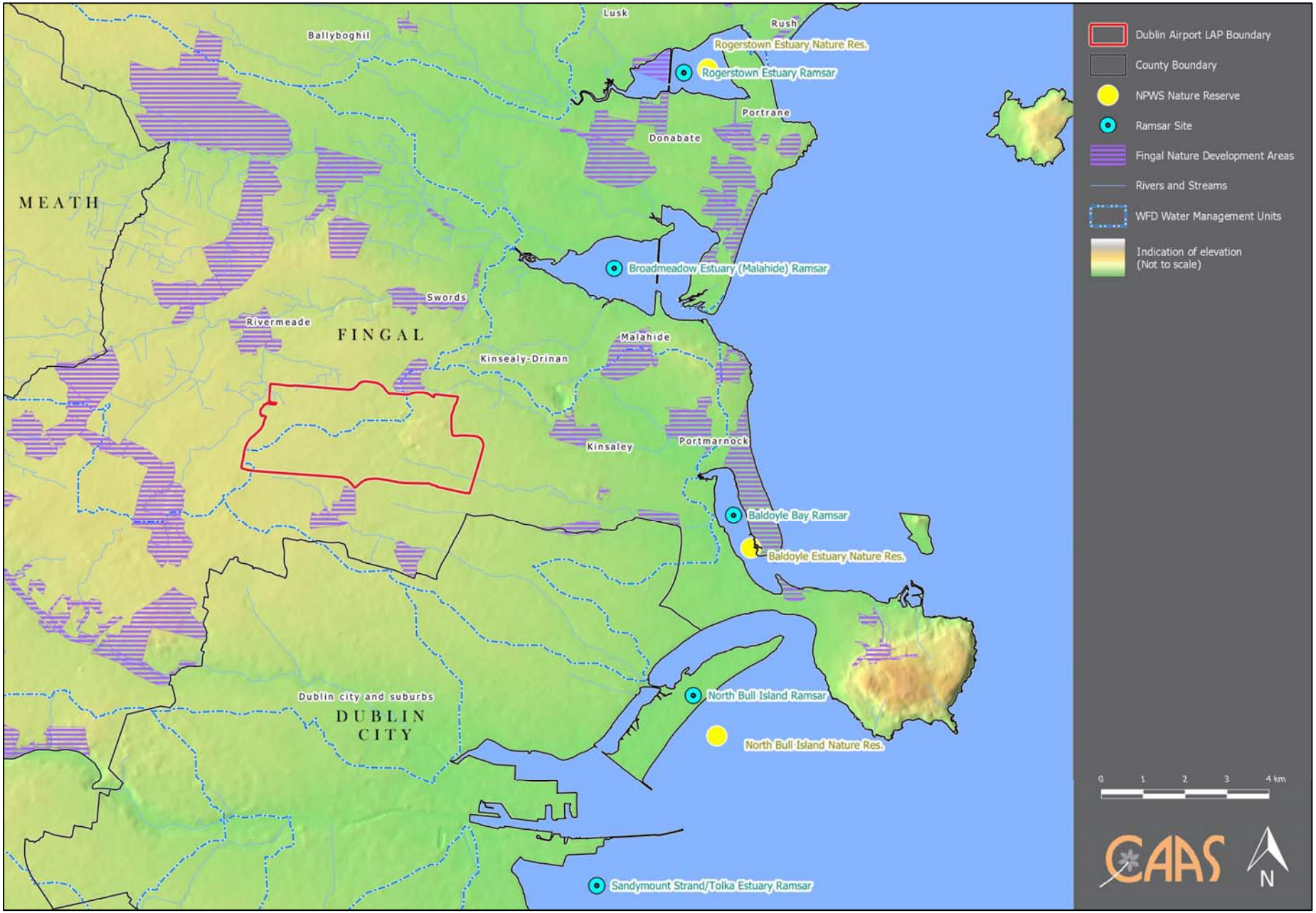

Figure 4.4 Other ecologically related designations in the wider area

4.6 Population and Human Health

4.6.1 Population

There are 21 houses occupied, 10 houses unoccupied and 3 derelict houses within the Plan area (Fingal County Council Rural House Count, 2018). The closest settlement to the airport is the adjacent St. Margaret's to the west.

In 2018, the airport accommodated 31.5 million passengers.

Analysis of the economic impacts associated with Dublin Airport is contained in the Dublin Airport Economic Impact Study 2016 undertaken for daa in April 2017 and updated in June 2019. The key findings are that direct employment supported by ongoing operations at Dublin Airport amounts to 21,500 jobs - adjusting for part-time and seasonal employment, this totals 19,200 Full-Time Equivalent jobs (FTEs). The total direct Gross Value Added (GVA) generated by Dublin Airport is estimated to be over €1.7 billion. Adding in multiplier impacts (indirect and induced), the total employment supported by activities at Dublin Airport is estimated to be 49,000 jobs (or 43,600 FTEs), earning a total of €1.9 billion. The catalytic impacts of Dublin Airport (tourism, transport of high value exports, the ability of Irish and multinational businesses to travel to clients and global headquarters etc) were estimated to total 80,700 jobs (71,300 FTEs) and €6.0 billion in GVA in 2018. The total economic impact of Dublin Airport therefore amounts to 129,700 jobs in Ireland, equivalent to 114,900 full-time jobs, earning a total €9.8 billion in GVA contributions to the national economy, representing 3.1% of total GDP.[13]

The settlement of Swords (adjacent to the key gateway of Dublin Airport) in the 2016 Census had a population of 39,248 persons. Swords was identified in the Fingal Development Plan 2017 - 2023 as 'Primary Economic Growth Town' with a predicted potential population growth up to 100,000 persons.

Residents, those employed and passengers have the potential to interact with various environmental components including material assets, air and climatic factors and water quality.

4.6.2 Human Health

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

4.6.3 Noise Interactions and Public Safety Zones[14]

Noise can have a significant and disruptive effect on everyday life and it has been identified by the WHO as the second greatest environmental cause of health problems (after air quality). The extensive studies into the links between environmental noise exposure and health have considered transportation noise sources including road, rail and aircraft with responses being found to differ depending upon source.

Research indicates that Exposure of people to daytime noise levels above 65 dB(A) can cause severe health problems. In general, noise levels in cities can range between 60-70 dB(A), with suburban levels between 50-60 dB(A). The World Health Organisation (WHO) has set guideline levels for annoyance at 55 dB(A), representing daytime levels below which a majority of the adult population will be protected from becoming a moderate or serious annoyance.

In 2009, the WHO European Regional Office published the 'Night Noise Guidelines for Europe' (2009). It presented evidence on the damage to human health due to long-term night-time noise exposure and recommended threshold values that, if breached at night,

[13] Text in this section is taken from Chapter 6 "Economic Impact of Dublin Airport" from the Draft Local Area Plan.

[14] Please also refer to Section 4.9.5 *Noise*.

would threaten health. An annual average night-time exposure not exceeding 40 dB(A) outdoors is recommended in the guidelines. It is recommended that that this level should be the target for night-time noise guidelines to protect the public, including the most vulnerable groups such as children, the chronically ill and the elderly. A night-time level of 55 dB(A) is recommended as an interim target for countries that cannot meet these night-time noise guidelines in the short term for various reasons, and where policy-makers choose to adopt a stepwise approach.

The available research has shown evidence supporting the association of environmental noise (including aircraft noise) with negative health outcomes including cardiovascular disease, cognitive impairment, sleep disturbance, annoyance and wellbeing (impacts on quality of life and mental health).

Railway noise is the second most dominant source of environmental noise in Europe, with approximately 9 million people exposed to levels above 50 dB(A) at night. Railway noise arises from engine noise, rolling noise and aerodynamic noise. In Europe, aircraft noise affects a much smaller proportion of the population compared to rail and road traffic noise. However, aircraft noise is regarded as being more annoying than both rail and road traffic noise at the same exposure level.

The Noise Action Plan for Dublin Airport 2019-2023 (Fingal County Council, 2018) contains an assessment of information on noise levels arising from Dublin Airport for the years 2006, 2011 and 2016. Some of the findings include:

- The number of people exposed to Dublin Airport noise levels greater than 55 dB(A) L_{den}15 decreased between 2006 and 2011, but increased between 2011 and 2016 resulting in around 5,900 people being exposed to more than 55 dB(A) L_{den} in 2016 than in 2006;
- Of the 292,700 people living in the Fingal County Council administrative area, 6.9% of the population were identified as being exposed to aircraft noise above 55 dB(A) L_{den} in 2016, while 0% of the population were identified as being exposed to aircraft noise levels above 70 dB(A) L_{den};
- The number of dwellings exposed to noise levels greater than 55 dB(A) L_{den} increased by 2,700 in 2016 from 2011 figures;
- The number of people exposed to noise levels greater than 50 dB(A) L_{night} increased by 5,200 in 2016 from 2011 figures;
- The number of dwellings exposed to noise levels greater than 50 dB(A) L_{night} increased by 1,800 in 2016 from 2011 figures;
- Of the 292,700 people living in the FCC administrative area, 2.3% of the population were identified as being exposed to aircraft noise above the desirable level of 50 dB(A) L_{night}, while 0% of the population were identified as being exposed to aircraft noise levels above 70 dB(A) L_{night}; and
- The number of people exposed to noise above 55 dB L_{night} has increased from 200 in 2006 and 2011, to 400 in 2016. This is an increase in the number of people exposed to noise above the WHO 'Interim target' for night noise as set out in the Night Noise Guidelines for Europe[16].

The Noise Action Plan includes a "Discussion" section that identifies:

> "The results of the noise mapping and other relevant sources of information indicate that noise from Dublin Airport has increased since 2011 along with the number of people exposed to aircraft noise. These increases are due to both the airport's continued growth and apparent encroachment in the vicinity of the airport. The results of the mapping also indicate an increase in night-time noise exposure both as a result of the airport and the apparent encroachment. Noise complaints, whilst increased in recent years, may not necessarily be connected to this increased noise exposure but may more likely be as a result of other factors."

[15] L_{den} is the day-evening-night composite noise indicator

[16] World Health Organisation, Night Noise Guidelines for Europe, 2009. http://www.euro.who.int/__data/assets/pdf_file/0017/43316/E92845.pdf

Inner and Outer Noise and Public Safety Zones[17] delineated for the airport and integrated into the Fingal Development Plan 2017-2023 cover a significant portion of north County Dublin and Fingal County Council's administrative area. These zones contribute towards the protection of human health and the successful operation of the airport and have implications for land uses and developments across an area that is multiple times the size of the Plan area lands. Public Safety Zones are shown on Figure 4.5.

Please also refer to Section 4.9.5 for more details on noise.

4.6.4 SEVESO (COMAH) Sites

Seveso sites are industrial sites that, because of the presence of dangerous substances in sufficient quantities, present a major accident hazard. Major industrial accidents involving dangerous substances pose a significant threat to humans and the environment; such accidents can give rise to serious injury to people or serious damage to the environment, both on and off the site of the accident.

The European Communities (Control of Major Accident Hazards Involving Dangerous Substances or COMAH) Regulations 2006 and the European Union (Control of Major Accident Hazards Involving Dangerous Substances) (Amendment) Regulations 2013, which implemented the Seveso II Directive (96/82/EC), have been revoked by the European Union (Control of Major Accident Hazards Involving Dangerous Substances) (Revocation) Regulations 2015 (S.I. No. 208 of 2015) and replaced by the Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015).

The purpose of the COMAH Regulations is to lay down rules for the prevention of major accidents involving dangerous substances, and to seek to limit as far as possible the consequences for human health and the environment of such accidents, with the overall objective of providing a high level of protection in a consistent and effective manner. The intention is to achieve this through tiered controls on the operators of the establishments subject to the regulations - the larger the quantities of dangerous substances present at an establishment, the more onerous the duties on the operator (defined and listed as lower and upper tier sites).

There is currently one Lower Tier Establishment SEVESO Site located within Dublin Airport Plan Area[18], namely CLH Aviation on Corballis Road. CLH Aviation manages the fuel storage terminal at Dublin Airport.

4.6.5 Existing Problems

Noise interactions with human health present an existing conflict. This conflict has been mitigated by various means through the Draft Plan and the existing planning framework. The planning framework contributes towards the management of noise, including relating to Noise Zones that take into account best available scientific knowledge and most up to date policy guidance.

[17] The inner and outer Public Safety Zones relate to an individual risk of fatality of 1 in 100,000 per year and 1 in one million per year, respectively. (Source:http://www.dttas.ie/aviation/publications/english/erm-public-safety-zones-report).

[18] HSA; Notified Seveso Establishments (February 2019) (http://www.hsa.ie/eng/Your_Industry/Chemicals/Legislation_Enforcement/COMAH/List_of_Establishments/)

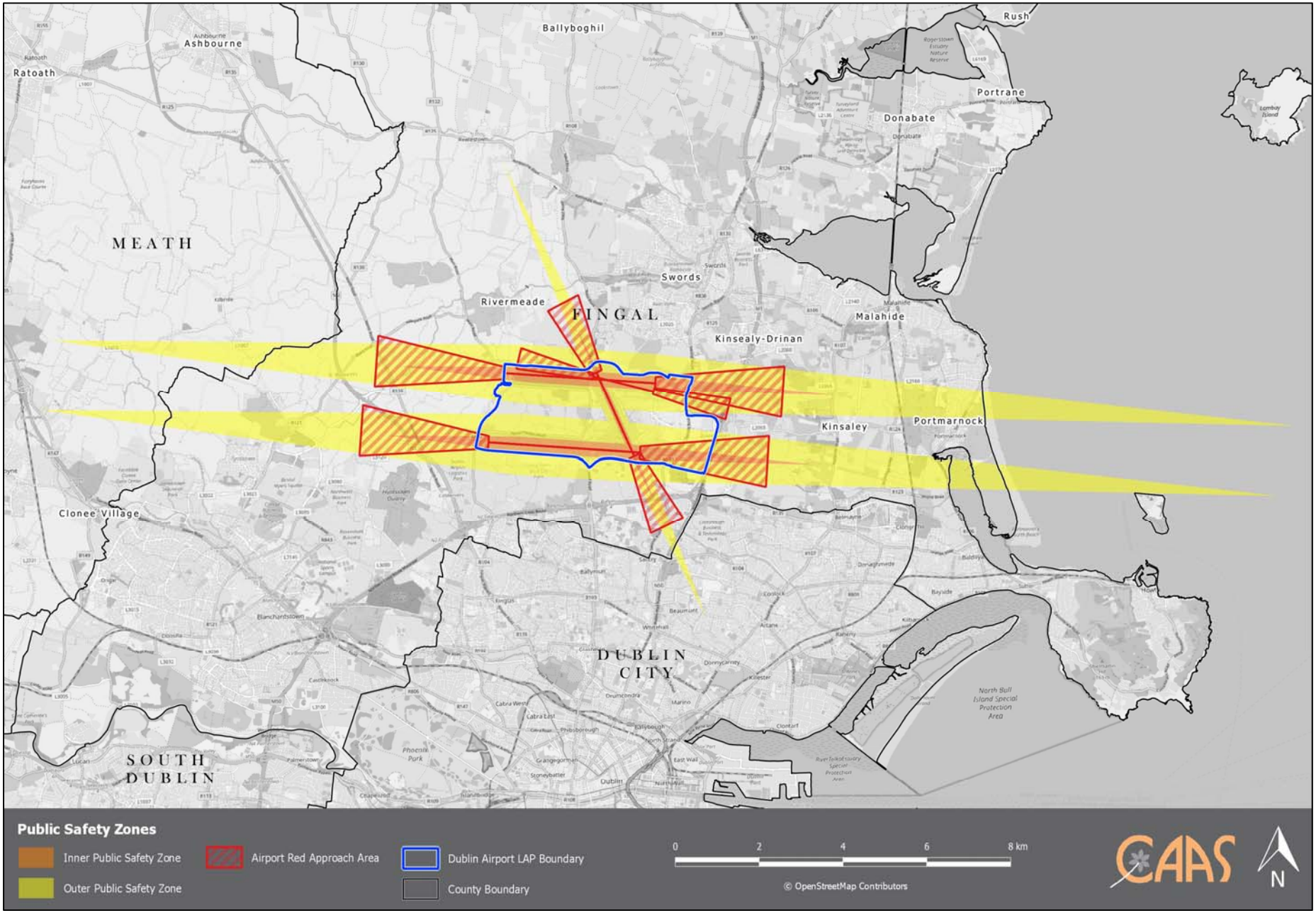

Figure 4.5 Public Safety Zones

4.7 Soil

4.7.1 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. Soils in any area are the result of the interaction of various factors, such as parent material, climate, vegetation and human action.

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

The EPA[19] has identified that the main soil quality pressures in Ireland relate to surface sealing (urbanisation) and human activity related to degradation through poor (or inappropriate) land management practices. However, in Ireland, the overall area of artificial surfaces remains low compared with that in other EU Member States.

The availability of soil data has increased over the last few years, due to establishment of a national soil map as part of the EPA-funded Irish Soil Information System Project, published in 2014.

4.7.2 Soil types

The majority of the Plan area (as shown on Figure 4.6) is covered by urban soils that have been disturbed, transported or manipulated by human activity in the urban environment and are often overlain by a non-agricultural, man-made surface layer. Urban soils have a combination of characteristics that differ from natural soils. These characteristics are due to alterations in both physical and chemical soil properties that cause long-term deviation from the natural state.

Other soils within or adjacent to the Plan area include luvisols[20], surface water gleys[21], and alluvial soils[22].

4.7.3 County Geological Sites

Provisions of the Fingal Development Plan contribute towards the protection of 21 County Geological Sites that were identified by a 2007 audit.

There are no such sites within the Airport Plan area and the closest are: Feltrim Quarry (c. 3.5 km to the east); Huntstown Quarry (c. 5 km to the west); and Glasnevin Cemetery (c. 5 km to the south).

4.7.4 Contaminated Soil

As is the case with other historically developed areas across the country, there is potential for contamination at local sites within the Plan area, especially where land uses occurred in the past in the absence of the high standards of today's environmental protection legislation. Contaminating substances could include those arising from unmanaged fuelling or de-icing activities.

In the absence of mitigation, contaminated materials have the potential to adversely impact upon human health, water quality and habitats and species.

There are two historic landfills identified within the Plan area: at Sandyhill in the west of the Plan area (where a waste licence was previously issued for a waste transfer station); and adjacent to Castlemote House in the north east of the Plan area. There are also a number of historic landfills identified in the wider area that are potential sources of contaminants.

Much of the Plan area is underlain by carboniferous limestone till subsoils and

[19] EPA: *Ireland's Environment: An Assessment 2016*

[20] Luvisol soils are generally fertile, widely used for agriculture and associated with significant accumulation of clay.

[21] Gleys are deep poorly drained mineral soils that can often be seasonally water logged.

[22] Alluvial soils are associated with alluvial (clay, silt or sand) river deposits.

geological formations and there is a range of groundwater vulnerability[23] ratings across the site (from "extreme – rock at or near surface or karst" to "extreme" to "high" to "moderate" to "low"). Vulnerability at the two historic landfills within the Plan area is rated as "high" or "extreme" (see Figure 4.11).

As is provided for by the Fingal Development Plan, the highest standards of remediation[24], and where appropriate to consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land.

4.7.5 Existing Problems

Legislative objectives governing soil were not identified as being conflicted with.

[23] Groundwater Vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated by human activities. Groundwater vulnerability maps are based on the type and thicknesses of subsoils and the presence of karst or limestone features. Groundwater is most at risk where the subsoils are absent or thin and, in areas of karstic limestone.

[24] Including as relevant those set out in the EPA's 2013 "Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites" and 2007 "Code of Practice: Environmental Risk Assessment for Unregulated Waste Disposal Sites"

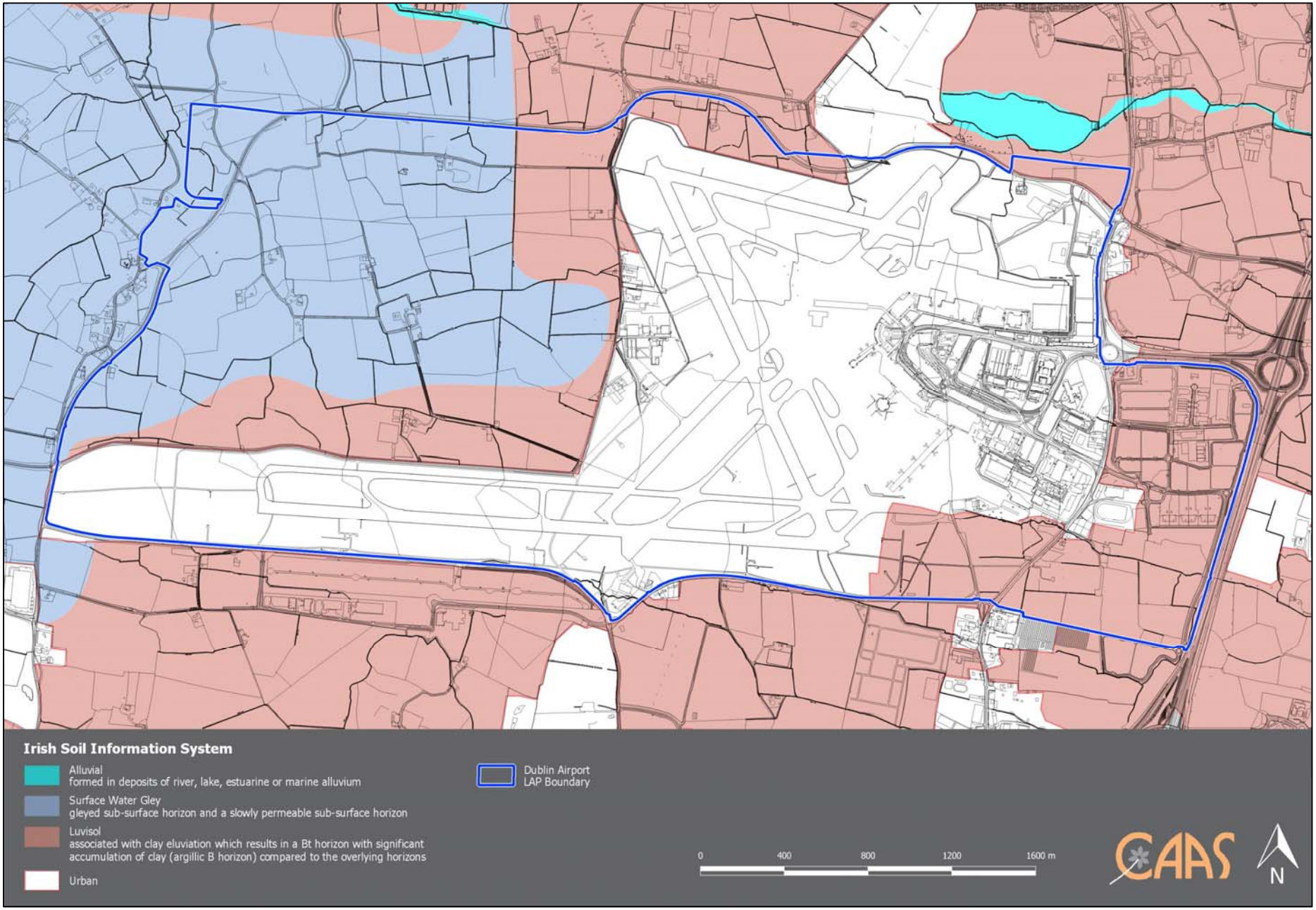

Figure 4.6 Soil types within Dublin Airport Plan area

4.8 Water

4.8.1 Water Framework Directive

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD requires that all Member States implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving *good status*. 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.*

Article 4 of the WFD sets out various exemptions for deterioration in status caused as a result of certain physical modifications to water bodies. This is provided: all practicable mitigation measures are taken; there are reasons of overriding public interest or the benefits to human health, safety or sustainable development outweigh the benefits in achieving the WFD objective; there are no better alternatives; and the reasons for the physical modification are explained in the River Basin Management Plan (RBMP).

The EU's Common Implementation Strategy Guidance Documents No. 20 and 36 provide guidance on exemptions to the environmental objectives of the WFD.

For the purpose of assessment, reporting and management, water is divided into groundwater, rivers, lakes, estuarine waters and coastal waters which are in turn divided into specific, clearly defined water bodies.

4.8.2 Zone of Influence

The Zone of Influence of the Plan beyond the Dublin Airport Plan area with respect to impacts upon waters can be estimated to be all bodies of groundwater and all surface waters downstream areas of catchments[25] which drain the Plan area.

4.8.3 Surface Water Drainage

Dublin Airport is located within the Eastern River Basin District. Most of the LAP lands are located within the Mayne catchment that drains to Bull Island while a portion of the western half of the LAP lands are located within the Broadmeadow catchment that drains to Malahide Estuary.

4.8.4 Surface Water Status[26]

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 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 Cuckoo Stream rises in the east of the site to the south of Terminal 2 and flows in an easterly direction until it confluences with the Mayne River to the north of Parkside housing estate. The Mayne River discharges to the Mayne Estuary (Baldoyle Estuary/Portmarnock and associated Baldoyle Estuary Nature Reserve). Both the Cuckoo Stream[27] and the

[25] A catchment is an area of land contributing to a waterbody, with all the water ultimately running off to a single outlet. The WFD requires water quality management to be based on natural river catchments i.e. by reference to the natural, environmental unit rather than by reference to administrative or legal boundaries, which often fragment river catchments.

[26] Information contained in this section is taken from the EPA's www.catchments.ie website, including the 2018 Liffey Catchment Assessment 2010-2015.

[27] The daa are licensed by Fingal County Council (Trade Effluent Discharge License WPS/F/339) to discharge trade effluent to sewers from a storm water pollution control facility at the airport. A review of the analytical results

Mayne River are identified by the EPA as being of *poor* status due to significant pressures from diffuse urban sources[28]. The status of the Mayne Estuary (Baldoyle Estuary/Portmarnock) is currently *unassigned*[29].

A number of streams rise in the north west of the LAP lands that flow into the Ward River. The Ward River and its tributaries flow into the Broadmeadow River that discharges to the Broadmeadow Estuary near Swords. The tributaries at the airport and the upper stretch of the Ward River are identified as being of *good* status; however, the lower stretch of the Ward River is identified as being *poor* status. Broadmeadow Estuary is identified as being of *moderate* status (this water body is impacted by excess nutrients from the discharge from the Swords waste water treatment plant, and from the upstream catchment areas of the Broadmeadow and Ward Rivers).

The Sluice River and its tributaries (Forest Little Stream, Wad Stream and Kealy's Stream) rise close to the north-eastern boundary of the LAP. The Sluice River discharges to Baldoyle Estuary/Portmarnock. The status of the Sluice River, its tributaries and Baldoyle Estuary/Portmarnock is currently *unassigned*.

The Santry River rises close to the Horizon Logistics Park to the immediate south of the Plan area. From its source to Coolock, the Santry River is identified as being of *poor* status, downstream of which the current status is *unassigned*. The Santry River is one of eight designated heavily modified water bodies in the Liffey and Dublin Bay Catchment, due to extensive flood protection. The Santry River drains to transitional waters at North Bull Island, Dublin Bay. The status of transitional waters at North Bull Island, Dublin Bay is currently *unassigned*.

Coastal waters in the Irish Sea to the west of Fingal are either generally identified as being of *good status* or they are identified as being *unassigned*. The Malahide Bay coastal water is identified as being of *moderate status*, impacted by excess nutrients from the Broadmeadow Estuary and the Malahide waste water treatment plant. Improvements are planned and the expected date for meeting the objective of the WFD is estimated for 2027.

WFD surface water status for the wider Fingal area is mapped on Figure 4.7 while surface water status for the Plan area and immediate surrounds is mapped on Figure 4.8.

4.8.5 Groundwater Status

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.

For groundwater bodies, the approach to classification is different to 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.

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submitted by the daa in fulfilment of their discharge compliance conditions for the years 2016 and 2017 was undertaken by Fingal County Council. Analysis of 2018 data is limited to date.

In 2017, 12 samples were taken. The licence limit for Biological Oxygen Demand (BOD) were exceeded on two occasions and Chemical Oxygen Demand (COD) was exceed on one occasion. The reason for the exceedance is most likely to relate de-icing of pavements and aircraft.

In 2016, 14 samples were taken. Two samples exceeded the BOD and COD limits in the licence. The reasons for these exceedances is also most likely to be de-icing.

The frequency of sampling is not less than weekly during de-icing discharges when the divert mode is in operation. The daa have over the years implemented management practices to minimise the discharge of de-icing fluids to the surface water system by means of glycol recovery processes at the point of use on the aircraft stands. It should be noted that the diversion of the Cuckoo Stream during de-icing events is designed to protect the waters downstream of the airport.

[28] Diffuse urban pressures, caused by misconnections, leaking sewers, and run-off from paved and unpaved areas, such industrial estates, major road networks, and car parks for example, have been identified as a significant pressure in 17 river water bodies from Dublin City and major towns. The significant impacts are a combination of enrichment due to upward trends in orthophosphate and spikes in ammonia concentrations.

[29] There is a data gap relating to WFD surface water status data for certain waterbodies as ecological status for these water bodies is currently not identified; these water bodies are identified as unassigned when it comes to WFD status 2013-2015.

The WFD status (2010-2015) for most of the groundwater underlying the Dublin Airport Plan area is identified as being of *good status*, meeting the objectives of the WFD. The groundwater underlying the north eastern part of the Plan area is identified as *poor*. The significant pressures on this groundwater body relate to levels of Trichloroethylene (an industrial solvent).

Groundwater status within the Plan area is shown on Figure 4.9.

4.8.6 Groundwater Productivity and Vulnerability

The Geological Survey of Ireland (GSI) rates aquifers according to both their vulnerability to pollution and their productivity. An aquifer is an underground body of water-bearing rock or unconsolidated materials (gravel or sand) from which groundwater can be extracted in useful amounts.

Groundwater Vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated by human activities. Groundwater vulnerability maps are based on the type and thicknesses of subsoils and the presence of karst or limestone features. Groundwater is most at risk where the subsoils are absent or thin and, in areas of karstic limestone. Much of the Plan area is underlain by carboniferous limestone till subsoils and geological formations and there is a range of groundwater vulnerability ratings across the site (from *extreme – rock at or near surface or karst* to *extreme* to *high* to *moderate* to *low*). Aquifer vulnerability is mapped on Figure 4.10.

The GSI also rates aquifers based on the hydrogeological characteristics and on the value of the groundwater resource. Ireland's entire land surface is divided into nine aquifer categories. Aquifer productivity rates the value of the groundwater resource. The south east of the Plan area is underlain by an aquifer (a body of rock containing groundwater) that is classified as a *Poor Bedrock Aquifer, Generally Unproductive except in Local Zones*, while the north west of the Plan area is underlain by an aquifer that is classified as a *Locally Important Bedrock Aquifer*, *Moderately Productive only in Local Zones.* Aquifer productivity is mapped on Figure 4.11.

4.8.7 WFD Registers 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 which 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: 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 fertilizers, 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).

Groundwater underlying all areas within the country is included on the RPA for Groundwater Drinking Water.

Broadmeadow Estuary (downstream, c. 3 km to the northeast of the plan area) is included on the RPA for Nutrient Sensitive Waters.

An area off the coast of Malahide (to the east of the plan area) is identified as an RPA for Shellfish Areas.

For more details on Entries to the RPAs please see Section 4.5.6.

4.8.8 Flooding

A Strategic Flood Risk Assessment (SFRA) is being undertaken alongside the Draft Plan. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Office of Public Works and Department of Environment, Heritage and Local Government, 2009).

The preparation of the Draft Plan, SEA and SFRA has taken place concurrently and the findings of the SFRA have informed both the Draft Plan and the SEA.

The SFRA review of the historical event data and predictive flood information has highlighted a number of sources of potential flood risk to the area.

Sources of flood risk within the Plan area include the Cuckoo Stream, which drains part of

the south of the Plan area, and the Forrest Little Stream, which drains part of the north-west of the Plan area.

Flood zones within the Plan area that have been delineated by the SFRA are mapped on Figure 4.12. Flood Zone A is where the probability of flooding from rivers/streams at the airport is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding) while is Flood Zone B is where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 year and 0.5% or 1 in 200 for coastal flooding). Flood Zone C (which covers all other areas that are not shown zones A or B on Figure 4.12) is where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding).

Please refer to SFRA report for more details on flooding issues.

4.8.9 Existing Problems

Subject to exemptions provided for by Article 4 of the WFD, based on available water data, certain surface and groundwater bodies will need improvement in order to comply with the objectives of the WFD.

There are a number of areas within the Plan area that are at elevated levels of flood risk.

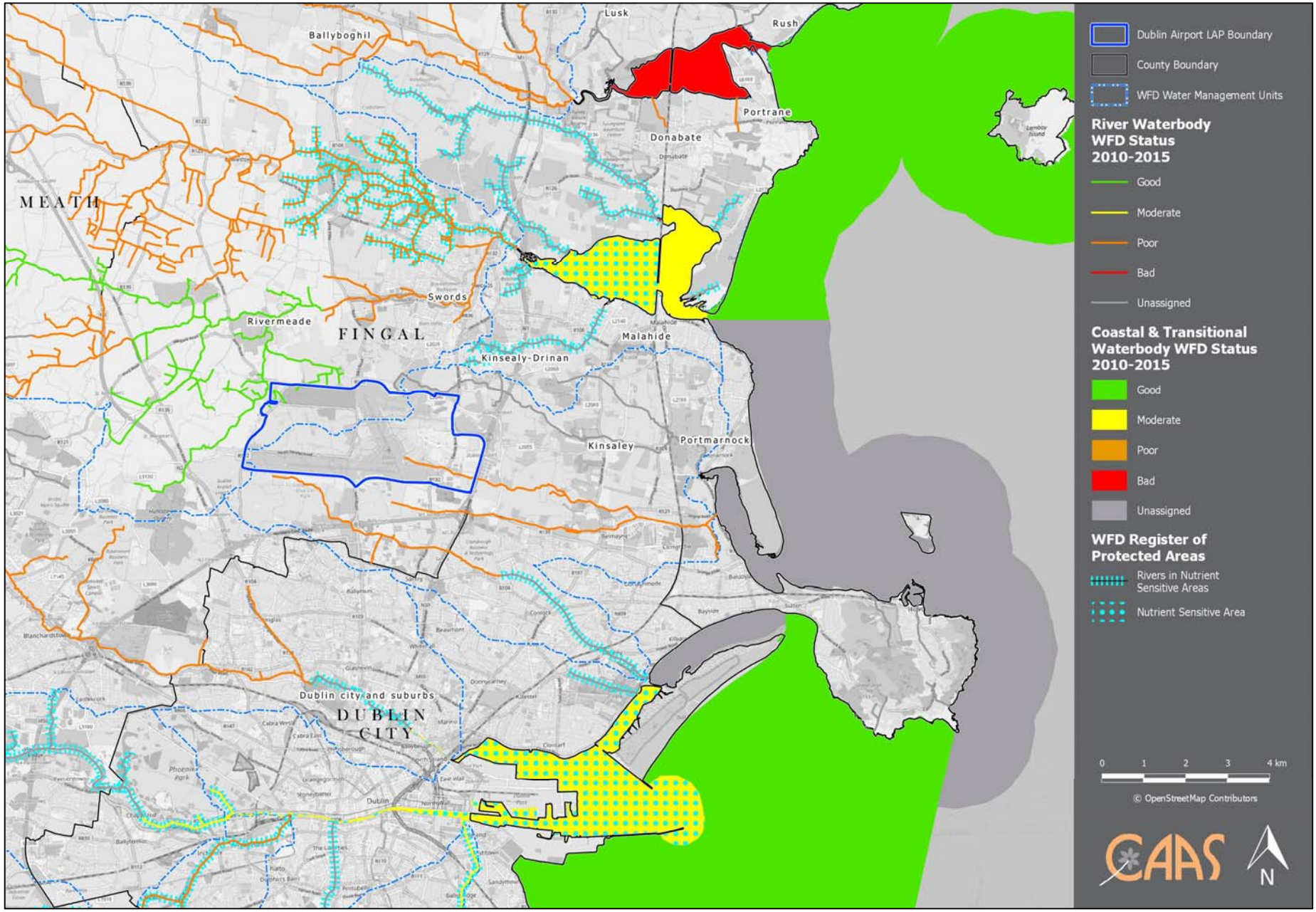

Figure 4.7 Surface Water Status in the wider area

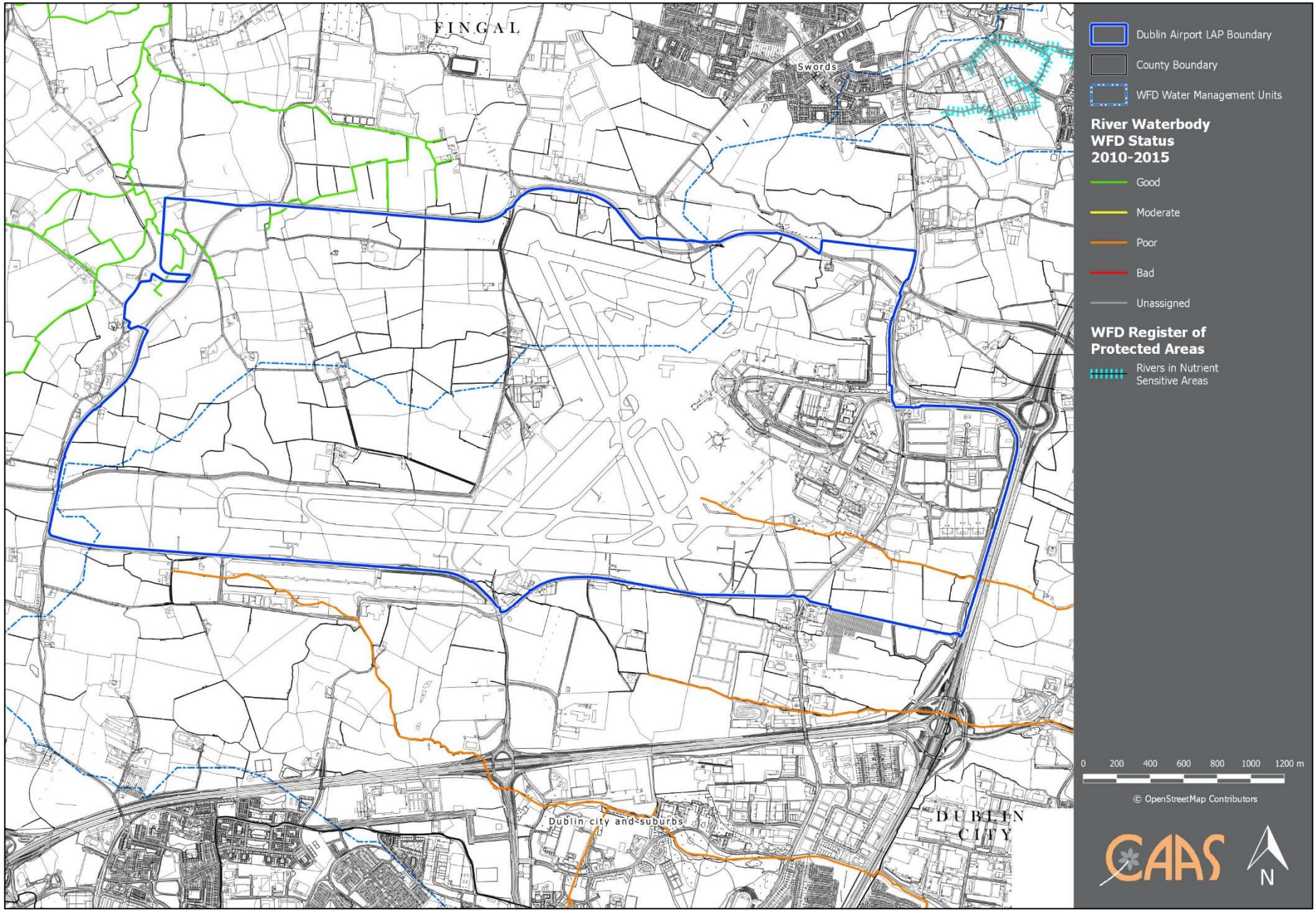

Figure 4.8 Surface Water Status within Dublin Airport Plan area

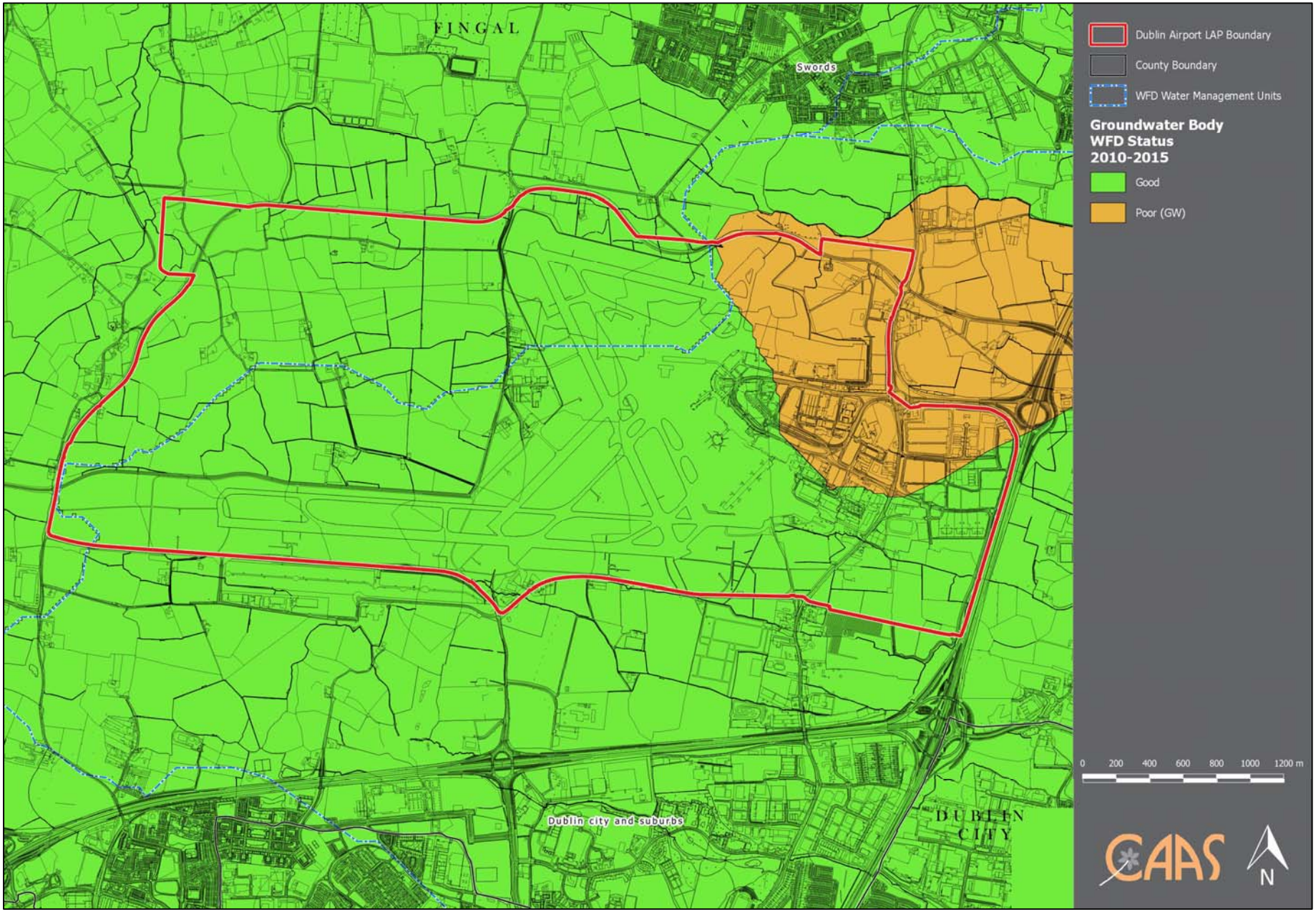

Figure 4.9 Groundwater Status within Dublin Airport Plan area

Figure 4.10 Aquifer Vulnerability within Dublin Airport Plan Area

Figure 4.11 Aquifer Productivity within Dublin Airport Plan Area

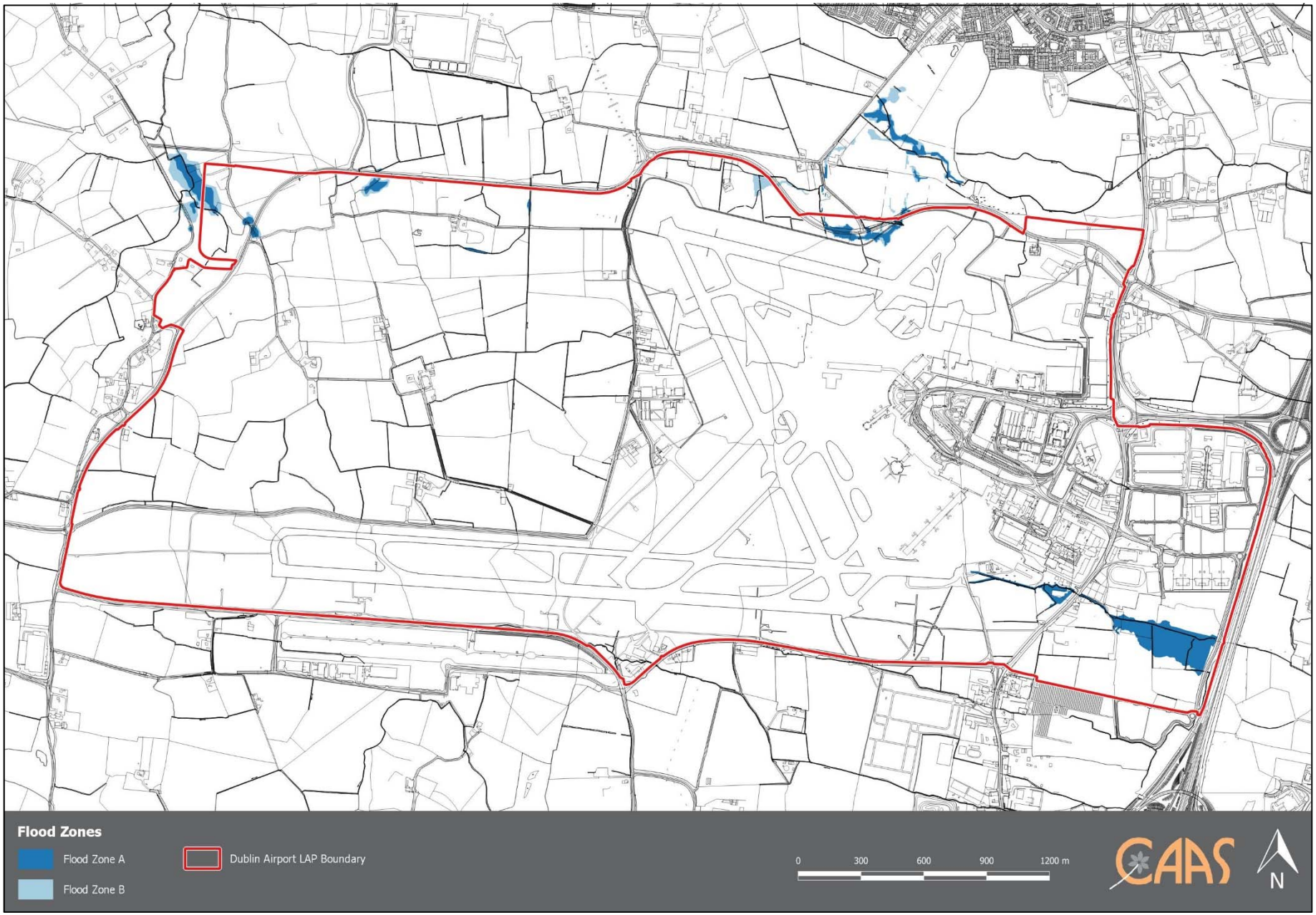

Figure 4.12 SFRA Flood Zones within the Plan Area

4.9 Air and Climatic Factors

4.9.1 Climatic Factors

Total emissions of greenhouse gases by humans come from various sectors including transport, agriculture, energy industries, manufacturing combustion, industrial processes, residential developments, commercial services developments, waste management processes and Fluorinated gases equipment (such as refrigeration and fire protection systems). With regard to emissions from aviation, the European Commission has identified that Aviation is one of the fastest-growing sources of greenhouse gas emissions. Direct emissions from aviation[30] account for about 3% of the EU's total greenhouse gas emissions and more than 2% of global emissions.

There is a wide and detailed framework for reducing and limiting increases in emissions from the various contributory sectors. At EU level, these include Directive's on the EU Emissions Trading System, Effort Sharing, Carbon Capture and Storage, Transport/Alternative Fuels, Fluorinated Gases and Land Use (Forests and Agriculture).

The key issue relating to the Plan in the context of climatic factors relates to greenhouse gas emissions arising from transport – both land and air. Interactions with climatic factors are also present with other environmental components including flooding (see Section 4.8.8). The assessment – and the description of the baseline provided below – therefore largely concentrates on the transport sector and associated issues, such as alternative fuels and energy/fuel efficiency.

4.9.1.1 Emissions Targets

Greenhouse gases are the subject of agreements at international, EU and national level. The United Nations Framework on Climate Change was adopted at the Rio Convention in 1992. The objective of the Framework seeks to *"stabilise greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system"*. A Conference of Parties (COP) is held annually in order to review the Convention's implementation. At the COP in Paris in 2015 (COP21), the parties reached a legally binding and universal agreement to limit global warming to 1.5°C above pre-industrial levels.

The ***National Policy Position on Climate Action and Low Carbon Development 2014*** adopted a vision of reducing CO_2 emissions in Ireland by at least 80% by 2050 (compared to 1990 levels) from the electricity generation, built environment and transport sectors. The ***Climate Action and Low Carbon Development Act 2015*** provides the statutory basis for the national objective laid out in the National Policy Position; and the Climate Change Advisory Council, an independent advisory body tasked with assessing and advising on how Ireland is making the transition to a low carbon, climate resilient and environmentally sustainable economy by 2050 in line with the 2015 Act.

Ireland's 2020 target is to achieve a 20% reduction of ***non-Emissions Trading Scheme*** (non-ETS) sector emissions (i.e. agriculture, transport[31], residential, commercial, non-energy intensive industry, and waste) on 2005 levels with annual binding limits set for each year over the period 2013-2020. New 2030 targets for EU Member States were adopted by the European Council in 2018. Ireland's 2030 target under the Effort Sharing Regulation is a 30% reduction of emissions compared to 2005 levels by 2030. There will be binding annual limits over the 2021-2030 period to meet that target.

In response to international objectives to reduce carbon emissions, the UN's International Civil Aviation Organisation (ICAO) adopted the following goal: "Limit or reduce the impact of aviation greenhouse gas emissions on the global climate". The global aviation industry, acting through ICAO, committed itself in its 2013 Resolution on Climate Change to adopting a 'basket of measures' consistent with that overarching goal:

- More innovative technologies, with the recommendation of a new CO_2 emissions standard for aircraft;
- More efficient operational procedures, including the adoption of a Global Air Navigation Plan;

[30] Information from the European Commission (2019) https://ec.europa.eu/clima/policies/transport/aviation_en

[31] Not including aviation but including combustion of fuel used in road, rail, navigation, domestic aviation and pipeline gas transport.

- The use of sustainable alternative fuels, including biofuels; and
- EU Emissions Trading Scheme (EU ETS) which includes CO_2 emissions from aviation.

4.9.1.2 EU Emissions Trading Scheme

Emissions' trading is a market-based system to reduce the emissions of climate-damaging greenhouse gases. It is based on the principle of a 'Cap and Trade' system: the cap makes sure that CO_2 becomes a product and, thus, CO_2 is valued at a price, which is determined by the supply and demand at the (trading) market.

Since the start of 2012, emissions from all flights from, to and within the European Economic Area are included in the ***EU Emissions Trading System*** (ETS). The EU ETS is a cornerstone of the EU's policy to combat climate change and it is a key tool for reducing industrial greenhouse gas emissions cost-effectively. The first - and still by far the biggest - international system for trading greenhouse gas emission allowances, the EU ETS covers more than 11,000 power stations and industrial plants in 31 countries, as well as airlines. The legislation[32] including aviation in the EU ETS was adopted in 2008 and applies to EU and non-EU airlines alike. Airlines are required to monitor, report and verify their emissions and to surrender allowances against those emissions. Airlines receive tradable allowances covering a certain level of emissions from their flights per year and must purchase allowances to cover any shortfall between their allocated sum of free emissions allowances and their actual emissions, as reported annually.

The Department of Communications, Climate Action and Environment and the Department of Transport, Tourism and Sport work collaboratively to address the environmental impact of aviation. Both Departments are fully committed to pursuing an agenda in favour of reducing emissions and have worked to ensure that Ireland makes an informed contribution to discussions relating to development of the EU ETS.

To support the planned development of a global ***Carbon Offsetting and Reduction Scheme for International Aviation*** (CORSIA) by the ICAO, the EU agreed in 2014 to limit the scope of aviation in the EU ETS to flights within the EEA. CORSIA will come into effect in 2021 and aims to stabilise global aviation emissions at 2020 levels by requiring airlines to offset any emissions growth after 2020 by purchasing eligible emission units generated by projects that reduce emissions in other sectors. As Ireland is a member of ICAO, Irish aircraft operators will have to offset any emissions growth after 2020 by purchasing eligible emission units, i.e. pay full carbon price.

4.9.1.3 Emissions Inventories and Projections

Ireland's ***Final Greenhouse Gas Emissions 1990-2017*** (EPA, 2019) details provisional estimates of greenhouse gas emissions for the period 1990-2017. For 2017, total national greenhouse gas emissions are estimated to be 60.74 million tonnes carbon dioxide equivalent (Mt CO_2eq). This is 0.9% lower (0.53 Mt CO_2eq) than emissions in 2016. Greenhouse gas emissions from the transport[33] sector decreased by 2.4% or 0.29 Mt CO_2eq in 2017. This is the first year of decreased emissions after four successive years of increases in transport emissions. In road transport in 2017, petrol use continued to decrease by 9.8% while diesel use increased by 0.4% and biofuels use increased by 35.6%.

Ireland's Greenhouse Gas Emission Projections 2018-2040 (EPA, 2019) provides an assessment of Ireland's progress towards achieving its emission reduction targets out to 2020 and 2030 set under the EU Effort Sharing Decision (No. 406/2009/EC) and Effort Sharing Regulation (2018/842) for the years 2013-2020 and a longer-term assessment based on current projections. As identified under "Emissions Targets" above, in terms of 2030 reduction targets, the EU Effort Sharing Regulation requires that Ireland reduce its non-ETS emissions by 30% on 2005 levels by 2030. The latest projections indicate that Ireland will exceed the carbon budget over the period 2021-2030 by 52-67 Mt CO_2 equivalent with the gap potentially narrowing to 7-22 Mt CO_2 equivalent if both the ETS and Land Use, Land Use Change and Forestry flexibilities described in the Regulation are fully utilised. Key Insights identified by the publication are that:

[32] Directive 2008/101/EC of the European Parliament and of the Council of 19 November 2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community.

[33] Not including aviation but including combustion of fuel used in road, rail, navigation, domestic aviation and pipeline gas transport.

- There is a long-term projected decrease in greenhouse gas emissions as a result of inclusion of new climate mitigation policies and measures that formed part of the National Development Plan, which was published in 2018. This is evident in the With Additional Measures scenario, which assumes full implementation of the programmes, policies and measures included in the National Development Plan.
- Fossil fuels such as coal, peat and gas continue to be key contributors to emissions from the power generation sector. However a significant reduction in emissions over the longer term is projected as a result of the expansion of renewables (e.g. wind), assumed to reach 41-54% by 2030, with a move away from coal and peat.
- A growth in emissions from the transport sector continues to be projected which is largely attributed to fuel consumption from diesel cars and diesel freight. A decrease in emissions over the longer term, most notably in the With Additional Measures scenario, is largely attributed to assumed accelerated deployment of 500,000 electric vehicles and the impact of greater biofuel uptake.
- Agriculture emissions are projected to continue to grow steadily over the period, which is mainly a result of an increase in animal numbers particularly for the dairy herd.
- The implementation of additional energy efficiency measures included in the National Development Plan will see a significant reduction in emissions in the residential, commercial/public services and manufacturing sectors over the projected period.
- The projections reflect plans to bring Ireland onto a lower carbon trajectory in the longer term. However, Ireland still faces significant challenges in meeting EU 2030 reduction targets in the non-ETS sector and national 2050 reduction targets in the electricity generation, built environment and transport sectors. Progress in achieving targets is dependent on the level of implementation of current and future plans.
- The 2019 emission projections do not consider the impact of new policies and measures that will be included in the forthcoming Government Climate Plan. It is anticipated that emission projections prepared later in 2019 to inform the preparation of Ireland's final National Energy and Climate Plan (due by the end of December 2019) will include the additional impact of the Government Climate Plan.

A strong growth in emissions projections from the transport sector is attributed to a rise in fuel consumption particularly for diesel cars and diesel freight up to 2025. A projected accelerated deployment of electric vehicles between 2025 and 2030 does however result in a projected decline in emissions during this period.

With regard to emissions from aviation, the European Commission has identified that Aviation is one of the fastest-growing sources of greenhouse gas emissions. Direct emissions from aviation[34] account for about 3% of the EU's total greenhouse gas emissions and more than 2% of global emissions.

Ireland's 2019 Action Plan for Aviation Emissions Reduction identifies that the figure for CO_2 emissions associated with Domestic aviation in Ireland was 9.8 kt of CO_2 in 2016. This is about 0.1% of overall transport emissions in Ireland. This figure has been reducing steadily since the mid-2000s.

Kerosene jet fuel sold at Irish Airports for International Aviation accounted for almost 21% of all energy used in the transport sector in Ireland (in 2016). The level of aviation emissions peaked in 2007, with 3,083 kt of CO_2 emitted by Irish airlines following a steady increase from 1996. Emissions for the most recent year for which data is available in the 2019 Action Plan shows that aviation emissions stood at 2251 kt in 2014.

The Action Plan identifies that aviation emissions' percentage share of overall transport emissions in Ireland has remained relatively constant since 1990, at around 20%. The anticipated increase in emissions is expected to be less than the actual volume of air traffic due to improving aircraft technology and the significant increase in the acquisition by Irish operators of newer and more environmentally friendly aircraft. The Action Plan identifies that overall, without any intervention, it is expected that emissions will grow significantly in the future.

Under the baseline assumptions of traffic growth and fleet rollover with 2010 technology, the Action Plan identifies that CO_2 emissions would almost double for flights departing European airports. Modelling the impact of improved aircraft technology for the scenario with implemented measures indicates an overall 8.5% reduction of fuel consumption and CO_2 emissions in 2040 compared to the baseline. Whilst the data to model the benefits of Air Traffic Management improvements and sustainable alternative fuels may be less robust, they are nevertheless valuable contributions to reduce emissions further. Overall fuel efficiency, including the effects of new aircraft types and Air Traffic Management-related measures, is projected to improve by 24% between 2010 and 2040. Further, sustainable

[34] Information from the European Commission (2019) https://ec.europa.eu/clima/policies/transport/aviation_en

aviation fuels have the potential to reduce CO_2 emissions significantly on a lifecycle basis. Market-based measures are also expected to help to reach the goal of carbon-neutral growth.

4.9.1.4 Responses

The Climate Action Plan is an all of Government plan to tackle climate change and bring about a step change in Irelands climate ambition over the coming years. The plan sets out an ambitious course of action over the coming years to address the diverse and wide-ranging impacts climate disruption is having on Ireland's environment, society, economic and natural resources.

The Climate Action Plan sets out clear 2030 targets for each sector with the ultimate objective of achieving a transition to a competitive, low-carbon, climate-resilient, and environmentally sustainable society and economy by 2050. The Climate Action Plan outlines the current state of play across key sectors, many of which are relevant to the Dublin Airport LAP including Electricity, Transport, Built Environment, and Industry and charts a course towards ambitious decarbonisation targets. Measures set out in the Climate Action Plan that the Local Authority has a role in and which can be supported in the LAP include the following:

- **Transport**: Measures to deliver targets, which include modal shift in favour of sustainable modes by providing good public transport, cycling and walking infrastructure, so people, are less reliant on their cars. Of relevance to the LAP area are major sustainable-mobility projects including MetroLink and the BusConnects Programme and walking and cycling routes that will form part of a comprehensive cycling and walking network for the metropolitan area, with a particular emphasis on safety of cyclists and expanded greenways.
- **Transport and Land Use**: Also relevant to the LAP is the promotion of compact growth and greater integration of policies for land use and transport planning, which will reduce the demand for commuter travel and support more efficient patterns of development and travel.
- **Electricity**: increase reliance on renewables and micro-generation.
- **Buildings**: improved energy efficiency in buildings and heating including increased use of district heating systems and heat pumps.
- **Waste and Circular Economy**: reduction in plastics, food waste, and resource use.

Regarding emissions from air travel, the Climate Action Plan identifies that:

> "Since 2012, greenhouse gas emissions associated with flights operating in the European Economic Area (EEA), including domestic flights as well as those to and from third countries, are covered by the EU ETS. Airlines are required to monitor, report and verify their emissions, and to surrender allowances against those emissions. Airlines receive tradable allowances covering a certain level of emissions from their flights per year and must purchase allowances to cover any shortfall between their allocated sum of free emissions allowances and their actual emissions, as reported annually.
>
> To support the planned development of a global Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) by the International Civil Aviation Organisation (ICAO), the EU agreed in 2014 to limit the scope of aviation in the EU ETS to flights within the EEA. CORSIA will come into effect in 2021 and aims to stabilise global aviation emissions at 2020 levels by requiring airlines to offset any emissions growth after 2020 by purchasing eligible emission units generated by projects that reduce emissions in other sectors. As Ireland is a member of ICAO, Irish aircraft operators will have to offset any emissions growth after 2020 by purchasing eligible emission units, i.e. pay full carbon price."

Climate adaptation is a change in natural or human systems in response to the impacts of climate change. These changes moderate harm or exploit beneficial opportunities and can be in response to actual or expected impacts. The ***National Adaptation Framework 2018*** (Department of Communications, Climate Action and Environment), sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change and to avail of positive impacts. The National Adaptation Framework outlines a whole of government and society approach to climate adaptation. Under the Framework, a number of Government Departments will be required to prepare sectoral adaptation plans in relation to a priority area that they are responsible for.

Climate mitigation describes action to reduce the likelihood of climate change occurring or reduce the impact if it does occur. This can include reducing the causes of climate change (e.g. emissions of greenhouse gases) as well as reducing future risks associated with climate change. The first ***National Mitigation Plan 2017***, prepared by the Department of Communications, Climate Action and Environment, represents an initial step to set Ireland on a pathway to achieve the level of decarbonisation required. It is a whole-of-Government Plan, reflecting in particular the central roles of the key Ministers responsible for the sectors covered by the Plan – Transport, Electricity Generation, the Built Environment, and Agriculture, as well as drawing on the

perspectives and responsibilities of a range of other Government Departments. Regarding emissions from air travel, the National Mitigation Plan identifies that:

> "Emissions from international maritime transport are being tackled as part of a global approach led by the International Maritime Organization (IMO) and emissions from airlines within the European Economic Area (EEA) are part of the ETS, with other international emissions the focus of a recent International Civil Aviation Organisation (ICAO) agreement. The focus of approaches set out in this chapter is on efforts to reduce emissions from the remaining elements of the transport sector, under the non-ETS sector.
>
> Measure T12 – Aviation Efficiency
> The Irish and UK National Supervisory Authorities created the UK-Ireland Functional Airspace Block in 2008 to help reduce fragmentation of air navigation service provision across Europe and improve efficiencies. In the first four years of the Functional Airspace Block operation, it delivered over €70m of savings to customers, including 232,000 tonnes of CO_2 from 73,000 tonnes of fuel. No actions required, savings continue to be delivered."

Fingal County Council has joined together with Dublin's three other local authorities to develop ***Climate Change Action Plans*** as a collaborative response to the impact that climate change is having, and will continue to have, on the Dublin Region and its citizens. These Plans are scheduled to be adopted in 2019. One of the actions in the Draft Fingal Climate Change Action Plan is *"To plan spatial development patterns which reduce transport demand and encourage low carbon transport modes e.g. consolidation of the existing communities already served by public transport and close to established social and community infrastructure and the creation of new communities serviced by high quality transport links"* and this action is supported in the LAP.

Ireland's 2019 Action Plan for Aviation Emissions Reduction reinforces Ireland's commitment to the development of a sustainable, resource efficient aviation sector and identifies various actions at both EU and National level that have been, are being and will be taken in order to reduce aviation emissions.

At *European level*, the Action Plan identifies that governments and industry across the region have invested heavily to understand and mitigate the environmental impacts of aviation, initially focussing on noise, then adding air quality and more recently the emissions affecting the global climate and CO_2 from fuel burn in particular. EU measures cited include:

- Aircraft related technology including fuel efficient aircraft, improved performance and versatility of new rotorcraft concepts, innovative airframe structures and materials, radical engine architectures, systems and controls and consideration of how aircraft is managed at the end of their useful life;
- Alternative fuels including paraffinic biofuels;
- Improved Air Traffic Management; and
- Economic/Market Based Measures, including the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), as part of the EU ETS that includes 500 aircraft operators participating in the cap and trade approach to limit CO_2 emissions. The Action Plan identifies that *"a future world with a globally implemented CORSIA aimed at carbon neutral growth of international aviation would significantly reduce emissions"*.

At *National level*, the Action Plan provides examples of how the European level measures described above are being implemented in Ireland:

- Aircraft Related Technology - Ireland's registered airlines are fully committed to reducing emissions and noise through investments in "next generation" aircraft and engine technologies and the implementation of certain operational decisions to minimise the environmental impact of their operations. For example, Aer Lingus has entered into an agreement to lease eight A321NEO long range aircraft with the first deliveries starting in 2019 and Ryanair will have new Boeing 737-MAX-200 arriving in spring 2019. The daa is also focussing on the development of measures to promote the use of more energy efficient aircraft among its client airlines.
- Operational Improvements, including, for example "Point Merge", which has significantly reduced the need to put aircraft into traditional circular holding patterns and continues to provide fuel, emissions and time saving benefits to the Aircraft operators using Dublin Airport.
- By focusing on operational efficiency, the UK/Ireland Functional Airspace Block enables airspace users to utilise the optimum flight profiles for their aircraft, which in turn helps them to reduce their fuel costs and CO_2 emissions.
- Dublin is part of the Airport Council International's Airport Carbon Accreditation (ACA) scheme, which airports use to keep track of the impact of greenhouse gas emissions from airport-controlled activities. Dublin and Cork airports are certified at Level 2 (Reduction) of the scheme. Dublin Airport's footprint decreased from a baseline of 36,917 tonnes CO_2 to 29,720 tonnes CO_2, a decrease of 19% from 2011-2018.
- Dublin Airport intends to become carbon neutral under the Airport Carbon Accreditation Scheme by 2020 through the implementation of numerous energy saving construction and equipment replacement projects. Such initiatives align with EU energy efficiency and renewable energy regulatory requirements.
- Dublin Airport has maintained staff engagement in energy efficiency with initiatives such as "Take the Stairs Week" and "Water Week".
- Ireland will support and promote the production, storage and distribution of sustainably produced biofuels for use in aviation. Relative to fossil

fuels, sustainably produced biofuels result in a reduction in CO_2 emissions across their life cycle.
- The EU ETS is one of the key environmental policies introduced by the EU to reduce emissions of carbon dioxide and other greenhouse gases from sectors including aviation. To reduce administrative costs, each aircraft operator is administered by a single country. Ireland administers a significant portion of the total verified emissions from aviation in the European Economic Area. For example, in 2016 Ireland reported 17% of the total verified greenhouse gas emissions from the aviation sector in the EEA.

The daa has developed a Sustainability Strategy to communicate, implement and foster the principles of sustainability with a commitment to deliver sustainable growth that takes account of environmental factors which strives to:

- Minimise negative impacts on the environment;
- Consume as few resources as possible; and
- Communicate what is being done to staff, community and passengers.

To achieve the commitments of their Sustainability Strategy, the daa has implemented working groups in key environmental priority areas including carbon, energy, waste, water, environmental management and green procurement. Fingal County Council supports the ongoing implementation of this sustainability strategy through active participation in the Dublin Airport Environmental Working Group.

4.9.2 Air Quality and Health

Ambient air quality is an important environmental issue as it can interact with human health. Sources of emissions to air within and surrounding the LAP lands include the combustion engines of aircraft, aerosol-borne particulate matter from de-icing, fugitive emission of volatiles from fuelling and aircraft maintenance activities – as well as emissions from vehicular traffic using the road network that includes the M1 and M50 Motorways and the extensive parking and vehicular serving areas.

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

The principles to this European approach are set out in the Ambient Air Quality and Cleaner Air for Europe (CAFE) Directive (2008/50/EC) (which replaces the earlier Air Quality Framework Directive 1996 and the first, second and third *Daughter Directives*; the fourth *Daughter Directive* will be included in CAFE at a later stage).

In order to comply with the Directives mentioned above, the EPA measures the levels of a number of atmospheric pollutants. For the purposes of monitoring in Ireland, four zones are defined in the Air Quality Standards Regulations 2002 (SI No. 271 of 2002).

4.9.3 National Air Quality and Issues

The EPA's (2018) *Air Quality in Ireland 2017* identifies that:

- No levels above the EU limit value were recorded at any of the ambient air quality network monitoring sites in Ireland in 2017;
- The tighter World Health Organisation (WHO) guideline values were exceeded at a number of monitoring sites for particulate matter (PM_{10} and $PM_{2.5}$), ozone and NO_2; and
- 2017 dioxin survey shows that concentrations of dioxins and similar pollutants remain at a consistently low level in the Irish environment.

Air pollution from transport is dominated by NO_x emissions. Of these, NO_2 is particularly impactful from a health perspective. The report describes that concentrations of NO_2 at urban areas in Ireland are close to the EU annual limit value. The potential implications for air quality with increases in traffic numbers or from certain weather conditions unfavourable to dispersion of pollutants could result in exceedances of the EU limit value.

The EPA's report states that:

- "Short-term exposure to NO_2 is linked to adverse respiratory effects including airway inflammation in healthy people and increased respiratory symptoms in asthmatics"; and
- "Long-term exposure is associated with increased risk of respiratory infection in children. NO_X is a major precursor in the formation of ground level ozone. It

is also a major precursor in the formation of photochemical 'smog'."

With regard to solutions, the report identifies possible actions that could help improve and maintain local air quality. These include:

- Any shift from the burning of solid fuel to cleaner, more energy efficient methods of home heating which will result in cleaner air quality for the consumer, their family and neighbours with a resultant improvement in their health; and
- A transition in modes of transport away from the use of the private diesel and petrol powered motor cars to alternative modes of transport such as walking, cycling and forms of transport that are environmentally friendly and sustainable such as electric motor powered vehicles. This is especially important in our at-risk urban environments.

4.9.4 Air Quality Monitoring at Dublin Airport

The daa undertakes a programme of voluntary air quality monitoring at Dublin Airport and in surrounding communities. Monitoring is undertaken using a stationary continuous air monitoring station located within the DAP boundary as well as at 10 separate locations outside the airport boundary.

This programme measures levels of Nitrogen Dioxide (NO_2), Benzene (C_6H_6) and Particulate Matter (PM_{10}) at various locations and has been implemented each year since 2011.

The onsite and offsite data collected since implementation of the air quality monitoring programme has been generally found to be well within the limit values mandated in the Air Quality Standards Regulations.

Offsite, the highest concentrations of Nitrogen Dioxide (NO_2) tend to be recorded adjacent to main roads around the airport, close to the vehicular emission source.

The most recent Air Quality Monitoring Report from Q1 2019 has identified that:

- Onsite NO_2 and PM_{10} concentrations indicate that concentrations are below the relevant annual limit values and within the allowed criteria of short-term limit values.
- An onsite increase in levels of NO_2 are directly related to construction activity on the North Apron.
- Results for NO_2 indicate that the highest concentrations offsite are recorded at the bus depot at the airport, Ireland's busiest bus depot. The results for annual mean NO_2 concentration for this location indicate an exceedance of annual mean limit value of 40 µg/m³ for NO_2. The elevated readings are related to the volume of vehicular activity that occurs in the area. A11 is a new sampling point and daa is reviewing the results and implementing mitigation process to reduce emission levels.
- Diffusion tube results for benzene indicate that concentrations at all locations are well below the annual average limit value.

4.9.5 Noise[35]

The mitigation and control of aircraft noise is currently determined by legislation set out by a UN organisation called the International Civil Aviation Organization (ICAO) and the EU, including:

- The Reduction of Noise at Source (ICAO Noise standards);
- The ICAO 'Balanced Approach' to noise management;
- EU Regulation 598/14, which enshrines the 'balanced approach' into EU Law; and
- The Aircraft Noise (Dublin Airport) Regulation Act 2019.

The 'balanced approach' sets out a method of noise management that favours reduction of noise at the locations affected, through land-use planning and noise reduction measures. To comply with the EU noise management Regulation, the Aircraft Noise (Dublin Airport) Regulation Act 2019 designates Fingal County

[35] Please also refer to Section 4.6.3 *Noise Interactions* and Public Safety Zones

Council as the 'competent authority' for the purposes of monitoring Aircraft Noise levels at Dublin Airport. This legislation also introduces a new set of procedures for noise assessment and management.

The Dublin Airport LAP is a land use plan for the purposes of effective land-use planning and safeguarding the use of the Airport. To help achieve this, noise zones relating to Dublin Airport have been in place for many years, with the current noise zones first contained in the Fingal Development Plan 2005-2011. The current noise zones are based on noise exposure from an expanded Dublin Airport including a new north runway. The basis of the noise zones was underpinned by relevant guidance in relation to aircraft noise and its effects available at that time. Since the publication of those zones in 2005, and over the last decade, further evidence has emerged that has updated understanding of how aircraft noise can affect health and quality of life. With the north runway set to become operational in 2022, updated information is available relating to aircraft noise performance and flight paths. For these reasons, it is considered appropriate to update the noise zones for Dublin Airport to allow for more effective land use planning for development within airport noise zones.

The proposed updated noise zones, which take into account best available scientific knowledge and most up to date policy guidance, are mapped on Figure 4.13. Proposed Variation No. 1 to the Fingal Development Plan 2017-2023 will facilitate the replacement of the older, current noise zones with these new noise zones.

The Noise Directive - Directive 2002/49/EC relating to the assessment and management of environmental noise - is part of an EU strategy setting out to reduce the number of people affected by noise in the longer term and to provide a framework for developing existing 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[36] 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.

In compliance with the Directive and transposing Environmental Noise Regulations (S.I. No. 140 of 2006), the Noise Action Plan for Dublin Airport 2019 -2023 was prepared and adopted in December 2018. The Noise Action Plan is designed to manage noise issues and effects associated with existing operations at Dublin Airport. The Noise Action Plan sets out proposed actions including the following relating to land use planning and management:

- Keep under review land-use policies in relation to aircraft noise through the review of existing land use planning policy in so far as it relates to Dublin Airport.
- Monitor noise encroachment associated with Dublin Airport to ensure that land use planning policy is appropriately informed as it relates to Dublin Airport.

The LAP and the above-mentioned Variation No. 1 to the Fingal Development Plan 2017-2023 provide the land use planning framework to achieve these actions.

4.9.6 Existing Problems

In terms of 2030 reduction targets, the EU Effort Sharing Regulation requires that Ireland reduce its non-ETS emissions by 30% on 2005 levels by 2030. The latest 2019 projections from the EPA (Ireland's Greenhouse Gas Emission Projections 2018-2040) indicate that Ireland will exceed the non-ETS carbon budget over the period 2021-2030 by 52-67 Mt CO_2 equivalent.

With regard to emissions from aviation, the European Commission has identified that Aviation is one of the fastest-growing sources of greenhouse gas emissions. Direct emissions from aviation[37] account for about 3% of the EU's total greenhouse gas emissions and more than 2% of global emissions.

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

[37] Information from the European Commission (2019) https://ec.europa.eu/clima/policies/transport/aviation_en

The onsite and offsite data collected since implementation of daa's air quality monitoring programme has been generally found to be well within the limit values mandated in the Air Quality Standards Regulations. Offsite, the highest concentrations of Nitrogen Dioxide (NO_2) tend to be recorded adjacent to main roads around the airport, close to the vehicular emission source. The most recent Air Quality Monitoring Report from Q1 2019 has identified that:

- Onsite NO_2 and PM_{10} concentrations indicate that concentrations are below the relevant annual limit values and within the allowed criteria of short-term limit values.
- An onsite increase in levels of NO_2 are directly related to construction activity on the North Apron.
- Results for NO_2 indicate that the highest concentrations offsite are recorded at the bus depot at the airport, Ireland's busiest bus depot. The results for annual mean NO_2 concentration for this location indicate an exceedance of annual mean limit value of 40 µg/m³ for NO_2. The elevated readings are related to the volume of vehicular activity that occurs in the area. A11 is a new sampling point and daa is reviewing the results and implementing mitigation process to reduce emission levels.

A number of sensitive receptors in the area around the Airport are subject to elevated noise levels. Areas where noise levels are highest are indicated by Noise Zone A on Figure 4.13.

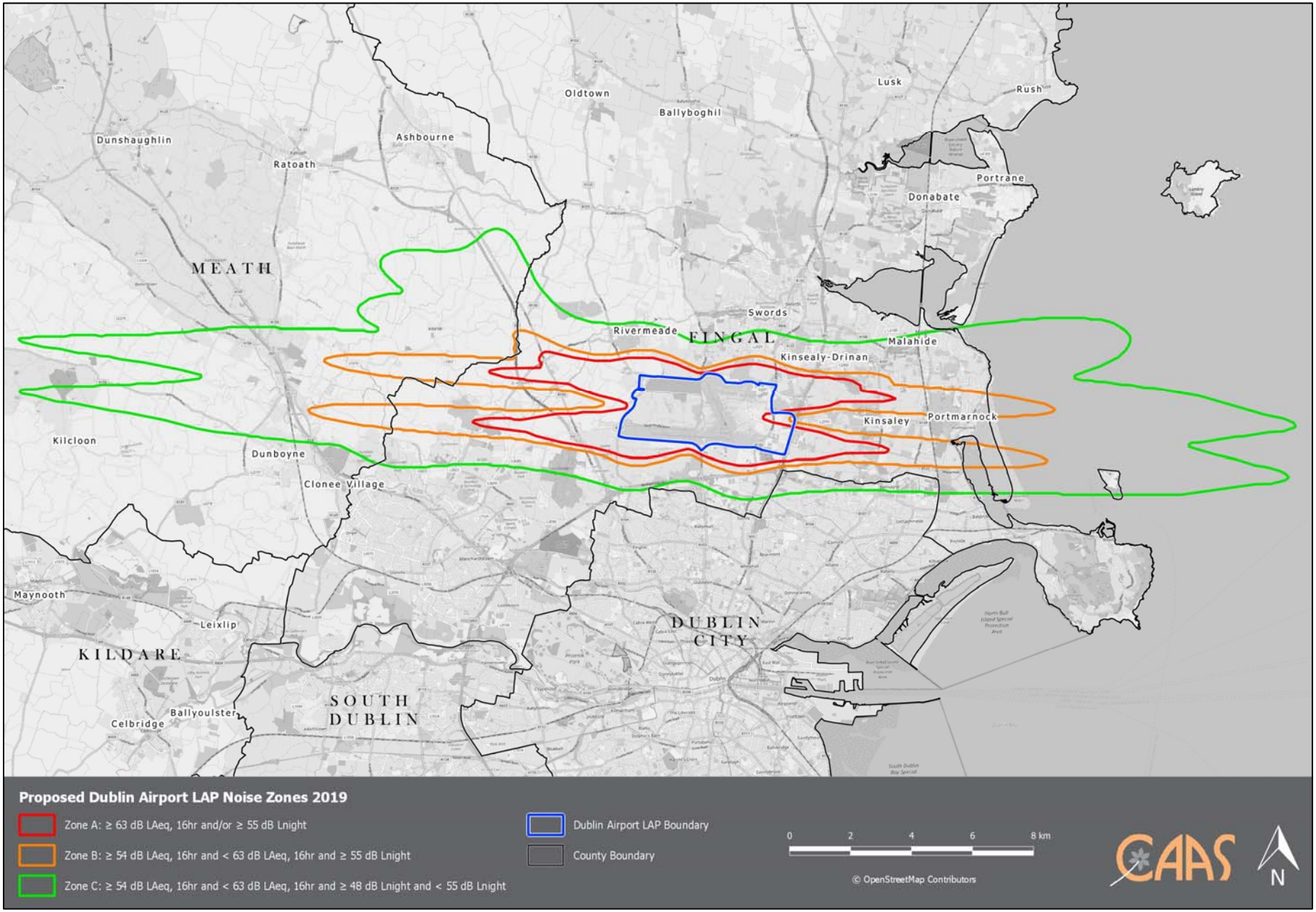

Figure 4.13 Proposed Dublin Airport Plan area Noise Zones (2019)

4.10 Material Assets

Resources that are valued and that are intrinsic to specific places are called 'material assets'. Material Assets relevant to this SEA include public assets and infrastructure[38], land and waste management.

Other material assets covered by the SEA include archaeological and architectural heritage (see Section 4.10) natural resources of economic value, such as air and water (see Sections 4.9 and 4.8).

4.10.1 Water Services Infrastructure[39]

Dublin Airport is situated within the catchment of the North Fringe Sewer with effluent treated at Ringsend Waste Water Treatment Plant.

In January 2014, Irish Water assumed responsibility for the provision of public water services, which included the transfer of responsibility for the Ringsend Wastewater Treatment Plant from Dublin City Council. Since taking on this responsibility, Irish Water have progressed upgrades to the plant and network.

In April 2019, An Bord Pleanála granted permission for the works required to facilitate the use of Aerobic Granular Sludge technology, to omit the previously permitted long sea outfall tunnel and to upgrade the sludge treatment facilities at Ringsend, and to provide for a Regional Biosolids Storage Facility in Newtown, Dublin 11. This further upgrade of the Ringsend Wastewater Treatment Plant will enable future population growth and ensure the plant operates to the highest possible environmental standards.

Irish Water are currently preparing the Sutton Pump Station Drainage Area Plan (DAP). The Sutton Pump Station DAP boundary includes the catchment of the North Fringe Sewer and the surrounding area. This study will assess current constraints and capacity for future growth within the catchment.

Dublin Airport and the surrounding area is located within the Ballycoolin Reservoir drinking water supply area. The area is served with trunk mains that have capacity to cater for additional future growth in the area including Dublin Airport. The current airport demand is met from an internal reservoir and boosting system which is under the control of the daa. A 25-year plan has been created by Irish Water for the Greater Dublin Area and a key apart of this plan is the proposed Water Supply Scheme to serve the region.

Under Section 58 of the Environmental Protection Agency Act 1992, the EPA is required to collect and verify monitoring results for all water supplies in Ireland covered by the European Communities (Drinking Water) Regulations, 2000. The EPA publishes their results in annual reports that are supported by Remedial Action Lists (RALs) identifying water supplies that are not in compliance with the Regulations. The most recent EPA Remedial Action List (Q1 of 2019) does not include the water scheme that supplies the Plan area.

4.10.2 Transport Infrastructure[40]

Dublin Airport is a key national asset, providing global connectivity to trade and tourism markets.

Given its strategic national function, Dublin Airport is well located in terms of surface access, sitting on Ireland's core Trans-European Transport Network and on or adjacent to several key elements of the national road network such as the M1 Dublin-Belfast corridor, M2/N2 Dublin-Derry, M3/N3 Dublin-northwest and the M50 orbital motorway.

The Airport is also well served by a number of public transport bus services such as the various local routes that run between Dublin City Centre and Dublin Airport and a number of regional and national bus services that run from Dublin Airport to a wide range of locations across Ireland. The mainline Dublin-Belfast rail line is located some five kilometres to the east, whilst the proposed MetroLink light rail system from Dublin City Centre to Swords will run in a tunnel directly beneath the Dublin Airport campus.

[38] These include settlements and urban/suburban areas, public open spaces, parks and recreational areas, public buildings and services and utility infrastructure.

[39] Informed by Chapter 5 of the Draft Plan and information from www.water.ie

[40] Informed by Chapter 8 of the Draft Plan.

Fingal County Council has long recognised the important role that Dublin Airport plays in the economic and cultural development of the Country and the associated importance of safeguarding future accessibility in this regard. It is in this context that Fingal County Council has recently completed the South Fingal Transport Study, a technical transport planning study comprising strategic transport modelling and objective assessment of potential transport infrastructure in the area around Dublin Airport. Various recommendations from the Study are included in the Fingal Development Plan and the Draft Dublin Airport Local Area Plan.

4.10.3 Waste Generation, Disposal and Management

Waste management within the Plan area is guided by the Eastern and Midlands Region Waste Management Plan 2015-2021 that provides a framework for the prevention and management of waste in a sustainable manner in 12 local authority areas, including Fingal County Council.

Certain airside wastes (galley wastes) from international flights are disposed of by deep burial under licence from the Department of Agriculture, Food and the Marine (Animal Health and Welfare Division).

There are two historic landfills identified within the Plan area and a number in the wider area (see Section 4.7.4).

The Fingal Development Plan commits the Council to continue to work in tandem with EU and National policy and the Environmental Protection Agency in the implementation and execution of its waste management responsibilities and duties throughout the duration of the lifetime of the Plan. Development within the Plan area will be subject to these provisions.

4.10.4 Agricultural Land

The primary land use adjoining the Airport to the north, south and west is agricultural.

The SEA for the Fingal Development Plan 2017-2023 provided a proxy for agricultural land quality by combining existing datasets relating to land cover and the predominant soil types mapped across Fingal. This Agricultural Land Quality rating is provided on Figure 4.14 for the Plan area and surrounding lands.

Only land cover classes relating to agricultural activities and soil types not considered ideal for horticulture were selected. The mapping is quite high level and strategic, however it gives a good indication of where high quality soils may be found.

4.10.5 Energy

The Airport's high-voltage electrical network is operated at 110 kilovolts and is currently supplied by the Dardistown Substation. The Dardistown Substation has two 40-megavolt amp transformers supplying four Airport ring networks namely Terminal 1, Terminal 2, campus and the airfield.

The Airport is currently served by a 19-bar gas main from the Cloghran Ground Installation, located on Swords Road. This feeds a 315-millimetre diameter, 4-bar ring main within the Airport. There are currently no constraints associated with gas supply[41].

The use of alternative fuels, including for electricity, forms a significant part of government policy to reduce transport emissions and contribute towards energy security.

The overall target for Ireland provided for by Renewable Energy Directive (Directive 2009/28/EC) is a 16% share of renewable energy in Gross Final Consumption by 2020. Under Directive 2009/28/EC, Ireland is obliged to deliver 10% of transport energy by renewable sources by 2020, as identified by the Department of Communications, Climate Action and Environment's (2017) *National Renewable Energy Action Plan Fourth Progress Report*, submitted under Article 22 of Directive 2009/28/EC.

Ireland's overall dependency on imported energy stood at 68% in 1990. However, since the mid-1990s import dependency has grown significantly, due to the increase in energy use together with the decline in indigenous natural gas production at Kinsale since 1995 and

[41] Informed by Chapter 7 of the Draft Plan and information from www.water.ie

decreasing peat production. Ireland's overall import dependency reached 90% in 2006. It varied between 85% and 90% until 2016 when it fell to 69%. This trend reflects the fact that Ireland is not endowed with significant indigenous fossil fuel resources and has only in recent years begun to harness significant quantities of renewable resources and more recently natural gas from the Corrib field.

4.10.6 Information Technology Communications

The Airport is currently serviced by a mixture of copper and fibre networks. These networks are currently served by two public node operator points within the Airport. These services enter the Airport through the R132 Swords Road.

4.10.7 Existing Problems

As identified by the Draft Local Area Plan, Dublin Airport is faced with a number of capacity constraints in the short to medium term on a range of key infrastructure to meet forecasted growth, including surface access, the existing runway, aircraft parking stands and passenger boarding gates. However, there are a number of key interventions identified by the Plan that will enable the capacity of the existing eastern campus to be maximised.

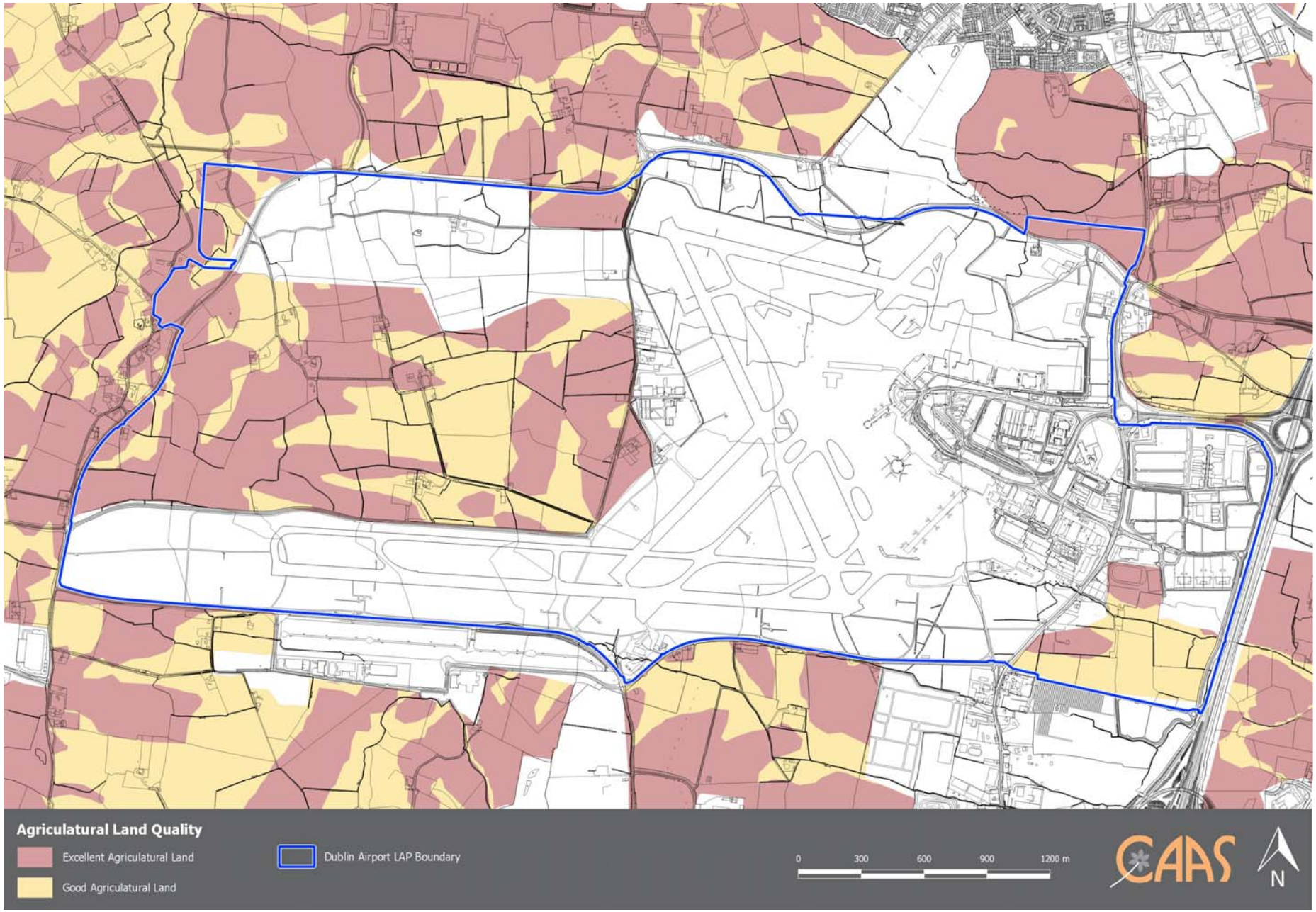

Figure 4.14 Agricultural Land Quality

4.11 Cultural Heritage

4.11.1 Archaeological Heritage

Archaeology is the study of past societies through the material remains left by those societies and the evidence of their environment. 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.

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

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. It is available from the National Monuments Service and at archaeology.ie.

The term 'monument' includes all man-made structures of whatever form or date except buildings habitually used for ecclesiastical purposes. All monuments in existence before 1700 A.D. are automatically considered to be historic monuments within the meaning of the Acts. Monuments of architectural and historical interest also come within the scope of the Acts. Monuments include: any artificial or partly artificial building, structure or erection or group of such buildings, structures or erections; any cave, stone or other natural product, whether or not forming part of the ground, that has been artificially carved, sculptured or worked upon or which (where it does not form part of the place where it is) appears to have been purposely put or arranged in position; any, or any part of any, prehistoric or ancient tomb, grave or burial deposit, or, ritual, industrial or habitation site; and any place comprising the remains or traces of any such building, structure or erection, any such cave, stone or natural product or any such tomb, grave, burial deposit or ritual, industrial or habitation site, situated on land or in the territorial waters of the State', but excludes 'any building or part of any building, that is habitually used for ecclesiastical purposes' (National Monuments Acts 1930-2004).

A recorded monument is a monument included in the list and marked on the map that comprises the RMP set out county by county under Section 12 of the National Monuments (Amendment) Act, 1994 by the Archaeological Survey of Ireland. The definition includes Zones of Archaeological Potential in towns and all other monuments of archaeological interest that have so far been identified.

There are number of listed archaeological sites and monuments within and surrounding the Plan area, including nine entries to RMP within the Plan area, as shown on Figure 4.15 and listed below:

- **Ringfort, Cloghran** (north-east of Plan area)
  This structure was partly demolished in 1822 and cleared away in 1873. The area has been incorporated into an extension to the recently constructed runway at Dublin Airport. Not visible at ground level.

- **Castle site, Corballis** (east of Plan area)
  There are no remains of the castle at this location and the site is under buildings within Dublin Airport. Not visible at ground level.

- **Holy Well, Toberbunnny** (south-east of Plan area)
  An unenclosed pool close to Cuckoo Stream, this has been incorporated into a golf course. It is said to have been a station well in former times. The site is no longer venerated.

- **Inn, Pickardstown** (centre of Plan area)
  This is a two-storey, four bay building of post-1700 date.

- **Enclosure, Harristown** (south-west of Plan area)
  This may be a levelled ringfort and it is now located under the runway. Not visible at ground level.

- **Dwelling site, Harristown** (south-west of Plan area)
  Harristown House probably occupied this site that is now part of the runway. Not visible at ground level.

- **Enclosure, Sandyhill** (west of Plan area)
  A sub-circular enclosure visible as a crop mark on an aerial photograph located within a relatively flat open field. No visible remains.

- **Enclosure, Sandyhill** (west of Plan area)
  A circular enclosure visible as a crop mark on an aerial photograph. Located at low point within field with quite stark undulations. No visible remains.

- **Ringfort, Shanganhill** (south-west of Plan area)
  A circular enclosure visible as a crop mark on an aerial photograph. Located at low point within field with quite stark undulations. No visible remains.

There are also a number of archaeological sites and features adjacent to the LAP lands, in areas such as St. Margaret's, Dunsoghly, Dubber and Cloghran. There are two historic graveyards adjacent to the LAP lands, one at St. Margaret's and one at Dardistown.

There is also the potential for unknown archaeological sites to be unearthed where new developments occur.

4.11.2 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.

Records of Protected Structures are legislated for under Section 12 and Section 51 of the Planning and Development Act 2000 as amended. Protected Structures are defined in the Planning and Development Act 2000 as amended as structures, or parts of structures that are of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view.

In relation to a protected structure or proposed protected structure, the following are encompassed:

(i) The interior of the structure;
(ii) The land lying within the curtilage[42] of the structure;
(iii) Any other structures lying within that curtilage and their interiors; and,
(iv) All fixtures and features that form part of the interior or exterior of any structure or structures referred to in subparagraph (i) or (iii).

There are four Protected Structures located within the Plan area, including as shown on Figure 4.16 and listed below:

- **Castlemoate House**, Swords Road, Cloghran (north-east of Plan area);
- **Old Central Terminal Building**, Dublin Airport, Collinstown (north-east of Plan area);
- **Windmill** (in ruins), R122 Road, Millhead (west of Plan area); and
- **Church of Our Lady Queen of Heaven**, Dublin Airport, Corballis (west of Plan area).

Research of historical maps for the area, accompanied by a field survey has identified structures of potential architectural significance within the Plan area.

[42] Curtilage is normally taken to be the parcel of ground immediately associated with the Protected Structure, or in use for the purposes of the structure. Protection extends to the buildings and land lying within the curtilage. While the curtilage sometimes coincides with the present property boundary, it can originally have included lands, features or even buildings now in separate ownership, e.g. the lodge of a former country house, or the garden features located in land subsequently sold off. Such lands are described as being attendant grounds, and the protection extends to them just as if they were still within the curtilage of the Protected Structure.

The Old Central Terminal Building is one of the most important Modern Movement buildings in Ireland, and particular care will be required in the case of any changes, additions, or interventions to this building or its setting.

There is a collection of six 18th century milestones incorporated into a piece of public art utilising the remains of the Forrest Tavern (adjacent to the northern boundary of the Plan area) and an old cast-iron pump. They are located close to the junction of the R108 and the Naul Road but originally stood at fixed points along the old Dublin to Naul Road.

There are various entries to the Protected Structures in areas surrounding the LAP and in the wider Fingal area there are a number of Architectural Conservation Areas (ACAs), including those located eastward of the airport at Kinsealy, Portmarnock and Malahide.

An ACA is a place, area or group of structures or townscape that is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of protected structures, whose character it is an objective to preserve in a development plan. The ACA designation requires that planning permission must be obtained before significant works can be carried out to the exterior of a structure in the ACA that might alter the character of the structure or the ACA. There are no ACAs within the Plan area.

4.11.3 Existing Problems

The context of archaeological and architectural heritage has changed over time however no existing conflicts with legislative objectives governing archaeological and architectural heritage have been identified.

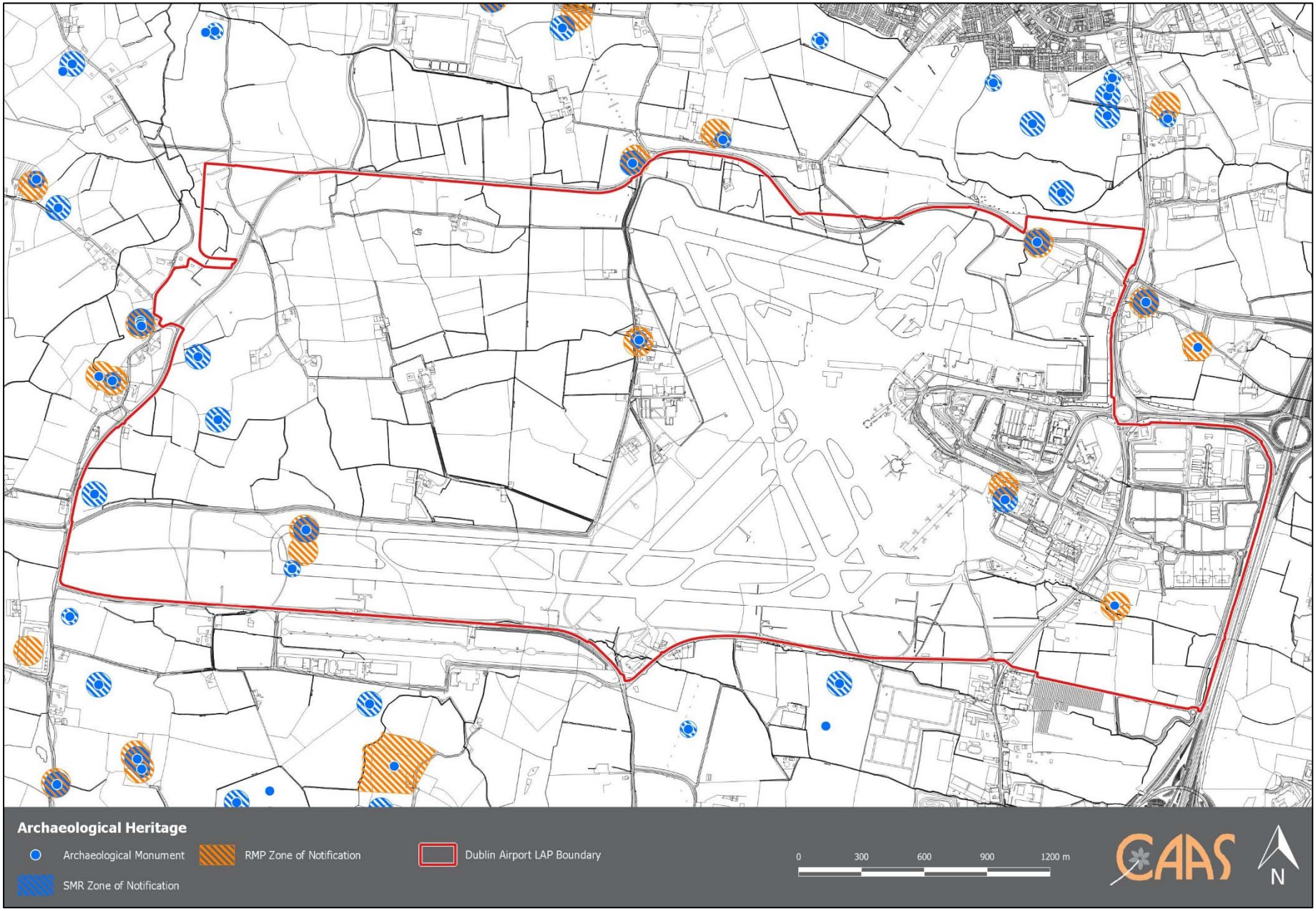

Figure 4.15 Archaeological Heritage

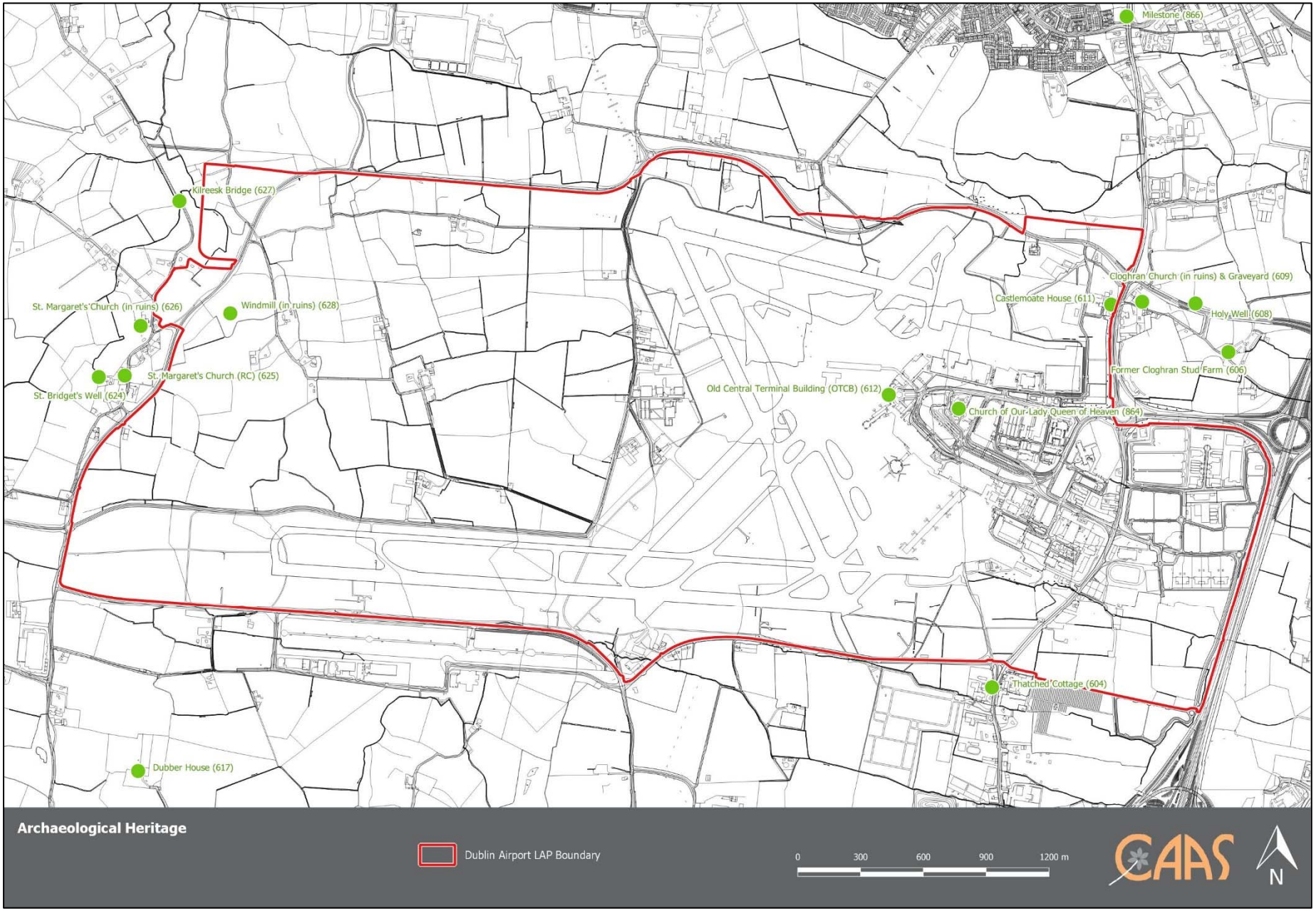

Figure 4.16 Architectural Heritage

4.12 Landscape

4.12.1 Landscape and Visual Impact

There are no landscape designations associated with the Plan area. Figure 4.17 shows landscape designations in the wider region, generally clustered along the coast to the east of the Plan area (including Highly Sensitive Landscape, Special Amenity Area Order and High Amenity Area).

The Plan area is largely flat and as a result are dominated by structures and development associated with the operational airport.

The main airport campus – including Terminals 1 and 2 in the east and the airfield, including runways in the west – and the campus' immediate environs are entirely artificial in character, comprising existing roads, car parks, buildings and landscape planting. The airfield contains a large proportion of airport-managed grassland with limited enclosure.

Outside the airfield, the west of the Plan area consists mainly of agricultural grasslands together with arable land. Enclosure is provided by hedgerows and treelines. A limited number of residential dwellings are located in the west of the Plan area including St. Margaret's. The open space in this area is not used for significant levels of amenity.

The immediate surrounds of the airport comprise a working agricultural landscape including agricultural grasslands and arable lands. The M1 Motorway is located to the east. The airport is located between the urban fringe of Dublin City and the Dublin town of Swords, c. 5 km inland from the coast.

Taking into account all of the above, the Plan area has significant capacity to accommodate further development without affecting visual amenity. Most views of the land are from passing motorists along the M1 and M50 Motorways, stretches of which are enclosed by treelines making views intermittent, and the N2 National Primary Road and M2 Motorway.

The absence of landscape related designations at the Plan area and the distance to closest landscape designations, mean that landscape designations are unlikely to be significantly affected by development at the airport.

4.12.2 Land and Property

Dublin Airport is located at Collinstown in Fingal County Council's administrative area in North County Dublin. Dublin City Centre is located 10 km to the south, while Swords is approximately 2 km to the north.

The Plan area for the Airport covers an area of 1,084 hectares, including lands that have been already developed for the airport and associated infrastructure.

The main airport campus (including Terminals 1 and 2), a number of commercial buildings, car-parking facilities, the R132, a sports centre and a limited number of residential dwellings are all located in the east of the Plan area. The airport's principal runway is located on an east-west axis within the south of the Plan area.

An additional runway is planned and permitted along an east-west axis within the north of the LAP lands. The implementation of this runway permission has led to changes in the appearance of the landscape at this location with development of new roads, road closures, archaeological excavations and hedgerow removal.

Greenfield lands, primarily in agricultural use, are located primarily in the west of the Plan area. A limited number of isolated residential dwellings are located in the west of the Plan area, including at St. Margaret's.

While the airport is surrounded by greenfield lands, to the north, south and west and by the M1 Motorway to the east, the adjoining lands (within 2 km of the LAP boundary) comprise a complex mosaic of land-uses that include, but are not limited to:

Agriculture
- Tillage
- Grazing (Beef and Equestrian)

Housing, including at St. Margaret's[43]
Commercial/Industrial/Retail
- Light Industrial/ Warehousing

[43] The discharge of noise conditions for the north runway has included the noise insulation of schools and dwellings, the purchase of dwellings and the ongoing monitoring and review.

- Logistic Parks/ Industrial/ Food Park
- Retail/ Hotels

Parking & Transport
- Buses (Harrison Depot)
- Long Term Car Parking
- Vehicle repair/part/maintenance depots

Specialist Rural Land-uses
- Quarries
- Cemetery
- Glasshouses
- Equestrian Centres
- Sports/ Playing fields
- Golf courses
- Kart Racing

Specialist infrastructure and activities
- Schools, church and social infrastructure associated with St. Margaret's
- Motorway
- Power Station
- Transmission Lines
- Water Storage
- Recycling
- Reception Centre

4.12.3 Existing Environmental Problems

New developments have resulted in changes to the visual appearance of lands within the Plan area however; legislative objectives governing landscape and visual appearance were not identified as being conflicted with.

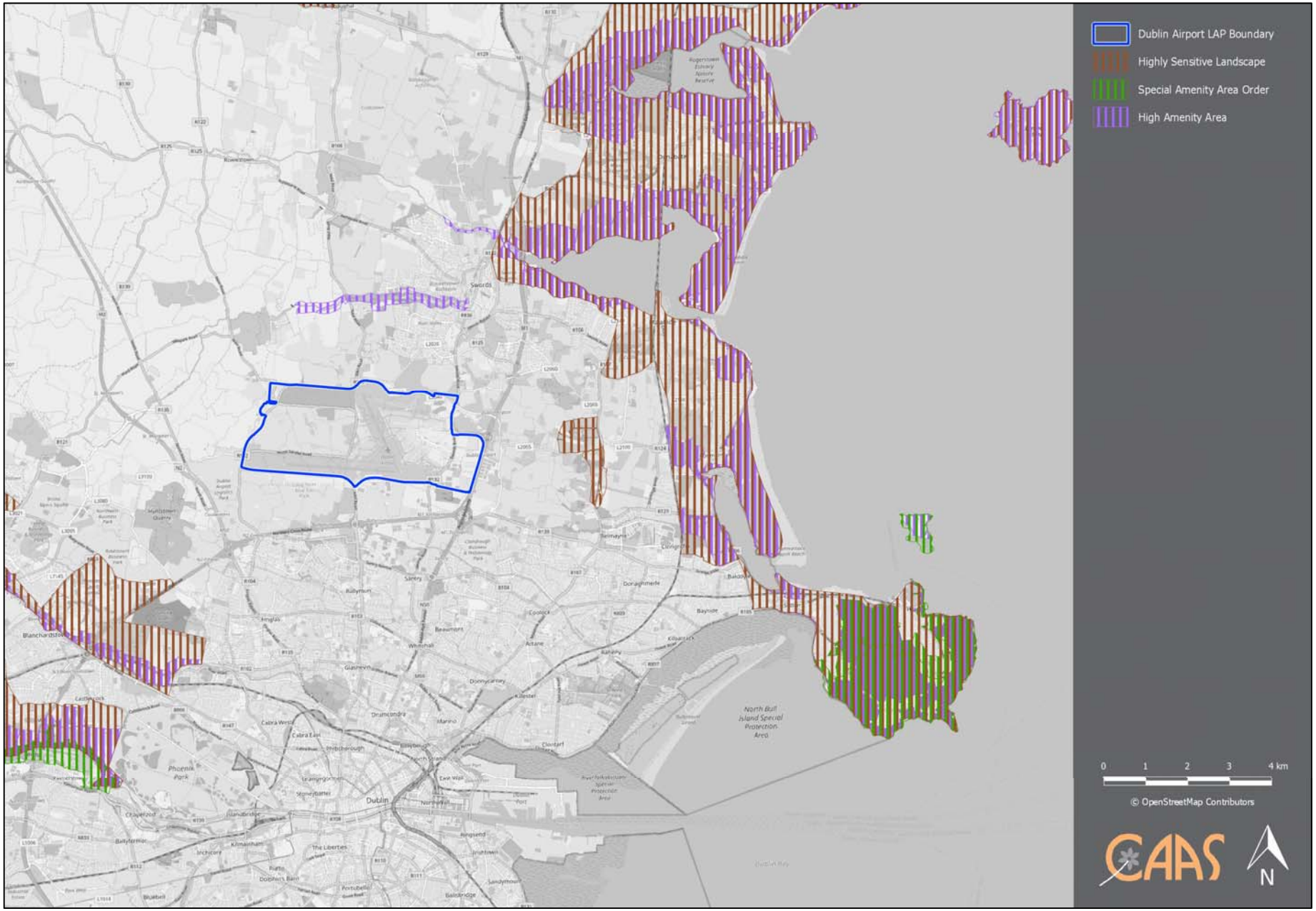

Figure 4.17 Landscape Designations

Section 5 Strategic Environmental Objectives

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies that generally govern environmental protection objectives established at international, Community or Member State level e.g. the environmental protection objectives of various European Directives that have been transposed into Irish law and that are required to be implemented.

The SEOs are set out under a range of topics and are used as standards against which the provisions of the Draft Plan and the alternatives are evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if - in the case of adverse effects - unmitigated.

The SEOs are linked to indicators that can facilitate monitoring the environmental effects of the Plan as well as identifying targets that the Plan can help work towards (see Table 5.1). The measures used are those that were developed through the SEA process for the Fingal Development Plan and finalised in 2017.

Further detail on legislation, plans and programmes are provided under Section 2 (and associated Appendix II "Relationship with Legislation and Other Plans and Programmes") and Section 4.

Table 5.1 Strategic Environmental Objectives (SEOs), Indicators and Targets

Environmental Component	SEO No.	SEO	Selected Indicator(s)	Selected Target(s)
Biodiversity, Flora and Fauna	1	**B1** Preserve, protect, maintain and where appropriate restore the terrestrial, aquatic and soil biodiversity, particularly EU and nationally designated sites and protected species	Number of programmed actions achieved in Development Plan period (2017-2023)	Update the Biodiversity Action Plan (2010-2015) with a clear programme for delivery of actions
			Not available (n/a)	Develop a Green Infrastructure Strategy within the lifetime of the Development Plan
Population and Human Health	2	**PHH1** Provide high quality residential, working and recreational environments with access to sustainable transport options	Number of people living and working in Fingal	Increase the number of people living and working in Fingal compared to the 2016 Census base findings
			The 2nd Fingal Development Plan SEA Monitoring Indictor and Target under this SEO are not directly relevant to the Airport LAP area; no additional measures are required	
	3	**PHH2** Protect human health	Number of breaches of air quality limits	Compliance with air quality legislation
			Number of measures implemented (Fingal Environment Department, Noise Section, yearly reporting)	Undertake a review as per the Dublin Agglomeration Noise Action Plan of the areas within Fingal identified as being exposed to high levels of noise and develop a programme of implementation of the mitigation measures within the lifetime of the Development Plan
Soil	4	**S1** Safeguard the soil resources within Fingal in recognition of the strong agricultural and horticultural base	Percentage of development within brownfield and infill compared to greenfield	Higher rate of brownfield and infill development as opposed to greenfield development

Environmental Component	SEO No.	SEO	Selected Indicator(s)	Selected Target(s)
Water	5	**W1** Protect and where necessary improve and maintain water quality and the management of watercourses and groundwater, in compliance with the requirements of the Water Framework Directive objectives and measures	% increase in waters achieving and maintaining at least 'good status'	Implementation of the Programme of Measures in the ERBD River Basin Management Plan
			Comply with the recommendations of the Fingal Groundwater Protection Scheme	No. of planning permissions granted in areas identified as vulnerable under Groundwater Protection Scheme
Air and Climatic Factors	6	**AC1** Minimise emissions of pollutants to air associated with transport	Percentage increase in walking, cycling and public transport modes	10% increase in the number of people using sustainable transport modes (rail, bus, cycling walking) against current 2011 Travel to Work Modes. (target also linked to No. 3 PHH2 above)
	7	**AC2** Minimise contribution to climate change by adopting adaptation and mitigation measures	No. of high vulnerable development applications permitted within lands in the 1% AEP and 0.1% AEP	No new high vulnerable development applications, as defined by the OPW the Planning System and Flood Risk Management Guidelines (2009), within lands that fall within the 1% AEP and 0.1% AEP
			Percentage of new residential buildings granted planning with A3 or higher BER	All new buildings to have an A3 or higher BER
Cultural Heritage	8	**CH1** Protect places, features, buildings and landscapes of cultural, archaeological and/ or architectural heritage from impact as a result of development in Fingal	n/a	Develop a code of practice for the management of architectural heritage in private ownership
Material Assets	9	**M1** Make best use of existing infrastructure and promote the sustainable development of new infrastructure to meet the needs of Fingal's population	Percentage of planning permissions within 500m of a bus stop and 1km of a railway	Require all new residential planning permissions to be within 500m of bus stop and 1km of railway station.
			Available capacity for treatment of phased development	Phased development in line with wastewater capacity
Landscape	10	**L1** Protect and maintain the special qualities of the landscape character, including coastal character within Fingal	Number of programmed objectives and policies achieved in Development Plan period	Fingal Development Plan SEA Monitoring Targets for Landscape are not directly relevant to the Airport LAP area; no additional targets are required

Section 6 Description of Alternatives

6.1 Introduction

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

6.2 Limitations in Available Alternatives

Objective DAO2 of the **Fingal Development Plan 2017-2023** seeks to *'Prepare and implement a new Local Area Plan for Dublin Airport which will accommodate the future sustainable growth and development of the airport lands while also facilitating the efficient and effective operation of Dublin Airport in accordance with the requirements of the Local Area Plan and proper planning and sustainable development'*. **This means that a 'do-nothing' option is not available.**

The alternatives available for the Dublin Airport Local Area Plan (LAP) are significantly limited by the robust policy framework in place at national, regional and local level supporting the continued development, growth and expansion of Dublin Airport, including for the first time its development as a secondary European hub airport[44];

- The **Fingal Development Plan 2017-2023**, which already provides for land use zoning and other policies and objectives that are in force and must be adhered to by the LAP; and
- The objectives of **other higher level plans and programmes** (such as the National Planning Framework and associated National Development Plan 2018, the Fingal Development Plan 2017-2023, the Eastern and Midland Regional Spatial and Economic Strategy and the Irish Aviation Policy 2015) that provide for the development, growth in traffic and expansion in connections at Dublin Airport.

The **Fingal Development Plan** provides land use zoning for the LAP lands. Most of the lands are zoned by the Development Plan as **'DA' - Dublin Airport**, the objective of which is to *"Ensure the efficient and effective operation and development of the airport in accordance with an approved Local Area Plan"*. The **Vision attached to this zoning objective** is to *"Facilitate air transport infrastructure and airport related activity/uses only (i.e. those uses that need to be located at or near the airport). All development within the Airport Area should be of a high standard reflecting the status of an international airport and its role as a gateway to the country and region. Minor extensions or alterations to existing properties located within the Airport Area which are not essential to the operational efficiency and amenity of the airport may be permitted, where it can be demonstrated that these works will not result in material intensification of land use. Air Transport Infrastructure includes: aircraft areas, air traffic control/tower, ancillary health, safety and security uses, aprons, cargo handling, maintenance hangers, meteorology, retail – airside/duty free, runways, taxiways, terminals and piers."* The **Development Plan also provides guidance** as to the appropriateness of various land use classes under the zoning objective.

The **Fingal Development Plan zones** other lands within the LAP area as **'HT' - High Technology** - and these are located within the eastern section of the LAP area. The objective of this HT zoning is to 'Provide for office, research and development and high technology/high technology manufacturing type employment in a high quality built and landscaped environment'. The **Dublin Airport Central Masterplan 2016** provides a more detailed framework for the future development of part of these 'HT' zoned lands. While the synergy between aviation and business uses is acknowledged, these lands do not form an integral part of the LAP, nevertheless, the quantum of business development approved for these lands within the provisions of the Masterplan has formed part of the Transport Study prepared to inform the LAP process.

[44] This policy framework is described in full in Chapter 2 of the Plan.

The **National Aviation Policy** (Department of Transport, Tourism and Sport, 2015) and the **National Planning Framework** (Government of Ireland, 2018) both emphasise the importance of the airport for the future prosperity of Ireland, as well as the Dublin City Region. Data from 2018 indicated that the airport reached 31.5 million passengers, with growth rates expected to continue to rise over the next 10 to 25 years.

The consistent growth in passengers that Dublin Airport has witnessed over the last decade has brought its own challenges. These include capacity considerations associated with runway and aircraft parking stands, and a cap of 32 million passengers per annum which was a requirement of planning permission for Terminal 2. Identified issues which require remedy as part of the LAP include aircraft parking stands, terminal processing capacity and the need to enhance surface access links. These matters are most effectively dealt with as policy within the LAP. Addressing capacity constraints at Dublin Airport is required to enable continued growth in line with supporting government policy for the benefit of Ireland's economic prosperity.

6.3 Available Reasonable Alternatives

6.3.1 Alternative Growth Scenarios for Passenger Numbers

In 2016, Dublin Airport handled 28 million passengers per annum (mppa), 216,000 air traffic movements and 134,000 tonnes of cargo.

The growth of Dublin Airport is set out in two principal higher-level documents. These are the National Aviation Policy (Department of Transport, Tourism and Sport, 2015), which establishes the growth of the airport and its development as a secondary hub as national policy, and the Oxford Economic Review of the State Airports (Department of Transport, Tourism and Sport, 2018), which details the levels of annual passenger numbers and aviation transport movements for Irish airports, including Dublin. Both documents were prepared by personnel with aviation expertise, utilising recently available passenger information. Taking into account that these documents inform and underpin the Draft Local Area Plan, it is considered that the 'baseline', 'downside' and 'upside' growth scenarios identified within Section 2.4 "Dublin" of the Oxford Economic Review form a reasonable and informed basis for the development alternatives required under the SEA Directive. The Oxford Economic Review indicates that 38 mppa is expected at 'baseline' growth to 2027, with a higher figure expected under the 'upside' growth scenario and a lower figure expected under the 'downside' growth scenario.

Extrapolated from the Review, and as detailed within Chapter 3 "Forecasts and Capacity Constraints" of the Draft Plan, projected passenger figures for the 'baseline' growth scenario for 2030 would amount to 40 mppa by 2030 and 54 mppa by 2050. Under the 'baseline' scenario, air traffic movements would amount to approximately 265,000 by 2030 and 365,000 by 2050; cargo would amount to approximately 165,000 tonnes by 2030 and 218,000 tonnes by 2050.

The 'downside' scenario forecast in the Review simulates two near term global risks scenarios: a "cliff-edge" Brexit leading to WTO trading arrangements between the UK and EU and a more protectionist attitude towards international trade and investment by the US. These factors are compounded by weaker demographic growth in Ireland and higher oil prices. Under this scenario passenger numbers would reach 36 mppa by 2030 and 49 mppa by 2050. Under the 'downside' scenario, air traffic movements would amount to approximately 250,000 tonnes by 2030 and 329,000 by 2050; cargo would amount to in excess of 150,000 tonnes by 2030 and 202,000 tonnes by 2050.

Under the 'upside' scenario the Review simulates the effects of a positive near-term boost to Ireland's economy as part of the global upturn, together with three longer-term characteristics for on-going improvements in outlook, faster population growth, faster productivity growth, and greater trade openness. Under this 'upside' scenario, Dublin is forecast to reach 42 mppa by 2030 and 61 mppa passengers by 2050. Under the 'upside' scenario, air traffic movements would amount to approximately 280,000 by 2030 and 409,000 by 2050; cargo would amount to approximately 170,000 tonnes by 2030 and 247,000 tonnes by 2050.

The operation of runways at airports may be undertaken through 'directional' or 'averaged' use. Directional use is where flights land at one runway only, and take off from the other runway. Averaged use is where flights land and take from both runways. Advice from Noise Consultants engaged by Fingal County Council is that of analysis of directional use provides a conservative assessment of noise impact. As this is the most effective scenario for determining the full scope of noise impact[45] on future development, all of the development alternatives for 'baseline', 'downside' and 'upside' growth have assumed directional runway use.

Taking into account the above, the alternative growth scenarios available for assessment by the SEA are as follows:

- Growth Scenario A 'Baseline';
- Growth Scenario B 'Downside'; and
- Growth Scenario C 'Upside'.

6.3.2 Alternatives for Managing Airport Service Levels

Two options were considered with respect to where in the planning hierarchy airport service levels are to be managed at:

Alternative A. More flexible approach to managing airport service levels

Alternative A seeks to manage airport service levels at both LAP and planning application levels. Provision of the relevant infrastructure may not be required in the event of improved modal shift or re-organisation of airport landside and/or airside processes. The LAP under this alternative would outline further transport assessment required to identify proposals to be specifically included in planning applications so that the infrastructure required can be provided to facilitate expansion based on available capacity in the surface access network (as identified by the South Fingal Transport Study), including upgrades to the airport roundabout, core bus corridor and provision of a western access. This option provides flexibility regarding the phasing of infrastructure provision over the life of the Plan.

The approach provided by Alternative A would be more coordinated than that under Alternative B and less likely to result in surface access infrastructure capacity issues or unnecessary constraints to airport expansion, thus affecting Ireland's international connectivity.

Alternative B. Less flexible approach to managing airport service levels

Alternative B would focus on managing airport service levels by introducing a provision for specific infrastructure requirements to be phased with identified airport passenger numbers throughput in the LAP. The LAP under this alternative would not provide flexibility in relation to the levels and timing of infrastructure to be provided over the life of the plan and include criteria limiting expansion within the timeframe of the LAP to infrastructural provision.

The approach provided by Alternative B would provide less flexibility than that under Alternative A and would be more likely to result in surface access infrastructure capacity issues or refusals of planning permissions over the life of the Plan - resulting in constraints to airport expansion, thus affecting Ireland's international connectivity.

[45] Regarding the assessment of noise in the context of the growth scenarios, a review of existing noise zones associated with Dublin Airport has been undertaken as a result of advancement in scientific knowledge of the impact of noise on public health. The improved knowledge on aircraft noise is reflected in EU Regulation 598/2014, regarding management of aircraft noise, and British Standard BS8233:2014, regarding standards for assessment of noise, and has been incorporated into the revised noise zones for Dublin Airport. These noise zones are proposed based on best available scientific knowledge and are for the protection of public health into the future. The amended noise zones form part of a Proposed Variation to the Fingal Development Plan and if adopted will form an intrinsic part of that statutory document.

6.3.3 Alternatives for a Community Strategy for St. Margaret's

St. Margaret's has experienced low levels of recent development because of its location adjacent to Dublin Airport and restrictions on new residential development. Objective DA28 from the Fingal Development Plan requires that a Strategy is prepared for 'St. Margaret's Special Policy Area' involving consultation between the existing community, Fingal County Council and the daa. It does not however address the content of such a Strategy or require the Strategy to be prepared now as part of the Airport LAP preparation process.

Alternative A. Include a Community Strategy for St. Margaret's

Alternative A would include a Community Strategy for St. Margaret's in the LAP, outlining, among other things, environmental and community enhancements.

Such a Strategy would set out a context to widen the rural area within which residents within the inner noise zone might be considered for one off rural housing so that they can move further away from the inner noise zone (to be addressed in Variation to the Fingal Development Plan).

Alternative B. Do not include Community Strategy for St. Margaret's

Alternative B would not include a Community Strategy for St. Margaret's in the LAP.

Section 7 Evaluation of Alternatives

7.1 Introduction

This section provides a comparative evaluation of the environmental effects of implementing the alternatives for the Plan described in Section 6. This determination sought to understand whether each alternative was likely to improve, conflict with or have a neutral interaction with environmental components.

7.2 Methodology

The relevant aspects of the current state of the environment (see Section 4) and the Strategic Environmental Objectives (SEOs) (see Section 5 and Table 7.1) are used in the evaluation of alternatives.

The alternatives are evaluated using compatibility criteria (see Table 7.2) in order to determine how they would be likely to affect the status of the SEOs. The SEOs and the alternatives are arrayed against each other to identify which interactions would cause effects on specific components of the environment. Where the appraisal identifies a likely conflict with the status of an SEO the relevant SEO code is entered into the conflict column - e.g. B1 which stands for the SEO likely to be affected - in this instance 'Preserve, protect, maintain and where appropriate restore the terrestrial, aquatic and soil biodiversity, particularly EU and nationally designated sites and protected species'.

The interactions identified are reflective of likely significant environmental effects[46].

The degree to which effects can be fully determined at this level of decision-making is limited, as the Plan will be implemented through lower tier decision-making and associated environmental assessments, where relevant. Nonetheless, a comparative evaluation of the various alternatives can be provided.

[46] These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

Table 7.1 Strategic Environmental Objectives[47]

Environmental Component	SEO No.	SEO
Biodiversity, Flora and Fauna	1	**B1** Preserve, protect, maintain and where appropriate restore the terrestrial, aquatic and soil biodiversity, particularly EU and nationally designated sites and protected species
Population and Human Health	2	**PHH1** Provide high quality residential, working and recreational environments with access to sustainable transport options
	3	**PHH2** Protect human health
Soil	4	**S1** Safeguard the soil resources within Fingal in recognition of the strong agricultural and horticultural base
Water	5	**W1** Protect and where necessary improve and maintain water quality and the management of watercourses and groundwater, in compliance with the requirements of the Water Framework Directive objectives and measures
Air and Climatic Factors	6	**AC1** Minimise emissions of pollutants to air associated with transport
	7	**AC2** Minimise contribution to climate change by adopting adaptation and mitigation measures
Cultural Heritage	8	**CH1** Protect places, features, buildings and landscapes of cultural, archaeological and/ or architectural heritage from impact as a result of development in Fingal
Material Assets	9	**M1** Make best use of existing infrastructure and promote the sustainable development of new infrastructure to meet the needs of Fingal's population
Landscape	10	**L1** Protect and maintain the special qualities of the landscape character, including coastal character within Fingal

Table 7.2 Criteria for appraising the effect of Alternatives on SEOs

Likely to **Improve** status of SEOs			**Potential Conflict** with status of SEOs - likely to be mitigated by complying with other measures included within the Plan		
to the **Greatest** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree

[47] See Section 5 for a description of Strategic Environmental Objectives.

7.3 Cumulative Effects

Cumulative effects are one of the types of effects that have been considered by the assessment. Cumulative effects can be described as the addition of many small impacts to create one larger, more significant, impact.

There are two types of potential cumulative effects that have been considered, namely:

- Potential *Intra-Plan* cumulative effects - these arise from the interactions between different types of potential environmental effects resulting from a plan, programme, etc. The interrelationships between environmental components that help determine these effects are identified on Table 8.4 e.g. interrelationships between: human health and air quality; human health and water quality; air quality and vegetation; human health and flood risk; and ecology and water quality. Effects that have been identified by the assessment (see Table 8.3) include those that are interrelated; implementation of the Plan will not affect the interrelationships between these components.

- Potential *inter-Plan* cumulative effects - these arise when the effects of the implementation of one plan occur in combination with those of other policies, plans, programmes, projects, etc. With regard to potential *inter-Plan* cumulative environmental effects, these occur because of the combination of: environmental effects that are identified by the assessment; and the effects arising from other policies, plans, programmes, etc.

Policies, plans, programmes, etc. that are subject to their own environmental assessment requirements as relevant and have the potential to interact with the Dublin Airport Local Area Plan have been identified under Sections 2.5, 4, 5, and 6.2 and 9 and Appendix II of this report and are considered by the assessment of environmental effects. Examples include those relating to:

- Transport and/or land use (e.g. the National Planning Framework and associated National Development Plan 2018, the Fingal Development Plan 2017-2023, Proposed Variation No. 1 to the Fingal Development Plan, the Eastern and Midland Regional Spatial and Economic Strategy, the Irish Aviation Policy 2015 and the National Transport Authority's Greater Dublin Area Transport Strategy 2016-2035);
- Water services, waste management and energy (e.g. Irish Water's Water Services Strategic Plan and associated Capital Investment Plan and Eastern and Midlands Regional Waste Management Plan); and
- Environmental protection and management (e.g. River Basin Management Plan 2018-2021, National Mitigation Plan 2017, National Adaptation Framework 2018 and Eastern CFRAMS Flood Risk Management Plan 2018).

Development, growth and expansion at Dublin Airport, as provided for by other policies, plans, programmes, etc. (including those relating to land use planning and transport), and further facilitated by the Local Area Plan, has the potential to result in the following significant environmental effects[48]:

- An increase in travel related greenhouse gas and other emissions to air, including from aviation.
- Contributions towards achievement of climate mitigation and adaptation measures.
- An increase in the frequency of noise emissions. This has been mitigated by management techniques including by the application of Noise Zones.
- Contributions towards need for and use of water and wastewater treatment capacity arising from new developments and associated potential adverse effects.
- Facilitation of new development that is accompanied by appropriate levels of water services thereby contributing towards environmental protection.
- Potential cumulative effects upon the status of water bodies because of new development.

[48] The above selection of effects are expanded upon in more detail under Section 8.2 "*Overall Findings*". Section 8.2 includes Table 8.3, which details the various types of environmental effects likely to arise as a direct result of the Plan and in combination with other policies, plans, programmes, etc., including potentially significant adverse environmental effects.

- In combination with policies, plans, programmes, etc. from all sectors, potential adverse effects on all environmental components arising from new development.

These effects will be avoided, reduced or offset by various mitigation measures relating to sustainable development, environmental protection and environmental management, including those that have been integrated into the Draft Plan for the Airport and/or the existing Fingal Development Plan (see Section 9 of this report).

The SEA undertaken for the Plan has taken account of the need for the implementation of the Plan to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

7.4 Detailed Evaluation of Alternatives

7.4.1 Effects Common to All Alternatives

Each of the alternatives envisage – in compliance with the robust policy framework in place at national, regional and local level – development, growth and expansion of Dublin Airport. As such, various potential environmental effects are common to each of the alternatives. The environmental effects detailed on would be present, some to varying degrees, under the different alternatives.

Table 7.3 Effects Common to All Alternatives

Environmental Component	Environmental Effects, in combination with the wider planning framework[49]		SEO Codes
	Significant Positive Effect, likely to occur	Potential Significant Adverse Effect, if unmitigated	
Biodiversity and flora and fauna	• Contribution towards the protection of ecology by facilitating the continued development of lands that have relatively low levels of environmental sensitivities and are served by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contribution towards protection of biodiversity and flora and fauna by contributing towards the protection of environmental vectors, air, water and soil.	Arising from both construction and operation of airport related development/activities: • Especially in areas downstream of the airport, loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats – including terrestrial and aquatic habitats – and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna; • Habitat loss, fragmentation and deterioration, including patch size and edge effects and effects on aquatic habitats; and • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.	**B1**
Population and human health	• Contribution towards the protection of human health by facilitating the continued development of lands that are surrounded by relatively low levels of sensitive receptors and are served by infrastructure and services, thereby helping to avoid the need to develop lands that are surrounded by higher levels of sensitive receptors and are less well-serviced lands elsewhere in the County and beyond. • Contribution towards protection of human health by contributing towards the protection of environmental vectors, air, water and soil. • Contributes towards higher quality residential, working and recreational environments with access to sustainable transport options.	• Potential adverse effects on sensitive receptors arising from increased frequency of noise emissions. • Potential adverse effects arising from flood events. • Other potential interactions if effects arising from environmental vectors such as air and water.	**PHH1** **PHH2**
Soil	• Contribution towards the protection of sensitive soils such as peatlands and designated sites of geological heritage by facilitating the continued development of lands that have low levels of soil/geological sensitivities, thereby helping to avoid the need to develop lands that have higher levels of soil/geological sensitivities elsewhere in the County and beyond.	• Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. • Potential for riverbank erosion.	**S1**

[49] Effects include in-combination effects – those arising from services, infrastructure and other development (to service development, including that related to the Airport) that are planned for through the wider planning framework including the National Planning Framework and associated National Development Plan 2018, the Fingal Development Plan 2017-2023, the Eastern and Midland Regional Spatial and Economic Strategy and the Irish Aviation Policy 2015.

Environmental Component	Environmental Effects, in combination with the wider planning framework[49]		SEO Codes
	Significant Positive Effect, likely to occur	Potential Significant Adverse Effect, if unmitigated	
Water	• Contribution towards the protection of water by facilitating the continued development of lands that have relatively low levels of environmental sensitivities and are served by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.	• Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. • Increase in flood risk and associated effects in flood events.	**W1**
Air and climatic factors	• Contribution towards climate mitigation and adaptation by facilitating the continued use and development of an existing airport rather than developing a new airport elsewhere, which would result in more emissions and may be located on lands less well suited to climate adaptation, for example lands that have higher vulnerability to flood risk over time.	Development, growth and expansion at the airport, as provided for by other governmental policies and plans and further facilitated by the Local Area Plan will result in: • Potential conflict between increasing Air Traffic Movements (which is likely to result in an increase in greenhouse gas emissions and other emissions to air, including from aviation, with associated interactions with climatic factors) whilst also aiming to reduce carbon emissions in line with local, national and European environmental objectives. • Potential conflicts between transport movements, including car movements, and air quality. • Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors. • Potential conflicts with climate adaptation measures including those relating to flood risk management.	**AC1** **AC2**
Material Assets	• Contributes towards protection and allows for continued use and development of existing and planned public assets and infrastructure at/servicing the existing Dublin Airport lands - thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond.	• Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Increases in waste levels, including wastes from construction and galley wastes. • Intensifying existing uses and accommodating new development within the airport is likely to lead to greater pressure on roads and/or public transport, with associated traffic issues – please also refer to effects under Air and Climatic Factors. • Potential future changes in land use, including from agricultural grasslands to artificial surfaces. • Potential impacts upon public assets and infrastructure. • Potential secondary and cumulative effects identified include those relating to the accommodation of new employment development and increased air traffic movements within the airport will contribute towards needs for: o Housing, commercial, social, infrastructural and amenity requirements within the wider Fingal and Greater Dublin Area. o Such needs are considered in the preparation of, and provided for by, other land use plans. Such plans are subject to separate environmental assessment processes.	**M1**
Cultural Heritage	• Contribution towards the protection of cultural heritage designations elsewhere in the County by facilitating the continued development of lands that have relatively low levels of cultural heritage, thereby helping to avoid the need to develop more sensitive lands elsewhere in the County and beyond.	• Potential effects on designated and unknown archaeological heritage including entries to the Record of Monuments and Places, including underwater archaeology. • Potential effects on architectural heritage as designated or included within the NIAH and RPS.	**CH1**

Environmental Component	Environmental Effects, in combination with the wider planning framework[49]		SEO Codes
	Significant Positive Effect, likely to occur	Potential Significant Adverse Effect, if unmitigated	
Landscape	• Contribution towards the protection of landscape designations elsewhere in the County by facilitating the continued development of lands that have no landscape designations, thereby helping to avoid the need to develop more sensitive lands elsewhere in the County and beyond.	• Changes in the appearance of lands – however there are no landscape designations within or near the Plan lands and most views of the land are had by passing motorists along the M1 and M50 Motorways, stretches of which are enclosed by treelines making views intermittent, and the N2 National Primary Road and M2 Motorway. • Potential future changes in land use and visual appearance, including from agricultural grasslands to artificial surfaces. • Potential development-related environmental pressures along the boundary of the LAP sometimes referred to in planning as an 'Edge Effect' – that causes increased land-use intensification adjacent to an area that is zoned for a specialist use – such as an airport.	**L1**

7.4.2 Alternative Growth Scenarios for Passenger Numbers

Growth Scenarios A 'Baseline', B 'Downside' and C 'Upside' are assessed against each individual Strategic Environmental Objective on Table 7.4 using the methodology described under Section 7.2.

Of all three Growth Scenarios, C 'Upside' would result in the greatest extent and degree of potential significant adverse environmental effects arising sooner from both:

- The need to construct greater amounts of airport and supporting infrastructure and facilities with more capacity sooner. This would lead to effects including those relating to biodiversity and flora and fauna, human health, soil, ground and surface and ground water, climate adaptation, material assets, cultural heritage and landscape and are described on Table 7.3.
- The need to operate the airport and supporting infrastructure at higher capacities and frequencies sooner – leading to increased levels of emissions to air and water. These emissions include:
  - Increases in greenhouse gas emissions, including from aviation and surface access, leading to increased potential conflicts with local, national and European environmental objectives aiming to reduce greenhouse gas emissions[50].
  - Increase in the emissions of Nitrogen Dioxide and particulate matter to air, especially adjacent to main roads around the airport and at the bus depot at the airport, Ireland's busiest bus depot[51].
  - Increases in the frequency of noise emissions, including from aircraft[52].
  - Increases in emissions to water – including from run-off and treated waste water[53].

Of all three Growth Scenarios, B 'Downside' would result in the least extent and degree of potential significant adverse environmental effects (described above for Growth Scenario C 'Upside') arising later.

[50] Objectives and Draft Plan provisions in relation to greenhouse gas emissions are described under Section 4.9.1 and include those of the Government's Climate Action that identifies, in relation to emissions from air travel, that: *"Since 2012, greenhouse gas emissions associated with flights operating in the European Economic Area (EEA), including domestic flights as well as those to and from third countries, are covered by the EU ETS. Airlines are required to monitor, report and verify their emissions, and to surrender allowances against those emissions. Airlines receive tradable allowances covering a certain level of emissions from their flights per year and must purchase allowances to cover any shortfall between their allocated sum of free emissions allowances and their actual emissions, as reported annually. To support the planned development of a global Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) by the International Civil Aviation Organisation (ICAO), the EU agreed in 2014 to limit the scope of aviation in the EU ETS to flights within the EEA. CORSIA will come into effect in 2021 and aims to stabilise global aviation emissions at 2020 levels by requiring airlines to offset any emissions growth after 2020 by purchasing eligible emission units generated by projects that reduce emissions in other sectors. As Ireland is a member of ICAO, Irish aircraft operators will have to offset any emissions growth after 2020 by purchasing eligible emission units, i.e. pay full carbon price."*

[51] Various Air Quality Objectives have been integrated into the Plan.

[52] The planning framework for the airport and surrounding areas includes various provisions in relation to the management of noise, including those relating to Noise Zones.

[53] These emissions are required to comply with the objectives of the Water Framework Directive and/or the relevant EPA issued license, as relevant.

Growth Scenario, A 'Baseline' would result in potential significant adverse environmental effects (described above for Growth Scenario C 'Upside') that would be less in extent and degree and arising later than those for Growth Scenario C 'Upside') and greater in extent and degree and arising sooner than those for Growth Scenario B 'Baseline'.

By facilitating the continued development of lands that have relatively low levels of environmental sensitivities and are served by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond, each of the scenarios would contribute towards the protection and management of various environmental components (as detailed on Table 7.3).

Table 7.4 Assessment of Alternative Growth Scenarios against Strategic Environmental Objectives

Alternative Scenario	Likely to **Improve** status of SEOs			**Potential Conflict** with status of SEOs - likely to be mitigated by complying with other measures included within the Plan		
	to the **Greatest** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree
Growth Scenario A 'Baseline'		**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**			**B1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**	
Growth Scenario B 'Downside'		**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**		**B1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**		
Growth Scenario C 'Upside'		**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**				**B1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**

7.4.3 Alternatives for Managing Airport Service Levels

Alternatives for Managing Airport Service Levels are assessed against each individual Strategic Environmental Objective on Table 7.5 using the methodology described under Section 7.2.

The approach provided by Alternative A would be more coordinated than that under Alternative B and less likely to result in surface access infrastructure capacity issues and/or unnecessary constraints to airport expansion, thus supporting Ireland's international connectivity. The approach provided by Alternative B would be less coordinated than that under Alternative A and more likely to result in surface access infrastructure capacity issues and/or unnecessary constraints to airport expansion, thus potentially affecting Ireland's international connectivity.

Alternative A would allow for a flexible approach that would help to avoid the unnecessary development of infrastructure (the provision of relevant infrastructure may not be required in the event of improved modal shift or re-organisation of airport landside and/or airside processes). This would help to avoid unnecessary potential significant adverse effects on environmental components such as biodiversity and flora and fauna, human health, soil, water, air and climatic factors, material assets, cultural heritage and landscape, as detailed on Table 7.3.

Alternative B would focus on managing airport service levels by introducing a provision for specific infrastructure requirements to be phased with identified airport passenger numbers throughput in the LAP – this would not allow for a flexible approach that would help to avoid the unnecessary development of infrastructure (the provision of relevant infrastructure may not be required in the event of improved modal shift or re-organisation of airport landside and/or airside processes). This would have the potential to result in unnecessary potential significant adverse effects on environmental components such as biodiversity and flora and fauna, human health, soil, water, air and climatic factors, material assets, cultural heritage and landscape, as detailed on Table 7.3.

Alternative A would facilitate the sustainable development of Dublin Airport to a greater degree than Alternative B, including with respect to making the best use of existing infrastructure, promoting the sustainable development of new infrastructure and promoting access to sustainable transport options.

By facilitating the continued development of lands that have relatively low levels of environmental sensitivities and are served by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond, each of the alternatives would contribute towards the protection and management of various environmental components (as detailed on Table 7.3).

By facilitating the continued development of the airport, each alternative would result in the potential significant adverse environmental effects described on Table 7.3 arising from both: construction of airport and supporting infrastructure and facilities; and operation of the airport and supporting infrastructure.

Table 7.5 Assessment of Alternatives for Managing Airport Service Levels against Strategic Environmental Objectives

Alternative	Likely to **Improve** status of SEOs			**Potential Conflict** with status of SEOs - likely to be mitigated by complying with other measures included within the Plan		
	to the **Greatest** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree
Alternative A. **More flexible approach to managing airport service levels**	**PHH1 M1**	**B1 PHH2 S1 W1 AC1 AC2 CH1 L1**		**B1 PHH1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**		
Alternative B. **Less flexible approach to managing airport service levels**		**B1 PHH2 S1 W1 AC1 AC2 CH1 L1**	**PHH1 M1**			**B1 PHH1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**

7.4.4 Alternatives for a Community Strategy for St. Margaret's

Alternatives for a Community Strategy for St. Margaret's are assessed against each individual Strategic Environmental Objective on Table 7.6 using the methodology described under Section 7.2.

St. Margaret's has experienced low levels of recent development because of its location adjacent to Dublin Airport and restrictions on new residential development. Objective DA28 from the Fingal Development Plan requires that a Strategy is prepared for 'St. Margaret's Special Policy Area' involving consultation between the existing community, Fingal County Council and the daa. It does not however address the content of such a Strategy or require the Strategy to be prepared now as part of the Airport LAP preparation process.

Alternative A would include a Community Strategy for St. Margaret's in the LAP that would provide for community and environmental enhancements. These enhancements would be likely to contribute towards:

- The protection of biodiversity and flora and fauna, human health, water and soil by contributing towards the protection of natural heritage;
- The protection of the population of St. Margaret's by contributing towards higher quality residential, working and recreational environments with access to sustainable transport options;
- Climate mitigation measures (including those arising from linkages and potential enhancement of public transport);
- The continued use and development of existing public assets and infrastructure, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere; and
- The protection of the area's cultural heritage and character.

The Strategy would set out a context to widen the rural area within which residents within the inner noise zone might be considered for one off rural housing so that they can move further away from the inner noise zone – the Council is seeking to provide for this issue through Proposed Variation No. 1 to the Fingal Development Plan. As identified by the SEA Screening of the Proposed Variation, any potential interactions arising from changes to the rural housing provisions under the Development Plan would be in the context of the various environmental protection and management provisions that have been integrated into that Plan, including those detailed at Section 9 of this report, and adverse effects would be mitigated to the extent that any residual effects would not be significant. This situation would apply under both Alternatives A and B.

Works involved in the development of community and environmental enhancements would be likely to present potential significant adverse environmental effects on various components (see Table 7.3). By complying with appropriate mitigation measures – these are identified at Section 6 of this report – potential adverse environmental effects that could arise as a result of implementing these scenarios would be likely to be avoided, reduced or offset.

Alternative B would not include a Community Strategy for St. Margaret's in the LAP and would not result in the aforementioned interactions at this time; however, the Development Plan provides for such a Strategy and it is likely that one would be prepared eventually, eventually resulting in these interactions.

Table 7.6 Assessment of Alternatives for a Community Strategy for St. Margaret's against Strategic Environmental Objectives

Alternative	Likely to **Improve** status of SEOs			**Potential Conflict** with status of SEOs - likely to be mitigated by complying with other measures included within the Plan		
	to the **Greatest** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree
Alternative A. **Include a Community Strategy for St. Margaret's**	**B1 PHH1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**					**B1 PHH1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**
Alternative B. **Do not include Community Strategy for St. Margaret's**			**B1 PHH1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**	**B1 PHH1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**		

7.5 The Selected Alternatives

The Draft Plan was developed by the Planning Team taking into account both:

1. Environmental considerations that were identified by the SEA, including those detailed above; and
2. Planning - including social and economic - effects that were also considered by the Council.

The alternatives that were selected for the Draft Local Area Plan are follows:

- For **Alternative Growth Scenarios for Passenger Numbers**, the Plan utilises forecasts from **all Alternative Scenarios**, the '**Baseline**', '**Upside**' and '**Downside**' **Scenarios**, to provide the framework for development.

- For **Alternatives for Managing Airport Service Levels**, the Plan has selected **Alternative A: 'More flexible approach to managing airport service levels'**.

- For **Alternatives for a Community Strategy for St. Margaret's**, the Plan follows Alternative A and integrates such a strategy.

Table 8.3 in Section 8 details the overall findings of the assessment with respect to the Plan that was developed from the selected alternatives.

By complying with appropriate mitigation measures – these are identified at Section 9 of this report – potential adverse environmental effects which could arise as a result of implementing these scenarios would be likely to be avoided, reduced or offset.

Section 8 Evaluation of Draft Plan Provisions

8.1 Introduction

The relevant aspects of the current state of the environment (see Section 4) and the Strategic Environmental Objectives (see Section 5 and Table 8.1) are used in the assessment of Plan provisions.

The provisions are evaluated using compatibility criteria (see Table 8.2) in order to determine how they would be likely to affect the status of the SEOs. The SEOs and the Plan provisions are arrayed against each other in order to identify which interactions - if any - would cause effects on specific components of the environment. Where the appraisal identifies a likely conflict with the status of an SEO, the relevant SEO code is entered into the conflict column - e.g. B1 which stands for the SEO likely to be affected - in this instance 'Preserve, protect, maintain and where appropriate restore the terrestrial, aquatic and soil biodiversity, particularly EU and nationally designated sites and protected species'.

The interactions identified are reflective of likely significant environmental effects[54]:

1. Interactions that would be likely to improve the status of a particular SEO would be likely to result in a significant positive effect on the environmental component to which the SEO relates.

2. Interactions that would potentially conflict with the status of an SEO and would be likely to be mitigated would be likely to result in potential significant negative effects however these effects will be mitigated by measures which have been integrated into the Plan (see Section 9).

3. Interactions that would probably conflict with the status of an SEO and would be unlikely to be mitigated would be likely to result in a significant negative effect on the environmental component to which the SEO relates.

The degree to which effects can be fully determined at this level of decision-making is limited, as the Plan will be implemented through lower tier decision-making and environmental assessments where relevant. Nonetheless, a robust assessment of Plan provisions against SEOs, taking into account the existing environment and policy framework, can be provided.

[54] These effects include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

Table 8.1 Strategic Environmental Objectives[55]

Environmental Component	SEO No.	SEO
Biodiversity, Flora and Fauna	1	**B1** Preserve, protect, maintain and where appropriate restore the terrestrial, aquatic and soil biodiversity, particularly EU and nationally designated sites and protected species
Population and Human Health	2	**PHH1** Provide high quality residential, working and recreational environments with access to sustainable transport options
	3	**PHH2** Protect human health
Soil	4	**S1** Safeguard the soil resources within Fingal in recognition of the strong agricultural and horticultural base
Water	5	**W1** Protect and where necessary improve and maintain water quality and the management of watercourses and groundwater, in compliance with the requirements of the Water Framework Directive objectives and measures
Air and Climatic Factors	6	**AC1** Minimise emissions of pollutants to air associated with transport
	7	**AC2** Minimise contribution to climate change by adopting adaptation and mitigation measures
Cultural Heritage	8	**CH1** Protect places, features, buildings and landscapes of cultural, archaeological and/ or architectural heritage from impact as a result of development in Fingal
Material Assets	9	**M1** Make best use of existing infrastructure and promote the sustainable development of new infrastructure to meet the needs of Fingal's population
Landscape	10	**L1** Protect and maintain the special qualities of the landscape character, including coastal character within Fingal

Table 8.2 Criteria for appraising the effect of Plan provisions on SEOs

Likely to **Improve** status of SEOs	**Potentially Conflicting** with status of SEOs - likely to be mitigated	**Probable Conflict** with status of SEOs- unlikely to be mitigated	**No Likely** interaction with status of SEOs

[55] See Section 5 for a description of Strategic Environmental Objectives.

8.2 Overall Findings

The overall findings of the SEA are that:

- **The Plan is consistent with the wider planning framework and contributes towards compliance with environmental legislation and policy**

  The Plan is situated alongside a hierarchy of statutory documents setting out public policy for, among other things, the development, growth in traffic and expansion in connections at Dublin Airport. The Plan is consistent with these other existing policies, plans, etc., that have been subject to their own environmental assessment processes, as relevant.

  Fingal County Council have integrated various provisions relating to sustainable development, environmental protection and environmental management (including those arising from the SEA and AA processes) into both the Draft Plan for the Airport and the existing Fingal Development Plan (see Section 9 of this report).

  This facilitates compliance of the Plan with various European and National legislation and policies relating to the sustainable development, environmental protection and environmental management.

  Implementation of the Plan will contribute towards efforts to achieve a number of the 17 Sustainable Development Goals[56] of the 2030 Agenda for Sustainable Development, which were adopted by world leaders in 2015 at a United Nations Summit and came into force in 2016.

- **The Dublin Airport lands to which the Plan relates have relatively low levels of environmental sensitivities and are served by infrastructure and services**

  The Local Area Plan lands:

  - Include areas that contain relatively low levels of environmental sensitivities and designations, in comparison to other lands within the administrative area of Fingal County Council and beyond, including, for example, coastal fringes and more rural upland areas;
  - Are served by infrastructure and services, including those relating to transport that provide linkages to and from Dublin City, the Greater Dublin Area and beyond; and
  - Will benefit from major planned infrastructural public transport projects (MetroLink and the Swords Road Core Bus Corridor).

  By providing for growth and development within this area, the Plan would help to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond and would contribute towards sustainable development. This would be likely to result in positive environmental effects on the protection and management of environmental components:

  - Biodiversity and flora and fauna;
  - Population and human health;
  - Soil;

[56] Including:
- Goal 3. Ensure healthy lives and promote well-being for all at all ages.
- Goal 6. Ensure availability and sustainable management of water and sanitation for all.
- Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable.
- Goal 12. Ensure sustainable consumption and production patterns.
- Goal 13. Take urgent action to combat climate change and its impacts.
- Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

- Water (status of rivers and groundwater);
- Flood;
- Sustainable mobility and associated effects (energy usage and emissions to air including noise and greenhouse gases);
- Material Assets (facilitating development of well-serviced lands, contributes towards use of existing and planned infrastructure);
- Cultural Heritage (architectural and archaeological heritage); and
- Landscape and amenities.

- **The Plan is likely to contribute towards, in combination with other governmental policies, plans etc., an increase in greenhouse gas emissions – although such increases will be mitigated**

  In addition to supporting the implementation of international and industry–led initiatives associated with improvements to aircraft and engine design, air traffic and other operational efficiencies to reduce carbon emissions, ***the Draft Dublin Airport LAP*** places a strong emphasis on contributing towards carbon emissions reduction within areas which can be addressed within the planning process. In summary, the LAP seeks to pursue climate mitigation in line with global and national targets and support the transition towards a low carbon economy by seeking to reduce CO_2 emissions at the Airport in particular through:

  - Providing for specific proposals to reduce carbon emissions associated with surface access;
  - Requiring proposals for carbon reduction to be addressed in planning applications including proposals for clean energy; and
  - Support the transition towards a net zero target by 2050.

  The LAP includes various provisions that will contribute towards the objectives of the wide policy framework relating to climate mitigation, alternative energy use and energy/fuel efficiency (see Section 4.9.1 and Appendix II), including the Emissions Trading Scheme Directive, the Alternative Fuels Infrastructure Directive, the Energy Efficiency Directive, the Climate Action and Low Carbon Development Act 2015, the National Mitigation Plan 2017, the Action Plan for Aviation Emissions Reduction 2019 and the Climate Action Plan 2019.

  Strong emphasis is placed on reducing climate emissions through increasing use of more sustainable transport modes for surface access to and from Dublin Airport. Chapter 8 of the LAP sets out objectives to provide for significant improvements in mode split in favour of walking, cycling and public transport, as well as proposals for enhanced mobility management plans. A particular emphasis is placed on targeting these modes towards airport employees to achieve a greater impact on reduction of carbon emissions by enhancing accessibility to Swords to the north and Dublin City to the south. MetroLink is considered to be significant in achieving this aim in the longer term. Over the life of the Plan, more immediate action in reducing carbon emissions is to be achieved by supporting the provision of pedestrian and cycle routes and a Core Bus Corridor as part of the NTA BusConnects project. These objectives are complimented by restricting increased employee car parking at the Airport.

  Future development at Dublin Airport will be required to demonstrate the integration of renewables-focused energy generation systems to support a reduction in greenhouse gas emissions and a reduction in the Airport's carbon footprint. Development proposals at the Airport will be required to address carbon emissions as part of planning applications for larger scale developments.

  Furthermore, as identified in the Climate Action Plan (Government of Ireland, 2019):

  > *"Since 2012, greenhouse gas emissions associated with flights operating in the European Economic Area (EEA), including domestic flights as well as those to and from third countries, are covered by the EU ETS[57]. Airlines are required to monitor, report and verify their emissions, and to surrender allowances against those emissions. Airlines receive tradable allowances covering a certain level of emissions from their flights per year and must purchase allowances to cover any*

[57] Emissions Trading Scheme (ETS)

shortfall between their allocated sum of free emissions allowances and their actual emissions, as reported annually.

To support the planned development of a global Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) by the International Civil Aviation Organisation (ICAO), the EU agreed in 2014 to limit the scope of aviation in the EU ETS to flights within the EEA. CORSIA will come into effect in 2021 and aims to stabilise global aviation emissions at 2020 levels by requiring airlines to offset any emissions growth after 2020 by purchasing eligible emission units generated by projects that reduce emissions in other sectors. As Ireland is a member of ICAO, Irish aircraft operators will have to offset any emissions growth after 2020 by purchasing eligible emission units, i.e. pay full carbon price."

- **The Plan is likely to contribute towards, in combination with other governmental policies, plans etc., an increase in the frequency of noise from aircrafts – although such increases will be mitigated**

  Unacceptable exposure to aircraft noise can have effects on human health and well-being. Development, growth and expansion at the airport, and associated increases in air traffic movements, as provided for by other governmental policies, plans etc., is likely to result in increases in the frequency of noise from aircrafts, having the potential to adversely affect sensitive uses and human health, particularly in the vicinity of the Airport. Provisions have been integrated into the Plan and a Proposed Variation to the Fingal Development Plan 2017-2023, including those relating to Noise Zones, which will facilitate the mitigation of potential effects taking into account best available scientific knowledge and most up to date policy guidance.

- **Potentially Significant Adverse Effects to be mitigated**

  Table 8.3 describes the various types of environmental effects likely to arise as a direct result of the Plan and in combination with other policies, plans etc., including potentially significant adverse environmental effects. These effects will be avoided, reduced or offset by the various mitigation measures relating to sustainable development, environmental protection and environmental management (including those arising from the SEA and AA processes) that have been integrated into both the Draft Plan for the Airport and the existing Fingal Development Plan (see Section 9 of this report). Environmental impacts which occur, if any, will be determined by the nature and extent of multiple or individual projects and site-specific environmental factors. Avoidance of conflict with SEOs and the environment is dependent upon compliance with mitigation measures (as detailed in Section 9).

Table 8.3 Overall Findings – Environmental Effects arising from Draft Plan Provisions

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects – those arising from services, infrastructure and other development (to service development, including that related to the Airport) that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Fingal Development Plan 2017-2023, the Eastern and Midland RSES and the Irish Aviation Policy 2015.			SEO Codes
	Significant Positive Effect, likely to occur	**Potential Significant Adverse Effect, if unmitigated**	**Residual Adverse Significant Effects**	
Biodiversity and flora and fauna	• Contribution towards the protection of ecology by facilitating the continued development of lands that have relatively low levels of environmental sensitivities and are served by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contribution towards the maintenance of existing green infrastructure and associated ecosystem services, listed species, ecological connectivity and non-designated habitats. • Contribution towards protection and/or maintenance of biodiversity and flora and fauna by contributing towards the protection of environmental vectors, air, water and soil. Biodiversity and flora and fauna includes biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species (including birds and bats), listed/protected species, ecological connectivity and non-designated habitats (including terrestrial and aquatic habitats), and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna.	Arising from both construction and operation of airport related development/activities: • Especially in areas downstream of the airport, loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats – including terrestrial and aquatic habitats – and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna; • Habitat loss, fragmentation and deterioration, including patch size and edge effects and effects on aquatic habitats; and • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.	• Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces arising from projects consented through the statutory planning/consent-granting framework. • Losses or damage to ecology (these would be: in compliance with relevant legislation)	**B1**
Population and human health	• Contribution towards the protection of human health by facilitating the continued development of lands that are surrounded by relatively low levels of sensitive receptors and are served by infrastructure and services, thereby helping to avoid the need to develop lands that are surrounded by higher levels of sensitive receptors and are less well-serviced lands elsewhere in the County and beyond. • Contribution towards protection of human health by contributing towards the protection of environmental vectors, air, water and soil. • Noise and Public Safety Zones delineated for the airport and integrated into the Fingal Development Plan 2017-2023 cover a significant portion of north County Dublin and Fingal County Council's administrative area. These zones contribute towards the protection of human health and the successful operation of the airport and have implications for land uses and developments across an area that is multiple times the size of the Plan area lands. Proposed Variation No. 1 to the Fingal Development Plan 2017-2023 will facilitate the replacement of the older, current noise zones with new noise zones that take into account best available scientific knowledge and most up to date policy guidance. • Contributes towards higher quality residential, working and recreational environments with access to sustainable transport options and towards improvements at St. Margaret's.	• Potential adverse effects on sensitive receptors arising from increased frequency of noise emissions. • Potential adverse effects arising from flood events. • Other potential interactions if effects arising from environmental vectors such as air and water.	• Potential interactions with residual effects on environmental vectors.	**PHH1** **PHH2**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects – those arising from services, infrastructure and other development (to service development, including that related to the Airport) that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Fingal Development Plan 2017-2023, the Eastern and Midland RSES and the Irish Aviation Policy 2015.			SEO Codes
	Significant Positive Effect, likely to occur	**Potential Significant Adverse Effect, if unmitigated**	**Residual Adverse Significant Effects**	
Soil	• Contribution towards the protection of sensitive soils such as peatlands and designated sites of geological heritage by facilitating the continued development of lands that have low levels of soil/geological sensitivities, thereby helping to avoid the need to develop lands that have higher levels of soil/geological sensitivities elsewhere in the County and beyond. • Contribution towards the protection of the environment from contamination - as is provided for by the Fingal Development Plan, the highest standards of remediation, and where appropriate to consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land.	• Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. • Potential for riverbank erosion.	• Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces.	**S1**
Water	• Contribution towards the protection of water by facilitating the continued development of lands that have relatively low levels of environmental sensitivities and are served by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contributions towards the protection of water resources including the status of surface and groundwaters and water based designations. • Contribution towards flood risk management and appropriate drainage.	• Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. • Increase in flood risk and associated effects in flood events.	• Any increased loadings as a result of development to comply with the River Basin Management Plan. • Flood related risks remain due to uncertainty with regard to extreme weather events – however such risks will be mitigated by measures that have been integrated into the Plan.	**W1**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects – those arising from services, infrastructure and other development (to service development, including that related to the Airport) that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Fingal Development Plan 2017-2023, the Eastern and Midland RSES and the Irish Aviation Policy 2015.			SEO Codes
	Significant Positive Effect, likely to occur	**Potential Significant Adverse Effect, if unmitigated**	**Residual Adverse Significant Effects**	
Air and climatic factors	• Contribution towards climate mitigation and adaptation by facilitating the continued use and development of an existing airport rather than developing a new airport elsewhere, which would result in more emissions and may be located on lands less well suited to climate adaptation, for example lands that have higher vulnerability to flood risk over time. • In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, alternative energy use and energy/fuel efficiency (such as the Emissions Trading Scheme Directive, the Alternative Fuels Infrastructure Directive, the Energy Efficiency Directive, the Climate Action and Low Carbon Development Act 2015, the National Mitigation Plan 2017, the National Adaptation Framework 2018, the Action Plan for Aviation Emissions Reduction 2019 and the Climate Action Plan 2019), including through measures relating to: o EU Emissions Trading Scheme and global Carbon Offsetting and Reduction Scheme for International Aviation, offsetting any increases in emissions; o Proposals for carbon reduction to be addressed in planning applications; o Supporting the transition towards a net zero target by 2050; o Improving public transport links/surface access (including MetroLink and the Swords Road Core Bus Corridor); o Phasing out of older aircraft/vehicles, increase in use of biofuels and electric vehicles; and o Drainage, flood risk management and resilience. • Contribution towards maintaining and improving air quality and reducing/limiting increases in emissions through measures relating to: o Traffic management, transport infrastructure and technological developments as guided by other sectoral plans and programmes; o Improving public transport mode split; and o Undertake a review of existing air quality monitoring within and surrounding the airport. • Contribution towards the management of noise, including through provisions relating to Noise Zones that take into account best available scientific knowledge and most up to date policy guidance.	Development, growth and expansion at the airport, as provided for by other governmental policies and plans and further facilitated by the Local Area Plan will result in: • Potential conflict between increasing Air Traffic Movements (which is likely to result in an increase in greenhouse gas emissions and other emissions to air, including from aviation, with associated interactions with climatic factors) whilst also aiming to reduce carbon emissions in line with local, national and European environmental objectives. • Potential conflicts between transport movements, including car movements, and air quality. • Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors. • Potential conflicts with climate adaptation measures including those relating to flood risk management.	• An increase in travel related greenhouse gas and other emissions to air, including from aviation. This has been mitigated by provisions that have been integrated into the Plan, including those relating to sustainable mobility. • An increase in the frequency of noise emissions. This has been mitigated for new development by management techniques including by the application of Noise Zones. • Risks remain due to uncertainty with regard to climate and interactions with issues including flooding and material assets.	**AC1** **AC2**

Environmental Component	Environmental Effects, in combination with the wider planning framework Effects include in-combination effects – those arising from services, infrastructure and other development (to service development, including that related to the Airport) that are planned for through the wider planning framework including the NPF and associated NDP 2018, the Fingal Development Plan 2017-2023, the Eastern and Midland RSES and the Irish Aviation Policy 2015.			SEO Codes
	Significant Positive Effect, likely to occur	**Potential Significant Adverse Effect, if unmitigated**	**Residual Adverse Significant Effects**	
Material Assets	• Contributes towards protection and allows for continued use and development of existing and planned public assets and infrastructure at/servicing the existing Dublin Airport lands - thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contribution towards compliance with national and regional water services and waste management policies.	• Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Increases in waste levels, including wastes from construction and galley wastes. • Intensifying existing uses and accommodating new development within the airport is likely to lead to greater pressure on roads and/or public transport, with associated traffic issues – please also refer to effects under Air and Climatic Factors. • Potential future changes in land use, including from agricultural grasslands to artificial surfaces. • Potential impacts upon public assets and infrastructure. • Potential secondary and cumulative effects identified include those relating to the accommodation of new employment development and increased air traffic movements within the airport will contribute towards needs for: o Housing, commercial, social, infrastructural and amenity requirements within the wider Fingal and Greater Dublin Area. o Such needs are considered in the preparation of, and provided for by, other land use plans. Such plans are subject to separate environmental assessment processes.	• Exceedance of capacity in critical infrastructure risks remain, including due to uncertainty with regard to climate – however, such risks will be mitigated by: measures, including those requiring the timely provision of critical infrastructure, and compliance with the Water Framework Directive and associated River Basin Management Plan. • Residual wastes to be disposed of in line with higher level waste management policies. • Any impacts upon public assets and infrastructure to comply with statutory planning/consent-granting framework. • Potential future changes in land use, including from agricultural grasslands to artificial surfaces to comply with relevant plans and legislation. • Residual effects from contributing towards needs for other development within the wider Fingal and Greater Dublin Area.	**M1**
Cultural Heritage	• Contribution towards the protection of cultural heritage designations elsewhere in the County by facilitating the continued development of lands that have relatively low levels of cultural heritage, thereby helping to avoid the need to develop more sensitive lands elsewhere in the County and beyond. • Contribution towards compliance with archaeological and architectural heritage legislation and requirements.	• Potential effects on designated and unknown archaeological heritage including entries to the Record of Monuments and Places, including underwater archaeology. • Potential effects on architectural heritage as designated or included within the NIAH and RPS.	• Potential effects on known architectural and archaeological heritage and unknown archaeology however, these will occur in compliance with legislation.	**CH1**
Landscape	• Contribution towards the protection of landscape designations elsewhere in the County by facilitating the continued development of lands that have no landscape designations, thereby helping to avoid the need to develop more sensitive lands elsewhere in the County and beyond.	• Changes in the appearance of lands – however there are no landscape designations within or near the Plan lands and most views of the land are had by passing motorists along the M1 and M50 Motorways, stretches of which are enclosed by treelines making views intermittent, and the N2 National Primary Road and M2 Motorway. • Potential future changes in land use and visual appearance, including from agricultural grasslands to artificial surfaces. • Potential development-related environmental pressures along the boundary of the LAP sometimes referred to in planning as an 'Edge Effect' – that causes increased land-use intensification adjacent to an area that is zoned for a specialist use – such as an airport.	• Potential changes in land use and visual appearance, to comply with relevant plans and legislation. • Residual visual effects would comply with landscape designation provisions. • Fingal Development Plan measures to mitigate against development-related environmental pressures along the boundary of the LAP so that effects are residual.	**L1**

8.3 Appropriate Assessment and Strategic Flood Risk Assessment

Screening for Appropriate Assessment (AA) is being undertaken alongside the preparation and adoption of the Draft Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The emerging conclusion of the Screening for AA process is that the Draft Plan will not give rise to any effect on the ecological integrity of any European Sites, alone or in combination with other plans or projects.

A Strategic Flood Risk Assessment (SFRA) is also being undertaken alongside the preparation and adoption of the Draft Plan. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG, 2009).

The preparation of the Plan, SEA, SFRA and Screening for AA has taken place concurrently and the findings of the SFRA and Screening for AA have informed the SEA. Various policies and objectives have been integrated into the Plan through the SEA and SFRA processes.

8.4 Interrelationship between Environmental Components

The SEA Directive requires the Environmental Report to include information on the likely significant effects on the environment, including on issues such as biodiversity, fauna, flora, population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

Likely significant effects on environmental components that are identified include those that are interrelated; implementation of the Draft Plan will not affect the interrelationships between these components. The presence of significant interrelationships between environmental components is identified on Table 8.4.

Table 8.4 Potential for Interrelationships between Environmental Components

Component	Biodiversity, flora and fauna	Population and human health	Soil	Water	Air and Climatic factors	Material assets	Cultural heritage	Landscape
Biodiversity, flora and fauna		No	Yes	Yes	Yes	Yes	No	Yes
Population and Human Health			Yes	Yes	Yes	Yes	No	Yes
Soil				Yes	Yes	Yes	No	No
Water					Yes	Yes	No	No
Air and Climatic Factors						Yes	No	No
Material Assets							Yes	Yes
Cultural Heritage								Yes
Landscape								

8.5 Additional Detail on Plan provisions and associated Assessment

8.5.1 Chapter 4 Vision and Strategic Objectives

	Likely to **Improve** status of SEOs	Potential **Conflict** with status of SEOs- likely to be mitigated	Probable **Conflict** with status of SEOs- unlikely to be mitigated	**No Likely** interaction with status of SEOs
Vision To facilitate and manage the sustainable growth of Dublin Airport in a manner that reflects its status as Ireland's premier aviation gateway whilst safeguarding the core operational function of the Airport and supporting neighbouring communities, the economy and the environment. **Strategic Aims of the Local Area Plan** The strategic aims of the LAP include: • Support for airport safeguarding. • Support the continued sustainable growth of Dublin Airport and connectivity as a hub airport whilst ensuring protection of the environment. • Support the timely delivery of required infrastructure to facilitate airport growth. • Support the growth of the Airport as a major economic driver for the region. • Support continued communication between the Airport and neighbouring communities to protect community amenity and mitigate potential impact from airport growth in the interests of long term sustainability. **Key Strategic Objectives** The key strategic objectives seek to give effect to the strategic vision and aims of the LAP in guiding the future development and growth of Dublin Airport. *Safeguarding* Safeguard the current and future operational, safety, technical and development requirements of Dublin Airport and provide for its ongoing development within a sustainable development framework, having regard to both the environmental impact on local communities and the economic impact on businesses within the area. Promote appropriate land use patterns in the vicinity of the flight paths serving the Airport, having regard to the precautionary principle, based on existing and anticipated environmental and safety impacts of aircraft movements. *Growth and Connectivity* Provide for the necessary airside and landside infrastructure to facilitate the projected increase in passengers over the life of the LAP whilst safeguarding for longer term growth. *Economic* Recognise the unique potential of Dublin Airport as an economic generator and major employer in the County whilst protecting its core operational function as the Country's main international airport. *Sustainability* Adopt a sustainable approach to airport development which responds to important environmental constraints associated with future development and includes mitigation where necessary and appropriate.	**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**	**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**		

Environment To accelerate a transition to a low carbon economy by providing a reduction in $C0_2$ emissions. Reduce environmental impacts, build climate resilience and promote quality of life for neighbouring communities. All development proposals at Dublin Airport shall have regard to the requirement for environmental assessment including screening for Appropriate Assessment, Environmental Impact Assessment and Flood Risk Assessment in accordance with relevant legislation and guidelines. All proposals for development shall demonstrate compliance with relevant Fingal Development Plan provisions relating to sustainable development and the protection of the environment. Maintain and improve surface water quality at the Airport. *Design Quality* Promote exemplar design and the creation of a high quality environment to reflect Dublin Airport's status as an international gateway airport. Promote innovative, carbon reducing, energy efficient and renewable energy technologies in building design.				

SEA Commentary:

The assessment of the Vision, Strategic Aims and Key Strategic Objectives against Strategic Environmental Objectives (SEOs B1, PHH1, PHH2, S1, W1, AC1, AC2, CH1, M1 and L1) is consistent with the:

- *Environmental effects detailed under subsections 8.2 to 8.4 above, including at Table 8.3; and*
- *Assessments of the selected alternatives for the Plan provided at Section 7 of this report.*

These high-level provisions will contribute towards the planning framework for the airport and will, as a direct result of development and activities identified and in combination with the implementation of other provisions from the Plan and other plans, programmes, etc. (including those related to land use planning, transport and climate mitigation), contribute towards the overall continued development of the airport. (SEOs PHH1, M1 and AC2)

Sustainability and the environment have been integrated into these provisions:

- *Vision: "sustainable growth of Dublin Airport";*
- *Strategic Aims: "sustainable growth of Dublin Airport", "protection of the environment", "timely delivery of required infrastructure" and "protect community amenity and mitigate potential impact from airport growth in the interests of long term sustainability"; and*
- *Key Strategic Objectives: throughout, including the integration of objectives for Sustainability and Environment and covering issues including sustainable development, emissions, climate resilience, surface water quality, protection of the environment, environmental and safety impacts of aircraft movements, providing infrastructure and promoting carbon reducing, energy efficient and renewable energy technologies in building design.*

The SEA process that has been undertaken alongside the preparation of the Plan have brought about various changes to the emerging Plan through an iterative process. These measures are included in those reproduced above and under Sections 8.5.2 "Chapter 5 Transition to a Low Carbon Economy", 8.5.4 "Chapter 7 Airport Infrastructure", 8.5.5 "Chapter 8 Surface Access and Transport", 8.5.6 "Chapter 9 Environment and Community" and 9 "Mitigation Measures" of this SEA Environmental Report. By integrating all SEA recommendations into the Plan, the Council is helping to ensure that: the potential significant adverse effects of implementing the Plan are avoided, reduced or offset; and the beneficial environmental effects of implementing the Plan are maximised.

8.5.2 Chapter 5 Transition to a Low Carbon Economy

	Likely to **Improve** status of SEOs	Potential **Conflict** with status of SEOs- likely to be mitigated	Probable **Conflict** with status of SEOs- unlikely to be mitigated	**No Likely** interaction with status of SEOs
Climate Action Objectives *Objective CA01* Support relevant provisions contained in the Fingal County Council Climate Change Action Plan 2019-2024, the National Climate Action Plan 2019 and any subsequent plan(s), National Climate Change Adaptation Framework 2018 and any subsequent plan(s) and the National Mitigation Plan 2017 and any subsequent plan(s). *Objective CA02* Major applications for aviation related expansion at Dublin Airport shall be supported by a carbon reduction strategy to include mitigation measures for implementation as part of development proposals. *Objective CA03* Require that all new developments at the Airport incorporate design solutions aimed at reducing carbon emissions, including the incorporation of renewable energy and energy saving technologies where practicable, including the use of district heating/cooling systems. *Objective CA04* Facilitate, where appropriate, sustainable energy development proposals and projects at Dublin Airport. *Objective CA05* Facilitate improved public transport links to and from the Airport and require that all traffic generating applications at the Airport demonstrate measures to maximise non-motorised and public transport use while minimising the use of the private car. *Objective CA06* All planning applications including proposals for more than 20 car parking spaces shall demonstrate provision and installation of Electric Vehicle charging infrastructure. **Circular Economy and Waste Management Objectives** *Objective WM01* Support, where appropriate, the provision of proposals to aid the transition from a waste management economy to a green circular economy. *Objective WM02* Promote a waste prevention and minimisation programme to target all aspects of waste in the LAP boundary area, focusing on all airport, commercial and domestic waste producers.	**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**	**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**		

SEA Commentary:

The assessment of the Climate Action and Circular Economy and Waste Management Objectives against Strategic Environmental Objectives (SEOs B1, PHH1, PHH2, S1, W1, AC1, AC2, CH1, M1 and L1) is consistent with the:

- *Environmental effects detailed under subsections 8.2 to 8.4 above, including at Table 8.3; and*
- *Assessments of the selected alternatives for the Plan provided at Section 7 of this report.*

The provisions outlined in this Chapter of the Plan are primarily concerned with sustainable development and environmental protection/management.

These provisions will contribute towards the planning framework for the Plan area and will, as a direct result of development and activities identified and in combination with the implementation of other provisions from the Plan and other plans, programmes, etc. (including those related to land use planning, transport and climate mitigation), contribute towards the overall continued development of the Plan area. (SEOs PHH1, M1 and AC2)

The LAP and its Climate Action Objectives seek to pursue climate mitigation in line with global and national targets and support the transition towards a low carbon economy by seeking to reduce CO_2 emissions at the Airport. These provisions will contribute towards the objectives of the wide policy framework relating to climate mitigation, alternative energy use and energy/fuel efficiency,

including the Emissions Trading Scheme Directive, the Alternative Fuels Infrastructure Directive, the Energy Efficiency Directive, the Climate Action and Low Carbon Development Act 2015, the National Mitigation Plan 2017, the Action Plan for Aviation Emissions Reduction 2019 and the Climate Action Plan 2019. (SEOs B1, PHH1, PHH2, S1, W1, AC1, AC2 and M1)

In addition to supporting the implementation of international and industry–led initiatives associated with improvements to aircraft and engine design, air traffic and other operational efficiencies to reduce carbon emissions, a strong emphasis is placed on contributing towards carbon emissions reduction within areas which can be addressed within the planning process. Future development at Dublin Airport will be required to demonstrate the integration of renewables-focused energy generation systems to support a reduction in greenhouse gas emissions and a reduction in the Airport's carbon footprint. Development proposals at the Airport will be required to address carbon emissions as part of planning applications for larger scale developments. (SEOs M1 and AC2)

Objectives CA05 and CA06 are likely to contribute towards reducing/limiting increases in greenhouse gas emissions with respect to surface access to and from Dublin Airport. Chapter 8 of the LAP sets out further objectives relating sustainable transport modes for surface access, which are also likely to contribute towards climate mitigation. (SEOs PHH1, M1 and AC2)

Circular Economy and Waste Management Objectives WM01 and WM02 will contribute towards both waste management and efficiencies in the use of energy, materials and water resources, thereby further contributing towards reducing/limiting increases in greenhouse gas emissions. (SEOs M1 and AC2)

The SEA process that has been undertaken alongside the preparation of the Plan have brought about various changes to the emerging Plan through an iterative process. These measures are included in those reproduced above and under Sections 8.5.4 "Chapter 7 Airport Infrastructure", 8.5.5 "Chapter 8 Surface Access and Transport", 8.5.6 "Chapter 9 Environment and Community" and 9 "Mitigation Measures" of this SEA Environmental Report. By integrating all SEA recommendations into the Plan, the Council is helping to ensure that: the potential significant adverse effects of implementing the Plan are avoided, reduced or offset; and the beneficial environmental effects of implementing the Plan are maximised.

8.5.3 Chapter 6 The Economic Impact of Dublin Airport

	Likely to **Improve** status of SEOs	Potential **Conflict** with status of SEOs- likely to be mitigated	Probable **Conflict** with status of SEOs- unlikely to be mitigated	**No Likely** interaction with status of SEOs
Economic Objectives *Objective ED1* Ensure an appropriate balance is achieved between developing the unique potential of Dublin Airport as an economic generator and major employer in the County and protecting the core operational function as the Country's main international airport. *Objective ED2* In order to protect the core aviation function of Dublin Airport, no further non-air transport related office development shall be permitted at the HT zoned lands within the Airport until such time as required roads infrastructure is in place and public and sustainable transport such as the Swords CBC and Metrolink are operational. Any planning application for further phases of development at Dublin Airport Central shall be accompanied by a traffic impact assessment of the impact of development on core airport function. *Objective ED3* Engage with and support aviation uses associated with Dublin Airport to create quality and easily accessible employment opportunities for Fingal residents.	**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**	**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**		

SEA Commentary:

The assessment of Economic Objectives against Strategic Environmental Objectives (SEOs B1, PHH1, PHH2, S1, W1, AC1, AC2, CH1, M1 and L1) is consistent with the:

- *Environmental effects detailed under subsections 8.2 to 8.4 above, including at Table 8.3; and*
- *Assessments of the selected alternatives for the Plan provided at Section 7 of this report.*

The provisions outlined in this Chapter of the Plan are primarily concerned with protecting and supporting the core aviation and operational function of the airport (as Ireland's main international airport). (SEOs PHH1, M1 and AC2)

These provisions will contribute towards the planning framework for the Plan area and will, as a direct result of development and activities identified and in combination with the implementation of other provisions from the Plan and other plans, programmes, etc. (including those related to land use planning, transport and climate mitigation), contribute towards the overall continued development of the Plan area. (SEOs PHH1, M1 and AC2)

The SEA process that has been undertaken alongside the preparation of the Plan have brought about various changes to the emerging Plan through an iterative process. These measures are included in those reproduced under Sections 8.5.2 "Chapter 5 Transition to a Low Carbon Economy", 8.5.4 "Chapter 7 Airport Infrastructure", 8.5.5 "Chapter 8 Surface Access and Transport", 8.5.6 "Chapter 9 Environment and Community" and 9 "Mitigation Measures" of this SEA Environmental Report. By integrating all SEA recommendations into the Plan, the Council is helping to ensure that: the potential significant adverse effects of implementing the Plan are avoided, reduced or offset; and the beneficial environmental effects of implementing the Plan are maximised.

8.5.4 Chapter 7 Airport Infrastructure

	Likely to **Improve** status of SEOs	Potential **Conflict** with status of SEOs- likely to be mitigated	Probable **Conflict** with status of SEOs- unlikely to be mitigated	**No Likely** interaction with status of SEOs
Enabling Infrastructure to Facilitate Airport Growth *Objective EA1* All development proposals at Dublin Airport shall have regard to the requirement for environmental assessment including screening for Appropriate Assessment, Environmental Impact Assessment and Flood Risk Assessment in accordance with relevant legislation and guidelines. *Objective EA2* All development proposals in the LAP area shall safeguard key operational features of the Airport (runways, taxiways, obstacle surfaces, radar and control tower sightlines). *Objective EA3* All development proposals shall not prejudice the orderly operation and continued growth of the Airport including provision of a third terminal in the future. **Terminal Objectives** *Objective TP1* Facilitate the on-going augmentation and reconfiguration of existing terminal facilities at Dublin Airport to ensure optimal use, subject to assessment of surface access constraints. *Objective TP2* Support and facilitate the expansion and enhancement of US preclearance facilities. *Objective TP3* Support the detailed review of the three identified locations for a third terminal at Dublin Airport as set out in the Department of Transport, Tourism and Sport (DTTAS), 'Review of Future Capacity Needs at Ireland's State Airports', (August 2018) during the lifetime of this LAP with a view to identifying the most appropriate location. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring.*	**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**	**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**		

For Objective TP3 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that the DTTAS is designated for implementation. **Runway Objective** *Objective RW1* Facilitate the operation of runways at Dublin Airport in line with current operational procedures, as determined by way of existing planning permissions or as otherwise determined in line with the requirements of the Aircraft Noise (Dublin Airport) Regulation Act 2019. **Taxiway Objective** *Objective TW1* To facilitate the development, amendment and enhancement of existing taxiways where required to improve the efficiency of airside operations. **Aircraft Parking Stands, Piers and Boarding Gate Objectives** *Objective SBG1* Facilitate the development of new stands, piers and boarding gates in line with the expansion of associated runway and terminal capacity across the Airport having regard to the need to protect key operational areas. *Objective SB2G* Provide improved and expanded parking facilities for aircraft. **Apron Objectives** *Objective AP1* Facilitate the orderly expansion and the enhancement of existing aprons where required to support airfield infrastructure and operations. *Objective AP2* Facilitate the efficient operation of existing and new apron areas. **Cargo Objectives** *Objective CG1* Facilitate air cargo operations though the provision of improved apron facilities. *Objective CG2* Facilitate the relocation and expansion of new cargo facilities and potential consolidation of air cargo operations, subject to site specific flood risk assessment and transport assessment. **Maintenance Repair and Overhaul (MRO) Objectives** *Objective HM1* Facilitate and support the provision of aircraft maintenance, repair and overhaul (MRO) facilities. *Objective HM2* Facilitate the relocation and potential consolidation of maintenance, repair and overhaul (MRO) facilities. Such planning applications shall be accompanied by a demonstration of need, along with an operational overview of existing and proposed facilities and shall have regard to impact on neighbouring uses. **Engine Testing Objectives** *Objective ET1* Minimise the noise from engine testing activities by seeking to locate site engine ground running in suitable locations to reduce impact on populated residential areas. Any future planning proposals shall include a noise impact assessment and noise mitigation measures to ameliorate noise. **Airfield Vehicular Circulation Objectives** *Objective AVO1* Support and facilitate efficient circulation of airside ground support service vehicles within the airfield. *Objective AVO2* Support the replacement of the existing aircraft ground service vehicles with electric vehicles within the lifetime of this LAP. **Supporting Utility Infrastructure Objective** *Objective UT1* Support and facilitate the development and upgrade of strategic information telecommunications technology and other required utilities infrastructure.				

Operational Safeguarding Objective *Objective OS1* Control the type and height of any structures that may be developed in the environs of the Airport (in consultation with the Irish Aviation Authority) in accordance with the Obstacle Limitation Requirements of Regulation (EU) No 139/2014 (EASA Certification Specifications), previously required under ICAO Annex 14 and which are depicted on the aerodrome operator's safeguarding map. **Design Objectives** *Objective DS1* Ensure that all development at Dublin Airport will be of high quality design and finishes to reflect Dublin Airport's status as an international gateway airport. *Objective DS2* A design framework shall be undertaken by daa along with other relevant stakeholders, which shall identify materials, design themes and structural typologies for built form within the Airport campus for completion within six months of the adoption of the Dublin Airport Local Area Plan for agreement with the Planning Authority. Each planning application for development of built form within the Airport eastern campus shall comply with the material use and design themes established in the design framework. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective DS2 it identifies that the timeframe for the next step to be undertaken is "6 months" and that the daa is designated for implementation.* *Objective DS3* Any proposals for development of terminal extensions, or for new terminals shall adhere to the requirements of the design framework, unless alternatives are expressly agreed with the Planning Authority. *Objective DS4* Require that all planning applications be accompanied by a design statement to demonstrate the key principles for Airport design as set out in Fig. 7.2 of this LAP along with the requirements of the agreed design framework. *Objective DS5* Encourage sustainable development through energy end use efficiency and increasing the use of renewable energy in all extensions and new buildings by requiring the following criteria be applied to ensure design and assembly of low-energy buildings: (i)Responsible environmental management in construction; (ii)A menu of superior design and specification towards sustainable construction options to include the following: (iii)Site layout and associated bio-climatic/ passive solar design measures (iv)Use of daylight where to reduce energy consumption (v)Use of healthy and controllable ventilation systems (vi) Use of heat recovery systems including Combined Heat and Power (vii) Promotion of water conservation measures (viii)Use of building materials with lower embodied energy use in manufacture (ix)Use of lower energy efficient lighting systems (x)Incorporation of renewable energy systems, e.g. active solar, heat pumps, etc in all buildings (xi)Optimising the use of Building Energy Management Systems (xii)Use of Monitoring and Targeting systems to monitor best practice in energy consumption towards reducing CO2 emissions to the greatest extent practicable. A statement of consistency shall be required to be submitted with all planning applications for extensions and new buildings indicating measures proposed to comply with i – xii.				
SEA Commentary: *The assessment of Airport Infrastructure Objectives against Strategic Environmental Objectives (SEOs B1, PHH1, PHH2, S1, W1, AC1, AC2, CH1, M1 and L1) is consistent with the:* • *Environmental effects detailed under subsections 8.2 to 8.4 above, including at Table 8.3; and* • *Assessments of the selected alternatives for the Plan provided at Section 7 of this report.* *The provisions outlined in this Chapter of the Plan support the development of airport infrastructure to address capacity constraints as well as the safe operation of the airport.* *These provisions will contribute towards the planning framework for the Plan area and will, as a direct result of development and activities identified and in combination with the implementation of other provisions from the Plan and other plans, programmes, etc. (including those related to land use planning, transport and climate mitigation), contribute towards the overall continued development of the Plan area. (SEOs PHH1, M1 and AC2)*				

The construction of airport infrastructure and facilities would lead to a variety of potential significant adverse environmental effects on environmental components including biodiversity and flora and fauna, human health, soil, ground and surface and ground water, climate adaptation, material assets and cultural heritage (see Table 8.3). The operation of this infrastructure and any associated increase in air traffic movements that would be facilitated would potentially lead to increased levels of emissions including:

- *Increases in greenhouse gas emissions, including from aviation and surface access, leading to increased potential conflicts with local, national and European environmental objectives aiming to reduce greenhouse gas emissions. (SEO AC2)*
- *Increase in the emissions of Nitrogen Dioxide and particulate matter to air, especially adjacent to main roads around the airport and at the bus depot at the airport, Ireland's busiest bus depot. (SEOs PHH2 and AC1)*
- *Increases in the frequency of noise emissions, including from aircraft. (SEO PHH2)*
- *Increases in emissions to water – including from run-off and treated waste water. (SEOs W1 and M1)*

The SEA process that has been undertaken alongside the preparation of the Plan have brought about various changes to the emerging Plan through an iterative process. These measures are included in those reproduced above and under Sections 8.5.2 "Chapter 5 Transition to a Low Carbon Economy", 8.5.5 "Chapter 8 Surface Access and Transport", 8.5.6 "Chapter 9 Environment and Community" and 9 "Mitigation Measures" of this SEA Environmental Report. By integrating all SEA recommendations into the Plan, the Council is helping to ensure that: the potential significant adverse effects of implementing the Plan are avoided, reduced or offset; and the beneficial environmental effects of implementing the Plan are maximised.

Sustainability and the environment have been integrated into provisions including:

- *Objective EA1: "requirement for environmental assessment including screening for Appropriate Assessment, Environmental Impact Assessment and Flood Risk Assessment";*
- *Objective CG2: "subject to site specific flood risk assessment and transport assessment";*
- *Objective ET1: "Minimise the noise from engine testing activities"…"Any future planning proposals shall include a noise impact assessment and noise mitigation measures to ameliorate noise.";*
- *Objective OS1: "Control the type and height of any structures that may be developed in the environs of the Airport";*
- *Objective DS1: "high quality design and finishes"; and*
- *Objective DS5: "sustainable development through energy end use efficiency and increasing the use of renewable energy in all extensions and new buildings".*

The optimal use of existing terminal facilities (Objective TP1), improving the efficiency of taxiways and airside operations (Objective TW1), efficient airfield circulation (Objective AVO1), electric vehicles (AVO2) and upgrading strategic information telecommunications technology (Objective UT1) all have the potential to contribute towards climate mitigation.

Any proposals to develop a third terminal at the airport (Objective TP3) would have to be subject to its own environmental assessment provisions.

8.5.5 Chapter 8 Surface Access and Transport

	Likely to **Improve** status of SEOs	Potential **Conflict** with status of SEOs- likely to be mitigated	Probable **Conflict** with status of SEOs- unlikely to be mitigated	**No Likely** interaction with status of SEOs
South Fingal Transport Study 2019 *Objective SF01* Implement the recommendations of the South Fingal Transport Study in relation to Dublin Airport in order to ensure that a balanced response to the expansion of Dublin Airport occurs. It shall be a requirement that any planning applications to increase passenger numbers or that result in an increased demand for travel, shall clearly demonstrate the required transport infrastructure and measures to accommodate the proposed increase in line with the recommendations of the South Fingal Transport Study. *Objective SF02* Require, as part of any application that will result in increased demand for travel, the submission of a detailed transport model (based on the NTA ERM), to be undertaken in collaboration with stakeholders such as FCC, the National Transport Authority and Transport Infrastructure Ireland, in order to appropriately phase transport infrastructure requirements and the appropriate provision of car-parking as set out in the South Fingal Transport Study, relevant to the growth of Dublin Airport. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective SF02 it identifies that the timeframe for the next step to be undertaken is "First planning application" and that FCC, daa, TII and NTA are designated for implementation.* **External Road Network Access Objectives** *Objective EA1* Maintain and protect accessibility to Dublin Airport as a priority and provide for alternative access points to the road network in line with the recommendations of the South Fingal Transport Study *Objective EA2* Ensure that the transport network, including road infrastructure, has the capacity to better arrange traffic in the vicinity of Dublin Airport and to cater for the estimated growth in traffic into the future. This includes the upgrade of the Airport Roundabout to increase capacity, potentially through grade separation, as part of the first proposal to increase surface access passengers where it cannot be demonstrated that public transport provision would satisfy travel demand. *Objective EA3* Develop the external road network on a phased and planned basis. *Objective EA4* Reserve an alignment for the East West Link Road from Collinstown Lane to Clonshaugh Road. *Objective EA5* Provide for a Western Access route to Dublin Airport from the N2 corridor, with consideration being given to the future capacity requirements and development layout of Dublin Airport. *Objective EA6* Facilitate the delivery of the R132 Swords Road Core Bus Corridor and to seek its prioritisation as a scheme of strategic national importance in enabling sustainable growth of Dublin Airport in the short-term and in advance of MetroLink. *Objective EA7* To ensure proposals for road network improvements in the vicinity of Dublin Airport have regard to the effective operation of future bus services generally and on the Swords Road Core Bus Corridor in particular. *Objective EA8* Ensure proposals for road network improvements in the vicinity of Dublin Airport have regard to the effective operation of the M50 at key junctions such as the Airport Roundabout, M1 Airport Interchange, M50 Ballymun Interchange and the M1/M50 Interchange. *Objective EA9* Enable efficient and reliable bus access on the R108 and Collinstown Lane and to ensure this function is provided as part of a future capacity upgrade as appropriate, whilst allowing for any road realignment required as part of Dublin Airport's runway end safety area requirements and MetroLink portal construction.	**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**	**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**		

Objective EA10 Facilitate a contingency strategy and emergency access plan to cater for unexpected incidents on the external and internal road networks in consultation with the relevant bodies. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective EA10 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that the daa is designated for implementation.* *Objective EA11* Develop appropriate signage facilities such as Variable Message Signs in order to cater for unexpected incidents on the external and internal road network. *Objective EA12* To maintain and protect accessibility of freight to and from Dublin Airport as a priority in particular with respect to accessibility from the M1, M50 and the TEN-T network for freight movements. Any planning applications for new or expansion of freight and cargo operations within the DA zoned lands shall be accompanied by a traffic impact assessment. **Cycling Objectives** *Objective CY1* Provide for cycle paths separated from traffic along the R132 between Pinnock Hill Roundabout and the boundary with Dublin City Council as part of the Swords Core Bus Corridor. *Objective CY2* All development proposals within the LAP shall be required to demonstrate provision of high quality cycle facilities for employees, to include secure bike parking facilities, and changing and shower facilities to incentivise sustainable transport. **Public Transport Objectives** *Objective PT1* Encourage and facilitate the provision of an integrated public transport network to serve Dublin Airport. *Objective PT2* Require the development of a transport interchange including a MetroLink station at the centre of the Dublin Airport campus, in accordance with the implementation of MetroLink by 2027 by the National Transport Authority and Transport Infrastructure Ireland. *Objective PT3* Ensure that the proposed MetroLink station and interchange in Dublin Airport campus is undertaken to best international standards for public transport interchanges. *Objective PT4* Facilitate the delivery of the R132 Swords Road Core Bus Corridor and to seek its prioritisation as a scheme of strategic national importance in enabling sustainable growth of Dublin Airport in the short-term and in advance of MetroLink. *Objective PT5* Facilitate the development of bus priority facilities from the western side of the Dublin Airport campus to the terminal buildings, as a means of easing congestion on the existing road network. This will include the facilitation of car parking facilities on the western periphery and the implementation of bus priority facilities as needed, such as on the Collinstown Lane approach to the R132 Swords Road. *Objective PT6* Investigate and provide for connections from the western parts of the airport campus to MetroLink, in the context of potential future planned development to the west of the existing terminals. *Objective PT7* Identify and protect an alignment for the Orbital Metro (Metro West) and to ensure connectivity between Metro West and Dublin Airport. *Objective PT8* Support the provision of new and/or improved bus routes through and around the airport campus including bus lanes, shelters, access points and interchange facilities. *Objective PT9* Prioritise public transport and taxis on the external and internal road network. *Objective PT10* Facilitate provision of stronger connectivity between Dublin Airport and the heavy rail/DART network along existing roads, and to prioritise public and sustainable transport provision along any future East-West Link Road through development lands at Clonshaugh and Clongriffin. *Objective PT11* Provide real time information, wayfinding, directional and scheduling information regarding public transport services to allow passengers and staff to optimally use the public transport facilities available *Objective PT12* Provide for high quality bus priority on approach roads to Dublin Airport as required. *Objective PT13* Support the provision of improved taxi facilities.				

Internal Access Objectives *Objective IA1* Require a review of traffic management arrangements around the Dublin Airport campus including internal access road and connections to the surrounding transport network, in order to provide for safe and efficient movement for all modes, as part of any planning application for an increase in origin-destination passenger numbers, which should assess the need for alterations in road alignment, grade separation, directional movement, and variable messaging signage, in order to provide for safe and efficient movement for all modes. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective IA1 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that FCC, daa, NTA are designated for implementation.* *Objective IA2* Support the implementation of a transport service linking the terminal buildings with long-term car parks around the southern and western perimeter of Dublin Airport. *Objective IA3* Ensure that passenger facilities and services are designed and operated so as to enhance the experience of airport users. This includes provision of high quality, legible and efficient circulation routes for all modes, appropriate passenger and travel information, including public transport information boards, and wayfinding infrastructure, waiting facilities and other relevant passenger information. *Objective IA4* Work with all stakeholders to identify the most appropriate regime for the efficient operation of taxi services including the management of any permit system and the identification of future dedicated taxi routes within the campus. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective IA4 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that FCC, daa, NTA are designated for implementation.* *Objective IA5* Provision of additional car-parking to serve uses within the DA zoned lands shall only be facilitated if it can be sufficiently demonstrated that the accessibility of Dublin Airport for its core uses including passengers and freight traffic will not be compromised. **Mobility Management Objectives** *Objective MM1* Facilitate, with the relevant stakeholders, the coordination and/or amalgamation of all Mobility Management Plans within the Dublin Airport campus, to provide an over-arching MMP for submission to Fingal County Council for approval every three years. This will include the designation of a mobility manager for the Airport by daa who should co-ordinate, engage and review the MMP. The first co-ordinated MMP should be delivered within 2 years of the adoption of this LAP. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective MM1 it identifies that the timeframe for the next step to be undertaken is "24 months" and that FCC, daa, TII, NTA are designated for implementation.* *Objective MM2* Identify and implement measures to maximise non-motorised and public transport use while minimising the use of the private car. *Objective MM3* Increase emphasis on the promotion of public transport usage among staff and passengers. *Objective MM4* Require that all organisations operating within the Dublin Airport campus implement the over-arching Mobility Management Plan, either as part of regular stakeholder liaison or incorporation within the Development Management process. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective MM4 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that FCC is designated for implementation.* **Car Parking Objectives** *Objective CP1* Facilitate a review the location of bus/coach parking in front of Terminal 1 in conjunction with an analysis of new MetroLink Station, Terminal 2, and Kerb proposals, in order to provide for an efficient multi-mode transport interchange convenient to all airport users. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective CP1 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that FCC/daa are designated for implementation.*				

Objective CP2 Utilize existing car parking facilities in the most efficient way possible, including potentially though the use of (a) parking management systems (b) real time guidance information system and (c) variable message signs (VMS). *Objective CP3* Provide for the development of short-term and long-term passenger car parking facilities in an appropriate, coherent and transparent manner, phased in accordance with Dublin Airport's growth, and the transport infrastructural requirements of the South Fingal Transport Study. *Objective CP4* Limit the growth of employee parking in order to improve public transport usage, particularly in locations near the centre of Dublin Airport campus where land can be more efficiently used for other purposes. *Objective CP5* Provide for (a) good access from the external road network and (b) frequent shuttle connections to the terminal buildings, for long-term car parks and other strategic car parking facilities. *Objective CP6* Provide for short-term car parks close to the terminal buildings so as to minimise passenger-walking distances. *Objective CP7* Limit the provision of new car parking to serve non-core uses within the DA zoned lands, and to control the supply of car parking at Dublin Airport so as to a) maximise the use of public transport b) reduce traffic congestion and c) to secure the efficient use of land.				

SEA Commentary:

The assessment of Surface Access and Transport Objectives against Strategic Environmental Objectives (SEOs B1, PHH1, PHH2, S1, W1, AC1, AC2, CH1, M1 and L1) is consistent with the:

- *Environmental effects detailed under subsections 8.2 to 8.4 above, including at Table 8.3; and*
- *Assessments of the selected alternatives for the Plan provided at Section 7 of this report.*

The provisions outlined in this Chapter have been informed by the Council's South Fingal Transport Study, a technical transport planning study comprising strategic transport modelling (using the National Transport Authority's East Regional Model) and recommendations regarding transport infrastructure in compliance with higher level policy requirements, including those of the Fingal Development Plan, National Planning Framework, Eastern and Midlands Regional Spatial and Economic Strategy (and associated Metropolitan Area Strategic Plan) and the Transport Strategy for the Greater Dublin Area. These provisions will contribute towards the planning framework for the Plan area and will, as a direct result of development and activities identified and in combination with the implementation of other provisions from the Plan and other plans, programmes, etc. (including those related to land use planning, transport and climate mitigation), contribute towards the overall continued development of the Plan area.

The Surface Access and Transport Objectives will contribute towards sustainable mobility, including facilitating a shift from car to more sustainable and non-motorised transport modes, and associated positive environmental effects (including those related to greenhouse gas emissions to air, air quality, energy use and human health). Specifically, they will facilitate (SEOs PHH2, AC1, AC2 and M1):

- *Improvements to public transport infrastructure and services such as the Swords Core Bus Corridor, Metrolink and increased use of shuttle bus services in the vicinity of the airport.*
- *Upgrading of roads infrastructure, which will aid improved public transport movements, including: an upgrade to the Airport Roundabout to complement BusConnects and other bus services; and the provision of a western access route to provide contingency planning and serve improved shuttle transfers from parking and lands to the west of the Airport.*
- *Improvements in mode split in favour of walking, cycling and public transport, as well as proposals for enhanced mobility management plans. A particular emphasis is placed on targeting these modes towards airport employees to achieve a greater impact on reduction of carbon emissions by enhancing accessibility to Swords to the north and Dublin City to the south. MetroLink is considered to be significant in achieving this aim in the longer term. Over the life of the Plan, more immediate action in reducing carbon emissions is to be achieved by supporting the provision of pedestrian and cycle routes and the Swords Core Bus Corridor as part of the NTA BusConnects project. These objectives are complimented by restricting increased employee car parking at the Airport.*

These provisions will contribute towards the objectives of the wide policy framework relating to climate mitigation, alternative energy use and energy/fuel efficiency, including the Emissions Trading Scheme Directive, the Alternative Fuels Infrastructure Directive, the Energy Efficiency Directive, the Climate Action and Low Carbon Development Act 2015, the National Mitigation Plan 2017, the Action Plan for Aviation Emissions Reduction 2019 and the Climate Action Plan 2019. (SEOs B1, PHH1, PHH2, S1, W1, AC1, AC2 and M1)

The construction of surface access infrastructure would lead to a variety of potential significant adverse environmental effects on environmental components including biodiversity and flora and fauna, human health, soil, ground and surface and ground water, climate adaptation, material assets and cultural heritage (see Table 8.3). The operation of this infrastructure and any associated increase in air traffic movements that would be facilitated would potentially lead to increased levels of emissions including:

- *Increases in greenhouse gas emissions, including from aviation and surface access, leading to increased potential conflicts with local, national and European environmental objectives aiming to reduce greenhouse gas emissions. (SEO AC2)*
- *Increase in the emissions of Nitrogen Dioxide and particulate matter to air, especially adjacent to main roads around the airport and at the bus depot at the airport, Ireland's busiest bus depot. (SEOs PHH2 and AC1)*
- *Increases in the frequency of noise emissions, including from aircraft. (SEO PHH2)*
- *Increases in emissions to water – including from run-off and treated waste water. (SEOs W1 and M1)*

The SEA process that has been undertaken alongside the preparation of the Plan have brought about various changes to the emerging Plan through an iterative process. These measures are included in those reproduced above and under Sections 8.5.2 "Chapter 5 Transition to a Low Carbon Economy", 8.5.4 "Chapter 7 Airport Infrastructure", 8.5.6 "Chapter 9 Environment and Community" and 9 "Mitigation Measures" of this SEA Environmental Report. By integrating all SEA recommendations into the Plan, the Council is helping to ensure that: the potential significant adverse effects of implementing the Plan are avoided, reduced or offset; and the beneficial environmental effects of implementing the Plan are maximised.

Sustainable mobility, including facilitating a shift from car to more sustainable and non-motorised transport modes, and associated positive environmental effects (including those related to greenhouse gas emissions to air, air quality, energy use and human health), have been integrated into many of these objectives:

- *Objective SF02: "the submission of a detailed transport model";*
- *Objective EA6: "sustainable growth" "advance of MetroLink";*
- *Objective EA7: "effective operation of future bus services ";*
- *Objective EA8: "effective operation of the M50 at key junctions";*
- *Objective EA9: "efficient and reliable bus access";*
- *Objective EA12: "traffic impact assessment";*
- *Objective CY1: "cycle paths separated from traffic";*
- *Objective CY2: "high quality cycle facilities";*
- *Objective PT1: "facilitate the provision of an integrated public transport network to serve Dublin Airport";*
- *Objective PT2: "transport interchange including a MetroLink station at the centre of the Dublin Airport campus";*
- *Objective PT3: "best international standards for public transport interchanges";*
- *Objective PT4: "Facilitate the delivery of the R132 Swords Road Core Bus Corridor ";*
- *Objective PT5: "bus priority facilities";*
- *Objective PT6: "provide for connections";*
- *Objective PT7: "ensure connectivity between Metro West and Dublin Airport";*
- *Objective PT8: "new and/or improved bus routes through and around the airport campus";*
- *Objective PT9: "Prioritise public transport";*
- *Objective PT10: "prioritise public and sustainable transport provision";*
- *Objective PT11: "optimally use the public transport facilities available";*
- *Objective PT12: "high quality bus priority on approach roads";*
- *Objective IA1: "safe and efficient movement for all modes";*
- *Objective MM1: "Mobility Management Plans";*
- *Objective MM2: "maximise non-motorised and public transport use while minimising the use of the private car";*
- *Objective MM3: "promotion of public transport usage"; and*
- *Objective MM4: "Mobility Management Plan".*

8.5.6 Chapter 9 Environment and Community

	Likely to **Improve** status of SEOs	Potential **Conflict** with status of SEOs- likely to be mitigated	Probable **Conflict** with status of SEOs- unlikely to be mitigated	**No Likely** interaction with status of SEOs
Flood Risk Management Objectives *Objective FRM01* Have regard to the Planning System and Flood Risk Management, Guidelines for Planning Authorities (DoEHLG/OPW 2009) and Circular PL2/2014, through the use of the sequential approach and application of the Justification Tests for Development Plans and Development Management. *Objective FRM02* Protect existing flood risk management infrastructure and safeguard planned future infrastructure. *Objective FRM03* Implement and comply fully with the recommendations of the Dublin Airport Local Area Plan Strategic Flood Risk Assessment and Surface Water Management Plan. *Objective FRM04* Ensure that a Flood Risk Assessment is carried out for any development proposal, in accordance with the Planning System and Flood Risk Management, Guidelines for Planning Authorities (DoEHLG/OPW 2009) and the recommendations of the Dublin Airport Local Area Plan Strategic Flood Risk Assessment and Surface Water Management Plan. This assessment should be appropriate to the scale and nature of risk to the potential development. **Sustainable Urban Drainage Objectives** *Objective SW01* Require all applications for development at Dublin Airport to demonstrate compliance with the Dublin Airport Local Area Plan Strategic Flood Risk Assessment and Surface Water Management Plan. *Objective SW02* Introduce SUDS to new greenfield and brownfield development sites by adoption of the SUDS Management train approach. *Objective SW03* Introduce SUDS measures to existing paved/developed areas that do not currently have any SUDS features. *Objective SW04* Recharge the ground and reduce storm volumes by the use of suitable SUDS measures. *Objective SW05* Alleviate local flooding issues within the LAP area by providing positive drainage to affected areas. *Objective SW06* Reduce risk of bird strike when developing new sites and implementing SUDS measures. *Objective SW07* Establish riparian corridors free from new development along all significant watercourses and streams. Ensure a riparian buffer strip either side of all watercourses within the LAP lands. *Objective SW08* Develop a robust surface water management system in compliance with the recommendations of the Dublin Airport Local Area Plan Strategic Flood Risk Assessment and Surface Water Management Plan associated with this LAP, to meet future development needs and providing resilience to the effects of climate change. This will entail a full review of the current surface water system at Dublin Airport including a review of drain down times, attenuation volumes, discharge rates, and opportunities for the retrofit of SUDS. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective SW08 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that FCC/daa are designated for implementation.* *Objective SW09* Develop a policy on sustainable drainage systems in proximity to the Airport, to ensure aircraft safety. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective SW09 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that FCC/daa are designated for implementation.*	**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**	**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**		

Water Supply Objectives *Objective IW1* Liaise with Irish Water to ensure that an adequate supply of drinking water is available for the sustainable development of the Airport. *Objective IW2* Liaise with and work in conjunction with Irish Water during the lifetime of the plan for the provision, extension and upgrading of waste water collection and treatment systems necessary to facilitate the sustainable development of the Airport. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective IW2 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that FCC is designated for implementation.* *Objective IW3* Collaborate with Irish Water to ensure the delivery of their Capital Investment Plan or any other relevant investment works programme to ensure both foul and water capacity constraints are not a deterrent to sustainable development. **Surface Water Quality Objectives** *Objective SWQ01* Applications for development shall demonstrate that they will not deteriorate the status of either surface or ground water bodies. Where appropriate, permissions shall be conditioned to require the developer to undertake actions in order to improve the status of water bodies, in line with the Water Framework Directive. *Objective SWQ02* The Dublin Airport Local Area Plan Strategic Flood Risk Assessment and Surface Water Management Plan should strive to achieve 'good status' in all its associated waterbodies in compliance with the Water Framework Directive, the River Basin Management Plan for Ireland 2018-2021 and the associated Programme of Measures (second cycle) and in cooperation with the development and implementation of the third cycle River Basin Management Plan 2022-2027 and any subsequent plans. **Ground Water Objectives** **Objective** *WQ01* Strive to achieve 'good status' in all waterbodies in compliance with the Water Framework Directive, the River Basin Management Plan for Ireland 2018-2021 and the associated Programme of Measures (second cycle) and in cooperation with the development and implementation of the third cycle River Basin Management Plan 2022-2027. *Objective WQ02* Protect and develop, in a sustainable manner, the existing groundwater sources and aquifers in the County and control development in a manner consistent with the proper management of these resources in conformity with the River Basin Management Plan for Ireland 2018-2021 and the associated Programme of Measures (second cycle) and to cooperate with the development and implementation of the third cycle River Basin Management Plan 2022-2027 and any subsequent plans. *Objective WQ03* Implement the recommendations of the Groundwater Protection Scheme. **Air Quality Objectives** *Objective AQ1* Implement the provisions of EU and National legislation relating to air quality, as appropriate and in conjunction with all relevant stakeholders. *Objective AQ2* Implement the recommendations of the Dublin Regional Air Quality Management Plan or any subsequent plan(s) and any other relevant policy documents and legislation in order to preserve good air quality where it exists or aim to improve air quality where it is unsatisfactory. *Objective AQ3* Ensure that development proposals in the Dublin Airport LAP area take account of the current and predicted changes in air quality, greenhouse emissions and local environmental conditions. *Objective AQ4* Take account of the global and local impacts of aviation as well as the likelihood of international action to limit greenhouse gas emissions from aviation through action at the International Civil Aviation Organisation (ICAO)as mandated in the Kyoto Protocol when evaluation any proposals to significantly increase the use of Dublin Airport.				

Objective AQ5 Undertake a review of existing air quality monitoring (and associated appropriate remedial action in the case of breaches) within and surrounding the Airport (including changes in Particulate Matter (PM) at relevant locations). Where relevant, such a review should identify additional monitoring proposals, remedial actions and implementation systems – such needs shall be provided for by Fingal County Council and/or the daa. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective AQ5 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that FCC/daa are designated for implementation.* **Archaeology Objectives** *Objective AR1* Ensure archaeological remains within the LAP area are identified and fully considered at the very earliest stages of the development process and that schemes are designed to avoid impacting on the archaeological heritage. *Objective AR2* Protect the archaeological resource by favouring the preservation in situ or at a minimum, preservation by record of archaeological sites, monuments, features or objects in their settings. *Objective AR3* Require proposals for linear development over one kilometre in length; proposals for development involving ground clearance of more than half a hectare; or developments in proximity to areas with a density of known archaeological monuments and history of discovery; to include an Archaeological Impact Assessment and refer such applications to the relevant Prescribed Bodies. **Architectural Heritage Objectives** *Objective AH1* Have particular regard to the conservation and protection of the 1937 Old Central Terminal Building and its setting. *Objective AH2* Ensure as far as is consistent with the development of necessary airport facilities, the conservation of the architectural heritage within the LAP area and in the areas immediately adjoining the plan area. *Objective AH3* Seek the reuse and retention of the Protected Structures within the LAP lands. **Natural Heritage Objectives** *Objective NH1* Require that any development proposal involving significant removal of trees, hedgerow or which otherwise might impact on existing ecology including wildlife habitat, shall be accompanied by proposals for compensatory habitat either within the LAP boundary or on alternative lands in the general vicinity of the Airport. *Objective NH2* Mitigation should take place within the LAP area, wherever possible, and where this is not possible, outside this area but within the local area. Mitigation will include, inter alia, the provision of compensatory habitat, and should be aimed at ensuring there is no net loss of habitats and those populations of species of conservation concern are maintained. *Objective NH3* All development proposals shall have regard to the Fingal Heritage Plan 2018-2023 and the Fingal Biodiversity Plan 2010-2015 and any subsequent plan(s) where appropriate. **Community Support Objectives** *Objective CS1* Fingal County Council will continue to engage with local communities that are likely to be affected by the growth of the Airport with a view to ensuring their concerns are understood and appropriate mitigation proposals implemented where required. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective CS1 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that FCC is designated for implementation.* *Objective CS2* Support the continual engagement between the daa and neighbouring communities regarding airport growth. *Objective CS3* Support the implementation of the Strategy for the Special Policy Area of St. Margaret's included in Appendix 1 to this LAP.				

Appendix I Strategy for St. Margaret's Special Policy Area *Objective LEAP1* Commence preparation of a '**Local Enhancement Action Plan**' for the 'Special Policy Area' of St. Margaret's' within 12 months of the adoption of the Dublin Airport Local Area Plan, in consultation with the local community and other relevant stakeholders based on the focus areas identified in this strategy for St. Margaret's. This plan shall address priority actions, funding and a delivery programme for proposed environmental and community enhancement projects. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective LEAP1 it identifies that the timeframe for the next step to be undertaken is "12 months" and that FCC is designated for implementation.* *Community Facilities, Services and Public Open Space Objectives* *Objective CF1* Facilitate and co-operate with the community and other relevant stakeholders towards the enhancement and provision of community facilities and services to serve the existing community. *Objective CF2* Promote and facilitate the sympathetic refurbishment of the existing 'Parochial Hall' and examine the feasibility for the extension of this existing community facility. *Objective CF3* Support and encourage the sympathetic refurbishment of the existing vernacular outbuilding to the rear of the existing Parochial Hall for additional community uses. *Objective CF4* Encourage and facilitate the provision of a new high quality open space feature in the centre of St. Margaret's for a combination of active and passive recreational uses. *Objective CF5* Encourage and facilitate the development of a 'Multi-Use Games Area' in the vicinity of the school with appropriate pedestrian linkages. *Environmental Enhancement Objectives* *Objective EE1* Encourage and facilitate environmental improvements to the physical fabric of the policy area. *Objective EE2* Prepare a set of design principles for the public realm as part of the 'Local Enhancement Action Plan' to guide environmental improvements in the area. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective EE2 it identifies that the timeframe for the next step to be undertaken is "12 months" and that FCC are designated for implementation.* *Cultural Heritage Objectives* *Objective CH1* Preserve, protect and enhance the natural, built and cultural heritage features that form the basis of local attractions for St. Margaret's. *Objective CH2* Protect those buildings and structures of archaeological, architectural or historic importance and the settings thereof, which are indicated on the Record of Monuments & Places, Record of Protected Structures and in the current Fingal Development Plan 2017-2023. *Objective CH3* Retain, appreciate and revitalise appropriately the vernacular heritage of St. Margaret's by deterring the replacement of good quality vernacular buildings with modern structures and by protecting (through the use of ACAs, the RPS and in the normal course of development management) vernacular buildings where they contribute to the character of the area. *Objective CH4* Promote and facilitate the preservation of Dunsoghly Castle Complex and the appropriate and sympathetic development of this important heritage asset as a future heritage attraction having regard to the special significance of the site, in consultation with the appropriate heritage bodies and other relevant stakeholders. *Chapter 10 of the LAP sets out objectives that require review, additional strategy development or implementation monitoring. For Objective CH4 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that the relevant landowner is designated for implementation.* *Objective CH5* Support and facilitate the interpretation of important archaeological, architectural and historic features of the area. *Objective CH6* Support the appropriate and sympathetic provision of noise insulation to St. Margaret's Church in consultation with relevant church and heritage bodies. *Chapter 10 of the LAP sets out objectives that require review,*				

additional strategy development or implementation monitoring. For Objective CH6 it identifies that the timeframe for the next step to be undertaken is "Life of LAP" and that the relevant landowner is designated for implementation. *Objective CH7* Promote the conservation, enhancement, public access and enjoyment of the archaeological, natural and built heritage as important elements in the enhancement of the area. *Improving Linkages* *Objective IL1* Examine the feasibility of improved pedestrian linkages and circulation routes within St. Margaret's. *Objective IL2* Promote and facilitate a connecting pedestrian link between Dunsoghly Castle Complex and St. Margaret's policy area. *Objective IL3* Support and encourage public transport providers to enhance the provision of public transportation services to St. Margaret's and to support and facilitate rural community transport initiatives where possible, aimed at providing new services through the area, enhancing and expanding existing services.				

SEA Commentary:

The assessment of the Environment and Community Objectives against Strategic Environmental Objectives (SEOs B1, PHH1, PHH2, S1, W1, AC1, AC2, CH1, M1 and L1) is consistent with the:

- *Environmental effects detailed under subsections 8.2 to 8.4 above, including at Table 8.3; and*
- *Assessments of the selected alternatives for the Plan provided at Section 7 of this report.*

The provisions outlined in this Chapter of the Plan are primarily concerned with sustainable development and environmental protection/management.

These provisions will contribute towards the planning framework for the Plan area and will, as a direct result of development and activities identified and in combination with the implementation of other provisions from the Plan and other plans, programmes, etc. (including those related to land use planning, transport and climate mitigation), contribute towards the overall continued development of the Plan area.

Flood Risk Management and Sustainable Urban Drainage Objectives would further contribute towards the existing framework for flood risk management and drainage. Associated positive interactions would include those relating to biodiversity and flora and fauna, human health, water, material assets, resilience to climate change and cultural heritage. (SEOs B1, PHH2, W1, AC2, M1 and CH1)

Water Supply Objectives would further contribute towards the existing framework for water services effects and associated positive interactions with human health and the best use of existing infrastructure/sustainable development of new infrastructure. (PHH1, PHH2 and M1)

Surface Water Quality Objectives and Ground Water Objectives would further contribute towards the existing framework for maintenance and improvement of water status, and associated positive interactions with human health and the best use of existing infrastructure/sustainable development of new infrastructure. (SEOs W1, PHH2 and M1)

Air Quality Objectives would further contribute towards the existing framework for air quality protection and reducing/limiting increases in greenhouse gas emissions, and associated positive interactions with human health, biodiversity and flora and fauna, water, material assets and resilience to climate change. (SEOs PHH2, B1, W1, AC1 and AC2)

Archaeology and Architectural Heritage Objectives would further contribute towards the existing framework for cultural and natural heritage protection and management. (SEOs B1, CH1, W1, S1 and PHH2)

Community Support Objectives including the Strategy for the Special Policy Area of St. Margaret's included in Appendix I to the LAP would be likely contribute towards:

- *The protection of biodiversity and flora and fauna, human health, water and soil by contributing towards the protection of natural heritage; (SEOs B1, CH1, W1, S1 and PHH2)*
- *The protection of communities by contributing towards higher quality residential, working and recreational environments with access to sustainable transport options; (SEO PHH1)*
- *Climate mitigation measures (including those arising from linkages and potential enhancement of public transport); (SEOs AC2 and PHH1)*
- *The continued use and development of existing public assets and infrastructure, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere; (SEO M1) and*
- *The protection of the area's cultural heritage and character. (SEOs CH1 and L1)*

The Community Strategy for St. Margaret's sets out a context to widen the rural area within which residents within the inner noise zone might be considered for one off rural housing so that they can move further away from the inner noise zone – the Council is seeking to provide for this issue through Proposed Variation No. 1 to the Fingal Development Plan. As identified by the SEA Screening of the Proposed Variation, any potential interactions arising from changes to the rural housing provisions under the Development Plan would be in the context of the various environmental protection and management provisions that have been integrated into that Plan, including those detailed at Section 9 of this report, and adverse effects would be mitigated to the extent that any residual effects would not be significant.

Works involved in the development of community and environmental enhancements under the Community Strategy would be likely to present potential significant adverse environmental effects on various components (see Table 8.3). (SEOs B1, PHH1, PHH2, S1, W1, AC1, AC2, CH1, M1 and L1)

The SEA process that has been undertaken alongside the preparation of the Plan have brought about various changes to the emerging Plan through an iterative process. These measures are included in those reproduced above and under Sections 8.5.2 "Chapter 5 Transition to a Low Carbon Economy", 8.5.4 "Chapter 7 Airport Infrastructure", 8.5.5 "Chapter 8 Surface Access and Transport", and 9 "Mitigation Measures" of this SEA Environmental Report. By integrating all SEA recommendations into the Plan, the Council is helping to ensure that: the potential significant adverse effects of implementing the Plan are avoided, reduced or offset; and the beneficial environmental effects of implementing the Plan are maximised.

Section 9 Mitigation Measures

9.1 Introduction

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Draft Plan. Various environmental sensitivities and issues have been communicated to the Council through the SEA process.

By integrating SEA recommendations into the Draft Plan, the Council has helped to ensure that:

- The potential significant adverse effects of implementing the Plan are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan are maximised.

Mitigation was achieved through the following:

- Early work undertaken by the Council that will contribute towards environmental protection and sustainable development;
- Consideration of alternatives; and
- Integration of individual measures into the Draft Local Area Plan and the existing Fingal Development Plan.

9.2 Early and strategic work undertaken by the Council to ensure contribution towards environmental protection and sustainable development

Far in advance of the placing of the Draft Plan (and associated documents) on public display, Fingal County Council undertook various work in order to inform the preparation of the Draft Plan. This included:

- Undertaking detailed Pre-Draft Public Consultation on the content of the Plan;
- Beginning the SEA early enough in the process so that it could inform the Draft Plan;
- Integration of sustainability and environment considerations into the Plan's Key Strategic Objectives, with one on Sustainability[58] and one on Environment[59]; and
- Assembling and analysing data from various sources to inform Plan provisions relating to climate mitigation and adaptation, airport infrastructure, airport related development, surface access, environment and community.

The findings of this early and strategic work have been integrated into the Draft Plan and will contribute towards environmental protection and sustainable development within the Airport area and wider County.

[58] *"Adopt a sustainable approach to airport development which responds to important environmental constraints associated with future development and includes mitigation where necessary and appropriate"*

[59] *"To accelerate a transition to a low carbon economy by providing a reduction in $C0_2$ emissions. Reduce environmental impacts, build climate resilience and promote quality of life for neighbouring communities. All development proposals at Dublin Airport shall have regard to the requirement for environmental assessment including screening for Appropriate Assessment, Environmental Impact Assessment and Flood Risk Assessment in accordance with relevant legislation and guidelines. All proposals for development shall demonstrate compliance with relevant Fingal Development Plan provisions relating to sustainable development and the protection of the environment. Maintain and improve surface water quality at the Airport."*

9.3 Consideration of Alternatives

As part of the Plan preparation/SEA process, the Council considered a number of alternatives for the Draft Plan (see Sections 6 and 7 of this SEA Environmental Report). These alternatives were assessed by the SEA process and the findings of this assessment informed the selection of preferred alternatives, facilitating an informed choice with respect to the type of Plan that was prepared and placed on public display.

9.4 Integration of individual measures into Draft LAP and the Fingal Development Plan

Various provisions have been integrated into the text of the Draft Dublin Airport Local Area Plan over multiple iterations through the Plan-preparation and SEA process.

In addition to the mitigation measures that have been integrated into the Draft Plan, as identified by the Plan's Key Strategic Objective relating to the Environment (see Section 9.2 above), all development is required to demonstrate compliance with relevant Fingal Development Plan provisions relating to sustainable development and environmental protection.

Table 9.1 links key mitigation measure(s) from both the Draft Dublin Airport Local Area Plan and the existing Fingal Development Plan to the potential adverse effects of implementing the Draft Plan, if unmitigated. The measures generally benefit multiple environmental components i.e. a measure providing for the protection of biodiversity, flora and fauna could beneficially impact upon the minimisation of flood risk and the protection of human health, for example.

Table 9.1 Integration of Environmental Considerations

Environmental Component	Mitigation already in force – from the Fingal Development Plan	Mitigation from the Draft Local Area Plan
All	Objective DMS02 Ensure Local Authority development proposals are subject to environmental assessment, as appropriate, including Screening for Appropriate Assessment and Environmental Impact Assessment.	**Key Strategic Objective Sustainability**: *Adopt a sustainable approach to airport development which responds to important environmental constraints associated with future development and includes mitigation where necessary and appropriate.* **Key Strategic Objective Environment**: *To accelerate a transition to a low carbon economy by providing a reduction in C02 emissions. Reduce environmental impacts, build climate resilience and promote quality of life for neighbouring communities. All development proposals at Dublin Airport shall have regard to the requirement for environmental assessment including screening for Appropriate Assessment, Environmental Impact Assessment and Flood Risk Assessment in accordance with relevant legislation and guidelines. All proposals for development shall demonstrate compliance with relevant Fingal Development Plan provisions relating to sustainable development and the protection of the environment. Maintain and improve surface water quality at the Airport.*
Biodiversity and Flora and Fauna	Also, see measures related to soil, water quality, air and material assets. Objective NH01 Support the implementation of the Fingal Heritage Plan in relation to the promotion and protection of Fingal's Natural Heritage. Objective NH02 Integrate provision for biodiversity with public open space provision and sustainable water management measures (including SuDS) where possible and appropriate. Objective NH03 Implement the Fingal Biodiversity Action Plan 2015 and any revisions thereof in partnership with all relevant stakeholders. Objective NH04 Undertake necessary ecological surveys and complete habitat mapping for the County during the lifetime of the Plan, prioritising sensitive coastal areas. Objective NH05 Raise awareness in relation to biodiversity across the community. Objective NH06 Consider developing a Natural Heritage Trail or Trails to support raising awareness about these natural assets amongst the public. Objective NH07 Actively support the aims and objectives of the All Ireland Pollinator Plan 2015-2020 by encouraging bee keeping and other measures to protect and increase the population of bees and other pollinating insects in Fingal. Objective NH08 Ensure that the management of the Council's open spaces and parks is pollinator-friendly, provides more opportunities for biodiversity, and does not introduce or lead to the spread of invasive species. Objective NH09 Support the National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, in the maintenance and, as appropriate, the achievement of favourable conservation status for the habitats and species in Fingal to which the Habitats Directive applies. Objective NH10 Ensure that the Council takes full account of the requirements of the Habitats and Birds Directives, as they apply both within and without European Sites in the performance of its functions. Objective NH11 Ensure that the Council, in the performance of its functions, takes full account of the objectives and management practices proposed in any management or related plans for European Sites in and adjacent to Fingal published by the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Objective NH12 Undertake field studies and map invasive species throughout the County and initiate control programs with all relevant stakeholders and landowners to control the key invasive species. Objective NH13 Ensure that proposals for development do not lead to the spread or introduction of invasive species. If developments are proposed on sites where invasive species are or were previously present, the applicants will be required to submit a control and management program for the particular invasive species as part of the planning process and to comply with the provisions of the European Communities Birds and Habitats Regulations 2011 (S.I. 477/2011). Objective NH14 Protect inland fisheries within and adjacent to Fingal and take full account of Inland Fisheries Ireland Guidelines in this regard when undertaking, approving or authorising development or works which may impact on rivers, streams and watercourses and their associated habitats and species. Objective NH15 Strictly protect areas designated or proposed to be designated as Natura 2000 sites (i.e. Special Areas of Conservation (SACs) and Special Protection Areas (SPAs); also known as European sites) including any areas that may be proposed for designation or designated during the period of this Plan. Objective NH16 Protect the ecological integrity of proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, Refuges for Fauna, and Habitat Directive Annex I sites. Objective NH17 Ensure that development does not have a significant adverse impact on proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, Refuges for Fauna, Habitat Directive Annex I sites and Annex II species contained therein, and on rare and threatened species including those protected by law and their habitats. Objective NH18 Protect the functions of the ecological buffer zones and ensure proposals for development have no significant adverse impact on the habitats and species of interest located therein.	Also, see measures related to soil, water quality, air and material assets. **Natural Heritage Objectives** **Objective NH1** Require that any development proposal involving significant removal of trees, hedgerow or which otherwise might impact on existing ecology including wildlife habitat, shall be accompanied by proposals for compensatory habitat either within the LAP boundary or on alternative lands in the general vicinity of the Airport. **Objective NH2** Mitigation should take place within the LAP area, wherever possible, and where this is not possible, outside this area but within the local area. Mitigation will include, inter alia, the provision of compensatory habitat, and should be aimed at ensuring there is no net loss of habitats and those populations of species of conservation concern are maintained. **Objective NH3** All development proposals shall have regard to the Fingal Heritage Plan 2018-2023 and the Fingal Biodiversity Plan 2010-2015 and any subsequent plan(s) where appropriate.

Environmental Component	Mitigation already in force – from the Fingal Development Plan	Mitigation from the Draft Local Area Plan
	Objective NH19 Develop Ecological Masterplans for the Rogerstown, Malahide and Baldoyle Estuaries focusing on their ecological protection and that of their surrounding buffer zones. Objective NH20 Maintain and/or enhance the biodiversity of the Nature Development Areas indicated on the Green Infrastructure maps. Objective NH21 Develop a demonstration site for each Nature Development Area. Objective NH22 Explore the development of a small grants scheme to assist landowners with the management of their lands within the ecological network for nature conservation purposes. Objective NH23 Protect the ecological functions and integrity of the corridors indicated on the Development Plan Green Infrastructure Maps. Objective NH24 Protect rivers, streams and other watercourses and maintain them in an open state capable of providing suitable habitat for fauna and flora, including fish. Objective NH25 Provide for public understanding of and public access to rivers, waterway corridors and wetlands, where feasible and appropriate, in partnership with the National Parks and Wildlife Service, Waterways Ireland and other relevant stakeholders, while maintaining them free from inappropriate development and subject to Ecological Impact Assessment and screening for Appropriate Assessment as appropriate. Objective NH26 Promote the use of watercourses, rivers and lakes for the pursuit of angling, through working with Inland Fisheries Ireland to improve water quality, to improve fish stocks and to provide safe access to fishing, where appropriate, taking full account of the requirements of the Habitats Directive and other relevant legislation. Objective NH27 Protect existing woodlands, trees and hedgerows which are of amenity or biodiversity value and/or contribute to landscape character and ensure that proper provision is made for their protection and management. Objective NH28 Consider the use of Tree Preservation Orders (TPOs) to protect important trees, groups of trees or woodlands. Objective NH29 Promote, encourage and support NeighbourWood Schemes by identifying suitable areas and support other initiatives that aim to establish and enhance woodlands for recreational purposes in partnership with local communities. Objective GI10 Develop and implement a Green Infrastructure Strategy for Fingal in partnership with key stakeholders and the public, taking an ecosystem services approach to strategy development and public consultation. Objective GI11 Ensure the Green Infrastructure Strategy for Fingal protects existing green infrastructure resources and plans for future green infrastructure provision which addresses the five main themes identified in this Plan, namely: • Biodiversity, • Parks, Open Space and Recreation, • Sustainable Water Management, • Archaeological and Architectural Heritage, • Landscape. Objective GI15 Ensure the protection of European Sites is central to Fingal County Council's Green Infrastructure Strategy. Objective GI18 Require all Local Area Plans to protect, enhance, provide and manage 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 GI19 Set targets for the provision of green infrastructure elements such as trees and green roofs as part of the preparation of Local Area Plans. Objective GI20 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 GI21 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 GI22 Require all proposals for large scale development such as road or drainage schemes, wind farms, housing estates, industrial parks or shopping centres to submit a Green Infrastructure Plan as an integral part of a planning application. Objective GI23 Investigate the development decision-support tools based on existing models, such as the Seattle Green Factor, to assist in the integration of different green infrastructure elements into development proposals. Objective GI24 Ensure biodiversity conservation and/or enhancement measures, as appropriate, are included in all proposals for large scale development such as road or drainage schemes, wind farms, housing estates, industrial parks or shopping centres. Objective GI25 Integrate provision for biodiversity with public open space provision and sustainable water management measures (including SuDS) where possible and appropriate. Objective MT14 The Council will work in cooperation with the NTA and adjoining Local Authorities to implement the Greater Dublin Area Cycle Network Plan subject to detailed engineering design and the mitigation measures presented in the SEA and Natura Impact Statement accompanying the NTA Plan. Objective LP01 Require that the design of lighting schemes minimises the incidence of light spillage or pollution into the surrounding environment. New schemes shall ensure that there is no unacceptable adverse impact on neighbouring residential or nearby properties; visual amenity and biodiversity in the surrounding areas. Objective LP02 Establish a hierarchy of light intensities on lands that are subject to Local Area Plans, Masterplans and larger tracts of lands subject to comprehensive developments in order to ensure that environmental impacts are minimised as far as possible through the designation of Environmental Zones.	

Environmental Component	Mitigation already in force – from the Fingal Development Plan	Mitigation from the Draft Local Area Plan
	Objective DMS01 Ensure that all plans and projects in the County which could, either individually or in combination with other plans and projects, have a significant effect on a European site or sites are subject to Screening for Appropriate Assessment. Objective DMS17 Promote and encourage the use of green walls and roofs as part of an integrated approach to green infrastructure provision. Objective DMS71 Provide green corridors in all new developments where the opportunity exists. Objective DMS72 Encourage the use of green roofs as amenity space. Objective DMS77 Protect, preserve and ensure the effective management of trees and groups of trees. Objective DMS78 Ensure during the course of development, trees and hedgerows that are conditioned for retention are fully protected in accordance with 'BS5837 (2012) Trees in relation to the Design, Demolition and Construction – Recommendations' or as may be updated. Objective DMS79 Require the use of native planting where appropriate in new developments in consultation with the Council. Objective DMS80 Ensure trees, hedgerows and other features which demarcate townland boundaries are preserved and incorporated where appropriate into the design of developments. Objective DMS81 Consider in tree selection the available rooting area and proximity to dwellings or business premises particularly regarding shading of buildings and gardens. Objective DMS82 Promote the planting of large canopy trees on public open space and where necessary provide for constructed tree pits as part of the landscape specification. Objective DMS83 Ensure roadside verges have a minimum width of 2.4 metres at locations where large trees are proposed and where necessary provide for constructed tree pits as part of the landscape specification. Road verges shall be a minimum of 1.2 metres wide at locations where small canopy trees are proposed. Objective DMS150 Proposals for new lighting shall ensure there is no dazzling or distraction to road users including cyclists, equestrians and pedestrians, and road and footway lighting meets Council standards. Objective DMS151 Establish a hierarchy of light intensities on lands that are subject to Local Area Plans, Masterplans and larger tracts of lands subject to comprehensive developments in order to ensure that environmental impacts are minimised as far as possible through the designation of Environmental Zones. Objective DMS152 A site assessment should be carried out prior to starting any design work to help inform and direct the layout, form and architectural treatment of the proposed development and identify issues that may need to be avoided, mitigated or require sensitive design and professional expertise. The site assessment should evaluate: Character of the site in its setting (including existing buildings), Access to the site, Services, Protected Designations, Rare and protected species (such as bats). Objective DMS168 Ensure that proposals for developments involving works to upstanding archaeological sites and features or works to the historic building stock include an assessment of the presence of bats in any such sites or structures and, where appropriate, ensure that suitable avoidance and/ or mitigation measures are proposed to protect bats in consultation with the National Parks and Wildlife Service.	
Population and Human Health	Also, see measures related to soil, water (quality and flooding) and material assets. Objective DA26 Restrict housing development in order to minimize the potential for future conflict between Airport operations and the environmental conditions for residents. Objective DA27 Permit improvement and extensions to existing properties in the area where it can be demonstrated that such works do not represent significant intensification of development, and that appropriate consideration of potential noise impacts are incorporated within the proposals. Objective DA28 Prepare a strategy for 'St. Margaret's Special Policy Area' involving consultation between the existing community, Fingal County Council and the Dublin Airport Authority. Objective DA13 Promote appropriate land use patterns in the vicinity of the flight paths serving the Airport, having regard to the precautionary principle, based on existing and anticipated environmental and safety impacts of aircraft movements. Objective DA14 Review Public Safety Zones associated with Dublin Airport and implement the policies to be determined by the Government in relation to these Public Safety Zones. Objective DA15 Take into account relevant publications issued by the Irish Aviation Authority in respect of the operations of and development in and around Dublin Airport. Objective DA16 Continue to take account of the advice of the Irish Aviation Authority with regard to the effects of any development proposals on the safety of aircraft or the safe and efficient navigation thereof. Objective DA17 Have regard to the safety and environmental impacts of aircraft movements associated with Weston Aerodrome in the assessment of any relevant development proposal Objective GI13 Ensure the Green Infrastructure Strategy for Fingal protects the County's natural coastal defences, such as beaches, sand dunes, salt marshes and estuary lands, and promotes the use of soft engineering techniques as an alternative to hard coastal defence works wherever possible. Objective DMS180 Have regard to the provision of the 'Major Accident Directive' (Seveso III) (European Council Directive 2012/18/EU) and impose restrictions in consultation with the HSA, on developments abutting or within proximity of a Seveso site. The extent of restrictions on development will be dependent on the type of risk present and the quantity and form of the dangerous substance present or likely to be present.	Also, see measures related to soil, water (quality and flooding), material assets, air and climatic factors. **Operational Safeguarding Objective** **Objective OS1** Control the type and height of any structures that may be developed in the environs of the Airport (in consultation with the Irish Aviation Authority) in accordance with the Obstacle Limitation Requirements of Regulation (EU) No 139/2014 (EASA Certification Specifications), previously required under ICAO Annex 14 and which are depicted on the aerodrome operator's safeguarding map.

Environmental Component	Mitigation already in force – from the Fingal Development Plan	Mitigation from the Draft Local Area Plan
	Objective DMS181 Permit new Seveso development only in low risk locations away from vulnerable residential, retail and commercial development. Objective DMS182 Prohibit new extensions to long-established Seveso sites where they are a non-conforming use and where they pose an unacceptable accident risk to the public. Objective DMS183 In areas where Seveso sites exist in appropriate locations with low population densities, ensure that proposed uses in adjacent sites do not compromise the potential for expansion of the existing Seveso use and in particular the exclusion of developments with the potential to attract large numbers of the public. Objective DMS184 Attach to any grant of permission for new warehouses or similar industrial buildings, a condition to exclude use/storage of SEVESO substances (or require a separate planning permission for it). Objective DMS185 Have regard to the advice of the Health and Safety Authority when proposals for new Seveso sites are considered and for all planning applications within the consultation distances stated in Table 12.13. Objective DMS186 Require developers to submit a detailed consequence and risk assessment with all Environmental Impact Statements and/or legislative licence applications for all Seveso sites.	
Soil	Also, see measures related to biodiversity, flora and fauna and water and material assets. Objective NH30 Protect and enhance the geological and geomorphological heritage of the County Geological Sites listed in Table GH01 and indicated on Green Infrastructure Maps. Objective NH31 Protect and promote safe and sustainable public access to County Geological Sites where appropriate and feasible subject to the requirements of Article 6 of the Habitats Directive. Development Management 12.14 In all cases involving contaminated land, it is the policy of Fingal County Council to require the highest standards of remediation and where appropriate to consult with the Environmental Protection Agency and other relevant bodies to resolve the environmental pollution created by contaminated land. Decontamination activities should ensure there is no off-site migration of contaminants via runoff, soils or groundwater and the area is available for use.	See measures related to biodiversity, flora and fauna and water and material assets.
Water	Also, see measures related to soil, biodiversity, flora and fauna, human health and material assets. Objective DA19 Ensure that every development proposal in the environs of the Airport takes into account the impact on water quality, water based-habitats and flooding of local streams and rivers and to provide mitigation of any negative impacts through avoidance or design and ensure compliance with the Eastern River Basin District Management Plan. Objective WQ01 Strive to achieve 'good status' in all waterbodies in compliance with the Water Framework Directive, the Eastern River Basin District Management Plan 2009-2015 and the associated Programme of Measures (first cycle) and to cooperate with the development and implementation of the second cycle national River Basin Management Plan 2017-2021. Objective WQ02 Protect and develop, in a sustainable manner, the existing groundwater sources and aquifers in the County and control development in a manner consistent with the proper management of these resources in conformity with the Eastern River Basin Management Plan 2009-2015 and the second cycle national River Basin Management Plan 2017-2021 and any subsequent plan and the Groundwater Protection Scheme. Objective WQ04 Protect existing riverine wetland and coastal habitats and where possible create new habitats to maintain naturally functioning ecosystems whilst ensuring they do not impact negatively on the conservation objectives of any European Sites. Objective WQ05 Establish riparian corridors free from new development along all significant watercourses and streams in the County. Ensure a 10 to 15 metre wide riparian buffer strip measured from the top of the bank either side of all watercourses, except in respect of the Liffey, Tolka, Pinkeen, Mayne, Sluice, Ward, Broadmeadow, Corduff, Matt and Delvin where a 30m wide riparian buffer strip from top of bank to either side of all watercourses outside urban centres is required as a minimum. Objective WQ06 Minimise the impact on surface water of discharges from septic tanks, proprietary effluent treatment systems and percolation areas by ensuring that they are located and constructed in accordance with the recommendations and guidelines of the EPA and Fingal County Council. Objective NH68 Protect bathing waters, including those listed in the Water Framework Directive Register of Protected Areas for the Eastern River Basin District, at Sutton, Portmarnock, Malahide, Donabate, Portrane, Rush, Loughshinny, Skerries and Balbriggan in order that they meet the required bathing water standards and implement the findings and recommendations of the Quality of Bathing Water in Ireland reports as published. Objective NH69 Protect the quality of designated shellfish waters off the Fingal coast. Objective NH70 Ensure that the Council, in the performance of its functions, complies with the requirements of the Shellfish Directive (2006/113/EC), statutory regulations pursuant to the Shellfish Directive and the Department of the Environment, Heritage and Local Government's Pollution Reduction Programmes for the Balbriggan/Skerries Shellfish Area and the Malahide Shellfish Area. Objective GI31 Ensure the provision of new green infrastructure addresses the requirements of functional flood storage, the sustainable management of coastal erosion, and links with provision for biodiversity, Sustainable Drainage Systems (SuDS) and provision for parks and open space wherever possible and appropriate.	Also, see measures related to soil, biodiversity, flora and fauna, human health and material assets. **Surface Water Quality Objectives** **Objective SWQ01** Applications for development shall demonstrate that they will not deteriorate the status of either surface or ground water bodies. Where appropriate, permissions shall be conditioned to require the developer to undertake actions in order to improve the status of water bodies, in line with the Water Framework Directive. **Objective SWQ02** The Dublin Airport Local Area Plan Strategic Flood Risk Assessment and Surface Water Management Plan should strive to achieve 'good status' in all its associated waterbodies in compliance with the Water Framework Directive, the River Basin Management Plan for Ireland 2018-2021 and the associated Programme of Measures (second cycle) and in cooperation with the development and implementation of the third cycle River Basin Management Plan 2022-2027 and any subsequent plans. **Ground Water Objectives** **Objective WQ01** Strive to achieve 'good status' in all waterbodies in compliance with the Water Framework Directive, the River Basin Management Plan for Ireland 2018-2021 and the associated Programme of Measures (second cycle) and in cooperation with the development and implementation of the third cycle River Basin Management Plan 2022-2027. **Objective WQ02** Protect and develop, in a sustainable manner, the existing groundwater sources and aquifers in the County and control development in a manner consistent with the proper management of these resources in conformity with the River Basin Management Plan for Ireland 2018-2021 and the associated Programme of Measures (second cycle) and to cooperate with the development and implementation of the third cycle River Basin Management Plan 2022-2027 and any subsequent plans. **Objective WQ03** Implement the recommendations of the Groundwater Protection Scheme. **Flood Risk Management Objectives** **Objective FRM01** Have regard to The Planning System and Flood Risk Management, Guidelines for Planning Authorities (DoEHLG/OPW 2009) and Circular PL2/2014, through the use of the

Environmental Component	Mitigation already in force – from the Fingal Development Plan	Mitigation from the Draft Local Area Plan
	Objective GI32 Seek the creation of new wetlands and/or enhancement of existing wetlands through provision for Sustainable Drainage Systems (SuDS). Objective GI33 Seek the provision of green roofs and green walls as an integrated part of Sustainable Drainage Systems (SuDS) and which provide benefits for biodiversity, wherever possible. Objective SW02 Allow no new development within floodplains other than development which satisfies the justification test, as outlined in the Planning System and Flood Risk Management Guidelines 2009 for Planning Authorities (or any updated guidelines). Objective SW03 Identify existing surface water drainage systems vulnerable to flooding and develop proposals to alleviate flooding in the areas served by these systems. Objective SW04 Require the use of sustainable drainage systems (SuDS) to minimise and limit the extent of hard surfacing and paving and require the use of sustainable drainage techniques where appropriate, for new development or for extensions to existing developments, in order to reduce the potential impact of existing and predicted flooding risks. Objective SW05 Discourage the use of hard non-porous surfacing and pavements within the boundaries of rural housing sites. Objective SW06 Encourage the use of Green Roofs particularly on apartment, commercial, leisure and educational buildings. Objective SW07 Implement the Planning System and Flood Risk Management-Guidelines for Planning Authorities (DoEHLG/OPW 2009) or any updated version of these guidelines. A site-specific Flood Risk Assessment to an appropriate level of detail, addressing all potential sources of flood risk, is required for lands identified in the SFRA, located in the following areas: Courtlough; Ballymadun; Rowlestown; Ballyboghil; Coolatrath; Milverton, Skerries; Channell Road, Rush; Blakescross; Lanestown/Turvey; Lissenhall, Swords; Balheary, Swords; Village/Marina Area, Malahide; Streamstown, Malahide; Balgriffin; Damastown, Macetown and Clonee, Blanchardstown; Mulhuddart, Blanchardstown; Portrane; Sutton; and Howth, demonstrating compliance with the aforementioned Guidelines or any updated version of these guidelines, paying particular attention to residual flood risks and any proposed site specific flood management measures Objective SW09 Assess and implement the recommendations of the Eastern CFRAMS when complete. Objective SW10 Require the provision of regional stormwater control facilities for all Local Area Plan lands and Strategic Development Zones with a view to also incorporating these control facilities in currently developed catchments prone to flooding. Objective DMS16 Promote and encourage the use of green walls and roofs for new developments that demonstrate benefits in terms of SuDS as part of an integrated approach to green infrastructure provision. Objective DMS73 Ensure as far as practical that the design of SuDS enhances the quality of open spaces. SuDS do not form part of the public open space provision, except where it contributes in a significant and positive way to the design and quality of open space. In instances where the Council determines that SuDS make a significant and positive contribution to open space, a maximum 10% of open space provision shall be taken up by SuDS. The Council will give consideration to the provision of SuDS on existing open space, where appropriate. Objective DMS74 Underground tanks and storage systems will not be accepted under public open space, as part of a SuDS solution.	sequential approach and application of the Justification Tests for Development Plans and Development Management. **Objective FRM02** Protect existing flood risk management infrastructure and safeguard planned future infrastructure. **Objective FRM03** Implement and comply fully with the recommendations of the Dublin Airport Local Area Plan Strategic Flood Risk Assessment and Surface Water Management Plan. **Objective FRM04** Ensure that a Flood Risk Assessment is carried out for any development proposal, in accordance with The Planning System and Flood Risk Management, Guidelines for Planning Authorities (DoEHLG/OPW 2009) and the recommendations of the Dublin Airport Local Area Plan Strategic Flood Risk Assessment and Surface Water Management Plan. This assessment should be appropriate to the scale and nature of risk to the potential development. **Sustainable Urban Drainage Objectives** **Objective SW01** Require all applications for development at Dublin Airport to demonstrate compliance with the Dublin Airport Local Area Plan Strategic Flood Risk Assessment and Surface Water Management Plan. **Objective SW02** Introduce SUDS to new greenfield and brownfield development sites by adoption of the SUDS Management train approach. **Objective SW03** Introduce SUDS measures to existing paved/developed areas that do not currently have any SUDS features. **Objective SW04** Recharge the ground and reduce storm volumes by the use of suitable SUDS measures. **Objective SW05** Alleviate local flooding issues within the LAP area by providing positive drainage to affected areas. **Objective SW06** Reduce risk of bird strike when developing new sites and implementing SUDS measures. **Objective SW07** Establish riparian corridors free from new development along all significant watercourses and streams. Ensure a riparian buffer strip either side of all watercourses within the LAP lands. **Objective SW08** Develop a robust surface water management system in compliance with the recommendations of the Dublin Airport Local Area Plan Strategic Flood Risk Assessment and Surface Water Management Plan associated with this LAP, to meet future development needs and providing resilience to the effects of climate change. This will entail a full review of the current surface water system at Dublin Airport including a review of drain down times, attenuation volumes, discharge rates, and opportunities for the retrofit of SUDS. **Objective SW09** Develop a policy on sustainable drainage systems in proximity to the Airport, to ensure aircraft safety. **Objective CG2** Facilitate the relocation and expansion of new cargo facilities and potential consolidation of air cargo operations, subject to site specific flood risk assessment and transport assessment.
Material Assets	Objective DA22 Control the supply of car parking at the Airport so as to maximize as far as is practical the use of public transport by workers and passengers and to secure the efficient use of land. Objective DA23 Encourage and facilitate the provision of an integrated public transport network to serve Dublin Airport. Objective DA24 Protect and enhance the transportation capacity required to provide for the surface access needs of the Airport. Objective DA25 Maintain and protect accessibility to the Airport as a priority. Objective GI14 Ensure the Green Infrastructure Strategy for Fingal safeguards important agricultural and horticultural lands in the County. Objective MT24 Support and advise the NTA and TII on the planning and implementation of public transport infrastructure, in particular by providing an understanding of Fingal's policies, objectives and requirements, including environmental sensitivities. Objective MT25 Support TII and the NTA in developing a revised design of the proposed new Metro North that addresses the needs of the Swords-Airport-City Centre corridor, environmental sensitivities and securing permission from An Bord Pleanála.	**Water Supply Objectives** **Objective IW1** Liaise with Irish Water to ensure that an adequate supply of drinking water is available for the sustainable development of the Airport. **Objective IW2** Liaise with and work in conjunction with Irish Water during the lifetime of the plan for the provision, extension and upgrading of waste water collection and treatment systems necessary to facilitate the sustainable development of the Airport. **Objective IW3** Collaborate with Irish Water to ensure the delivery of their Capital Investment Plan or any other relevant investment works programme to ensure both foul and water capacity constraints are not a deterrent to sustainable development. **Supporting Utility Infrastructure Objectives**

Environmental Component	Mitigation already in force – from the Fingal Development Plan	Mitigation from the Draft Local Area Plan
	Objective MT26 Support TII and the NTA in a possible future extension of the proposed new Metro North finishing point to connect with the Northern Line in Donabate, with a view to securing permission from An Bord Pleanála. Objective MT27 Support TII in progressing the design of a Light Rail Corridor that addresses the needs of Fingal, in particular the Blanchardstown area, with a view to securing permission from An Bord Pleanála. Objective MT34 Work with public transport providers and State agencies to create bus connectivity between Dublin 15 and Dublin Airport/Swords. Objective DW01 Liaise with and work in conjunction with Irish Water during the lifetime of the Plan to develop and identify an additional sustainable water source serving the Eastern and Midlands Region and the existing population of Fingal while also facilitating the sustainable development of the County, in accordance with the requirements of the Settlement Strategy and associated Core Strategy. Objective DW02 Liaise with Irish Water to ensure that an adequate supply of drinking water for domestic, commercial, industrial and other uses is available for the sustainable development of the County. Objective DW03 Protect both ground and surface water resources and work with Irish Water to develop and implement Water Safety Plans to protect sources of public water supply and their contributing catchment. Objective DW04 Support the development of a new sustainable Water Source for the Greater Dublin Area. Objective DW06 Promote the sustainable use of water and water conservation in existing and new development within the County and encourage demand management measures among all water users. Objective WT02 Liaise with Irish Water to ensure the provision of wastewater treatment systems in order to ensure compliance with existing licences, EU Water Framework Directive, River Basin Management Plans, the Urban Waste Water Directive and the EU Habitats Directive. Objective WT03 Facilitate the provision of appropriately sized and located waste water treatment plants and networks including a new Regional Wastewater Treatment Plant and the implementation of other recommendations of the Greater Dublin Strategic Drainage Study, in conjunction with relevant stakeholders and services providers, to facilitate development in the County and Region and to protect the water quality of Fingal's coastal and inland waters through the provision of adequate treatment of wastewater. Objective WT05 Seek the best available technology in all waste water treatment plants proposed for the County. Objective WT07 Require all new developments to provide separate foul and surface water drainage systems and to incorporate sustainable urban drainage systems. Objective WT08 Prohibit the discharge of additional surface water to combined (foul and surface water) sewers in order to maximise the capacity of existing collection systems. Objective WT09 Promote the appropriate development and use of Integrated Constructed Wetlands within the County. Objective WM02 Facilitate the implementation of national legislation and national and regional waste management policy having regard to the waste hierarchy. Objective WM03 Implement the provisions of the Eastern Midlands Region Waste Management Plan 2015 -2021 or any subsequent Waste Management Plan applicable within the lifetime of the Development Plan. All prospective developments in the County will be expected to take account of the provisions of the Regional Waste Management Plan and adhere to the requirements of that Plan. Objective WM04 Facilitate the transition from a waste management economy to a green circular economy to enhance employment and increase the value recovery and recirculation of resources. Objective WM18 Ensure that construction and demolition Waste Management Plans meet the relevant recycling / recovery targets for such waste in accordance with the national legislation and regional waste management policy. DMS146 Ensure all new large-scale residential and mixed-use developments include appropriate facilities for source segregation and collection of waste. Objective DMS147 Ensure all new developments include well designed facilities to accommodate the three bin collection system. Objective DMS148 Ensure all new developments make provision for bring bank facilities where appropriate. Objective DMS149 Require that construction and demolition waste management plans be submitted as part of any planning application for projects in excess of any of the following thresholds: • New residential development of 10 units or more. • New developments other than above, including institutional, educational, health and other public facilities, with an aggregate floor area in excess of 1,250sqm. • Demolition / renovation / refurbishment projects generating in excess of 100m3 in volume of C&D waste. • Civil engineering projects in excess of 500m3 of waste materials used for development of works on the site.	**Objective UT1** Support and facilitate the development and upgrade of strategic information telecommunications technology and other required utilities infrastructure.

Environmental Component	Mitigation already in force – from the Fingal Development Plan	Mitigation from the Draft Local Area Plan
Air and Climatic Factors	Objective DA01 Facilitate the operation and future development of Dublin Airport, in line with Government policy, recognising its role in the provision of air transport, both passenger and freight. Objective DA02 Prepare and implement a new Local Area Plan for Dublin Airport which will accommodate the future sustainable growth and development of the airport lands while also facilitating the efficient and effective operation of Dublin Airport in accordance with the requirements of the Local Area Plan and proper planning and sustainable development. Objective DA03 Safeguard the current and future operational, safety, technical and developmental requirements of Dublin Airport and provide for its ongoing development within a sustainable development framework, having regard to both the environmental impact on local communities and the economic impact on businesses within the area. Objective DA06 Continue to participate in the Dublin Airport Stakeholders Forum, St Margaret's Community Liaison Group and other public stakeholder forums involving representatives from Local Authorities, airport operators, community and other stakeholders, providing a forum for discussion of environmental, community and other issues. Objective DA07 Strictly control inappropriate development and require noise insulation where appropriate within the Outer Noise Zone, and actively resist new provision for residential development and other noise sensitive uses within the Inner Noise Zone, as shown on the Development Plan maps, while recognising the housing needs of established families farming in the zone. To accept that time based operational restrictions on usage of a second runway are not unreasonable to minimize the adverse impact of noise on existing housing within the inner and outer noise zone. Objective DA08 Notwithstanding Objective DA07, apply the provisions with regard to New Housing for Farming Families only, as set out in Chapter 5 Rural Fingal, within the Inner Noise Zone subject to the following restrictions: • Under no circumstances shall any dwelling be permitted within the predicted 69 dB Laeq 16 hours noise contour, • Comprehensive noise insulation shall be required for any house permitted under this objective, • Any planning application shall be accompanied by a noise assessment report produced by a specialist in noise assessment which shall specify all proposed noise mitigation measures together with a declaration of acceptance of the applicant with regard to the result of the noise assessment report. Objective DA09 Ensure that aircraft-related development and operation procedures proposed and existing at the Airport consider all measures necessary to mitigate against the potential negative impact of noise from aircraft operations (such as engine testing, taxiing, taking off and landing), on existing established residential communities, while not placing unreasonable, but allowing reasonable restrictions on airport development to prevent detrimental effects on local communities, taking into account EU Regulation 598/2014 (or any future superseding EU regulation applicable) having regard to the 'Balanced Approach' and the involvement of communities in ensuring a collaborative approach to mitigating against noise pollution. Objective DA10 Restrict development which would give rise to conflicts with aircraft movements on environmental or safety grounds on lands in the vicinity of the Airport and on the main flight paths serving the Airport, and in particular restrict residential development in areas likely to be affected by levels of noise inappropriate to residential use. Objective DA11 Review the operation of the Noise Zones on an ongoing basis in line with the most up to date legislative frameworks in the area, the ongoing programme of noise monitoring in the vicinity of the Airport flight paths, and the availability of improved noise forecasts. Objective DA12 Restrict the Crosswind Runway to essential occasional use on completion of the second eastwest runway. Objective DA18 Ensure that every development proposal in the environs of the Airport takes account of the current and predicted changes in air quality, greenhouse emissions and local environmental conditions. Objective DA20 Take account of the global and local impacts of aviation as well as the likelihood of international action to limit greenhouse gas emissions from aviation through action at the International Civil Aviation Organisation ICAO as mandated in the Kyoto Protocol when evaluating any proposals to significantly increase the use of Dublin Airport. Objective MT01 Support National and Regional transport policies as they apply to Fingal. In particular, the Council supports the Government's commitment to the proposed new Metro North and DART expansion included in Building on Recovery: Infrastructure and Capital Investment 2016-2021. The Council also supports the implementation of sustainable transport solutions. Objective MT02 Support the recommendations of the National Transport Authority's Transport Strategy for the Greater Dublin Area 2016-2035 to facilitate the future sustainable growth of Fingal. Objective MT03 Implement Smarter Travel – A Sustainable Travel Future policy and work to achieve the Key Goals set out in this policy. Objective MT10 Facilitate the provision of electricity charging infrastructure for electric vehicles both on street and in new developments in accordance with car parking standards. Objective MT11 Support the growth of Electric Vehicles and EBikes, with support facilities, through a roll-out of additional electric charging points in collaboration with relevant agencies at appropriate locations. Objective MT15 Investigate and avail of the opportunities provided by new Metro North and any other public transport infrastructure to provide new cycle and pedestrian links including crossings of the M50 which currently represents a major barrier to active transport modes.	The LAP seeks to pursue climate mitigation in line with global and national targets and support the transition towards a low carbon economy by seeking to reduce CO_2 emissions at the Airport in particular through: • Providing for specific proposals to reduce carbon emissions associated with surface access; • Requiring proposals for carbon reduction to be addressed in planning applications including proposals for clean energy; and • Support the transition towards a net zero target by 2050. The LAP includes various provisions that will contribute towards the objectives of the wide policy framework relating to climate mitigation and adaptation, alternative energy use and energy/fuel efficiency, including: • The Emissions Trading Scheme Directive; • The Alternative Fuels Infrastructure Directive • The Energy Efficiency Directive; • The Climate Action and Low Carbon Development Act 2015; • The National Mitigation Plan 2017; • The Action Plan for Aviation Emissions Reduction 2019; and • The Climate Action Plan 2019. **Air Quality Objectives** **Objective AQ1** Implement the provisions of EU and National legislation relating to air quality, as appropriate and in conjunction with all relevant stakeholders. **Objective AQ2** Implement the recommendations of the Dublin Regional Air Quality Management Plan or any subsequent plan(s) and any other relevant policy documents and legislation in order to preserve good air quality where it exists or aim to improve air quality where it is unsatisfactory. **Objective AQ3** Ensure that development proposals in the Dublin Airport LAP area take account of the current and predicted changes in air quality, greenhouse emissions and local environmental conditions. **Objective AQ4** Take account of the global and local impacts of aviation as well as the likelihood of international action to limit greenhouse gas emissions from aviation through action at the International Civil Aviation Organisation (ICAO)as mandated in the Kyoto Protocol when evaluation any proposals to significantly increase the use of Dublin Airport. **Objective AQ5** Undertake a review of existing air quality monitoring (and associated appropriate remedial action in the case of breaches) within and surrounding the Airport (including changes in Particulate Matter (PM) at relevant locations). Where relevant, such a review should identify additional monitoring proposals, remedial actions and implementation systems – such needs shall be provided for by Fingal County Council and/or the daa. **South Fingal Transport Study 2019** **Objective SF01** Implement the recommendations of the South Fingal Transport Study in relation to Dublin Airport in order to ensure that a balanced response to the expansion of Dublin Airport occurs. It shall be a requirement that any planning applications to increase passenger numbers or that result in an increased demand for travel, shall clearly demonstrate the required transport infrastructure and measures to accommodate the proposed increase in line with the recommendations of the South Fingal Transport Study. **Objective SF02** Require, as part of any application that will result in increased demand for travel, the submission of a detailed transport model (based on the NTA ERM), to be undertaken in collaboration with stakeholders

Environmental Component	Mitigation already in force – from the Fingal Development Plan	Mitigation from the Draft Local Area Plan
	Objective MT24 Support and advise the NTA and TII on the planning and implementation of public transport infrastructure, in particular by providing an understanding of Fingal's policies, objectives and requirements, including environmental sensitivities. Objective GI28 Provide attractive and safe routes linking key green space sites, parks and open spaces and other foci such as cultural sites and heritage assets as an integral part of new green infrastructure provision, where appropriate and feasible. Objective GI30 Develop a Cycle/Pedestrian Network Strategy for Fingal that encompasses the Fingal Way and other proposed routes which will be screened for Appropriate Assessment and Strategic Environmental Assessment. Objective GI12 Ensure the Green Infrastructure Strategy for Fingal reflects a long-term perspective, including the need to adapt to climate change. Objective MT38 Maximise capacities of junctions by using traffic management measures thereby reducing congestion. Objective MT40 Implement a programme of road construction and improvement works closely integrated with existing and planned land uses, taking into account both car and non-car modes of transport whilst promoting road safety as a high priority. Major road construction and improvement works will include an appraisal of environmental impacts. Objective MT41 Seek to implement the Road Improvement Schemes indicated in Table 7.1 within the Plan period, subject to assessment against the criteria set out in Section 5.8.3 of the NTA Transport Strategy for the GDA, where appropriate and where resources permit. Reserve the corridors of the proposed road improvements free of development Objective MT42 Protect the strategic transport function of national roads, including motorways through the implementation of the DoECLG 'Spatial Planning and National Roads – Guidelines for Planning Authorities'. Objective CC01 Comply with the recommendations of the GDSDS Climate Change Policy with regard to the provision and management of drainage services in the County and recognise that climate mitigation and adaption measures are evolving and comply with new national measures as presented in National Plans and Frameworks. Objective CC02 Implement the specific recommendations of Table CC1 of the GDSDS Regional Policy Volume 5 Climate Change Policy for all housing, commercial and industrial developments within the County. Objective CC03 Continue to reduce energy and chemical consumption within the Council's treatment plants and pumping stations. Objective CC04 Mitigate the causes of climate change as per COP21 also known as the 2015 Paris Climate Conference. Objective EN05 Prepare a Climate Change Mitigation and Adaptation Strategy and a Local Authority Renewable Energy Strategy (LARES), Spatial Energy Demand Analysis (SEDA) and a Sustainable Energy Action Plan (SEAP). Objective EN06 Encourage and facilitate the development of renewable energy sources, optimising opportunities for the incorporation of renewable energy in large scale commercial and residential development. Objective EN07 Support the implementation of the 'Strategy for Renewable Energy 2012-2020' Department of Communications, Energy and Natural Resources (now Department of Communications, Climate Action and Environment) and the related National Renewable Energy Action Plan (NREAP) and National Energy Efficiency Action Plan (NEEAP). Objective EN08 Work with relevant stakeholders to carry out a Spatial Energy Demand Analysis (SEDA) of the County within the Plan period as resources permit. Objective EN09 Require details of the requirements for alternative renewable energy systems, for buildings greater than 1000sq m or residential schemes above 30 units, under SI 243 of 2012 European Communities (Energy Performance of Buildings) to be submitted at pre planning stage for consideration. These should take the form of an Energy Statement or Feasibility Study carried out by qualified and accredited experts. Objective EN23 Establish a Climate Change Adaptation Team within Fingal County Council to prepare a Climate Change Mitigation and Adaptation Strategy with relevant stakeholders, Dublin Local Authorities and various interest groups. The Climate Change Mitigation and Adaptation Strategy will include targets for emissions reduction from the County; provision for reporting on progress in reducing emissions; and a process of engagement with citizens, businesses and civil society in relation to the changes required. Objective AQ01 Implement the provisions of EU and National legislation on air, light and noise and other relevant legislative requirements, as appropriate and in conjunction with all relevant stakeholders. Objective AQ02 Implement the recommendations of the Dublin Regional Air Quality Management Plan (or any subsequent plan) and any other relevant policy documents and legislation in order to preserve good air quality where it exists or aim to improve air quality where it is unsatisfactory. Objective NP01 Implement the relevant spatial planning recommendations and actions of the Dublin Agglomeration Environmental Noise Action Plan 2013-2018 (or any subsequent plan), working in conjunction with relevant statutory agencies. Objective NP02 Continue to promote appropriate land use patterns in the vicinity of Dublin Airport to minimise the amount of residents exposed to undesirable noise levels. Objective NP03 Require all developments to be designed and operated in a manner that will minimise and contain noise levels. Objective NP04 Ensure that future developments are designed and constructed to minimise noise disturbance and take into account the multi-functional uses of streets including movement and recreation as detailed in the Urban Design Manual (2009) and the Design Manual for Urban Roads and Streets (2013).	such as FCC, the National Transport Authority and Transport Infrastructure Ireland, in order to appropriately phase transport infrastructure requirements and the appropriate provision of car-parking as set out in the South Fingal Transport Study, relevant to the growth of Dublin Airport. **Mobility Management Objectives** **Objective MM1** Facilitate, with the relevant stakeholders, the coordination and/or amalgamation of all Mobility Management Plans within the Dublin Airport campus, to provide an over-arching MMP for submission to Fingal County Council for approval every three years. This will include the designation of a mobility manager for the Airport by daa who should co-ordinate, engage and review the MMP. The first co-ordinated MMP should be delivered within 2 years of the adoption of this LAP. **Objective MM2** Identify and implement measures to maximise non-motorised and public transport use while minimising the use of the private car. **Objective MM3** Increase emphasis on the promotion of public transport usage among staff and passengers. **Objective MM4** Require that all organisations operating within the Dublin Airport campus implement the over-arching Mobility Management Plan, either as part of regular stakeholder liaison or incorporation within the Development Management process. **Cycling Objectives** **Objective CY1** Provide for cycle paths separated from traffic along the R132 between Pinnock Hill Roundabout and the boundary with Dublin City Council as part of the Swords Core Bus Corridor. **Objective CY2** All development proposals within the LAP shall be required to demonstrate provision of high quality cycle facilities for employees, to include secure bike parking facilities, and changing and shower facilities to incentivise sustainable transport. **Public Transport Objectives** **Objective PT1** Encourage and facilitate the provision of an integrated public transport network to serve Dublin Airport. **Objective PT2** Require the development of a transport interchange including a MetroLink station at the centre of the Dublin Airport campus, in accordance with the implementation of MetroLink by 2027 by the National Transport Authority and Transport Infrastructure Ireland. **Objective PT3** Ensure that the proposed MetroLink station and interchange in Dublin Airport campus is undertaken to best international standards for public transport interchanges. **Objective PT4** Facilitate the delivery of the R132 Swords Road Core Bus Corridor and to seek its prioritisation as a scheme of strategic national importance in enabling sustainable growth of Dublin Airport in the short-term and in advance of MetroLink. **Objective PT5** Facilitate the development of bus priority facilities from the western side of the Dublin Airport campus to the terminal buildings, as a means of easing congestion on the existing road network. This will include the facilitation of car parking facilities on the western periphery and the implementation of bus priority facilities as needed, such as on the Collinstown Lane approach to the R132 Swords Road. **Objective PT6** Investigate and provide for connections from the western parts of the airport campus to MetroLink, in the context of potential future planned development to the west of the existing terminals. **Objective PT7** Identify and protect an alignment for the Orbital Metro (Metro West) and to ensure connectivity between Metro West and Dublin Airport.

Environmental Component	Mitigation already in force – from the Fingal Development Plan	Mitigation from the Draft Local Area Plan
	Objective NP05 Ensure that development complies with the NRA's design goal for sensitive receptors exposed to road traffic noise or as updated by any subsequent guidelines published by Transport Infrastructure Ireland. Objective DMS116 Require that all new developments with over 100 employees and all new schools shall have a Mobility Management Plan. Existing schools that apply for planning permission to accommodate expansion will also be required to provide a Mobility Management Plan. Require new developments to be designed in accordance with DMURS. In particular they shall have layouts and designs which reflect the primacy of walking and cycling by providing safe, convenient and direct access to local services, employment and public transport. The promotion of cycling as a sustainable mode of transport depends on providing sufficient parking at places of employment and education. Bicycle parking standards, which are norms, are set out in Table 12.9. Objective DMS118 Ensure that all new employment and education developments include adequate, secure and dry bicycle parking, in accordance with the standards set out in Table Objective DMS119 Support public transport improvements by reserving the corridors of planned routes free from development. Provide setbacks along public transport corridors to allow for future improvement to enable the provision of a safe and efficient network of public transport infrastructure.	**Objective PT8** Support the provision of new and/or improved bus routes through and around the airport campus including bus lanes, shelters, access points and interchange facilities. **Objective PT9** Prioritise public transport and taxis on the external and internal road network. **Objective PT10** Facilitate provision of stronger connectivity between Dublin Airport and the heavy rail/DART network along existing roads, and to prioritise public and sustainable transport provision along any future East-West Link Road through development lands at Clonshaugh and Clongriffin. **Objective PT11** Provide real time information, wayfinding, directional and scheduling information regarding public transport services to allow passengers and staff to optimally use the public transport facilities available **Objective PT12** Provide for high quality bus priority on approach roads to Dublin Airport as required. **Objective PT13** Support the provision of improved taxi facilities. **Objective DS5** Encourage sustainable development through energy end use efficiency and increasing the use of renewable energy in all extensions and new buildings by requiring the following criteria be applied to ensure design and assembly of low-energy buildings: (i)Responsible environmental management in construction; (ii)A menu of superior design and specification towards sustainable construction options to include the following: (iii)Site layout and associated bio-climatic/ passive solar design measures (iv)Use of daylight where to reduce energy consumption (v)Use of healthy and controllable ventilation systems (vi) Use of heat recovery systems including Combined Heat and Power (vii) Promotion of water conservation measures (viii)Use of building materials with lower embodied energy use in manufacture (ix)Use of lower energy efficient lighting systems (x)Incorporation of renewable energy systems, e.g. active solar, heat pumps, etc in all buildings (xi)Optimising the use of Building Energy Management Systems (xii)Use of Monitoring and Targeting systems to monitor best practice in energy consumption towards reducing CO2 emissions to the greatest extent practicable. A statement of consistency shall be required to be submitted with all planning applications for extensions and new buildings indicating measures proposed to comply with i – xii. **Engine Testing Objectives** **Objective ET1** Minimise the noise from engine testing activities by seeking to locate site engine ground running in suitable locations to reduce impact on populated residential areas. Any future planning proposals shall include a noise impact assessment and noise mitigation measures to ameliorate noise. **Improving Linkages (Appendix I Strategy for St. Margaret's Special Policy Area)** **Objective IL1** Examine the feasibility of improved pedestrian linkages and circulation routes within St. Margaret's. **Objective IL2** Promote and facilitate a connecting pedestrian link between Dunsoghly Castle Complex and St. Margaret's policy area. **Objective IL3** Support and encourage public transport providers to enhance the provision of public transportation services to St. Margaret's and to support and facilitate rural community transport initiatives where possible, aimed at providing new

Environmental Component	Mitigation already in force – from the Fingal Development Plan	Mitigation from the Draft Local Area Plan
		services through the area, enhancing and expanding existing services. **Various Plan provisions relating to External Road Network Access**
Cultural Heritage	Objective GI34 Ensure, wherever possible and appropriate, that elements of the archaeological and architectural heritage are fully integrated into proposals for new developments at the project design stage. Objective GI35 Seek to provide and/or enhance access to archaeological and architectural heritage assets in a sustainable manner, where appropriate, thus facilitating opportunities for education and understanding. Objective CH01 Support the implementation of the Fingal Heritage Plan in relation to the promotion and protection of Fingal's Cultural Heritage. Objective CH02 Favour the preservation in situ or at a minimum preservation by record, of archaeological sites, monuments, features or objects in their settings. In securing such preservation the Council will have regard to the advice and recommendations of the National Monuments Service of the Department of the Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Objective CH03 Protect all archaeological sites and monuments, underwater archaeology, and archaeological objects, which are listed in the Record of Monuments and Places and all sites and features of archaeological and historic interest discovered subsequent to the publication of the Record of Monuments and Places, and to seek their preservation in situ (or at a minimum, preservation by record) through the planning process. Objective CH04 Encourage and promote the appropriate management and maintenance of the County's archaeological heritage, including historical burial grounds, in accordance with conservation principles and best practice guidelines. Objective CH05 Ensure archaeological remains are identified and fully considered at the very earliest stages of the development process, that schemes are designed to avoid impacting on the archaeological heritage. Objective CH06 Require that proposals for linear development over one kilometre in length; proposals for development involving ground clearance of more than half a hectare; or developments in proximity to areas with a density of known archaeological monuments and history of discovery; to include an Archaeological Impact Assessment and refer such applications to the relevant Prescribed Bodies. Objective CH07 Ensure that development within the vicinity of a Recorded Monument or Zone of Archaeological Notification does not seriously detract from the setting of the feature, and is sited and designed appropriately. Objective CH08 Develop a policy in relation to the treatment of archaeological monuments within open space of developments. A different designation from that of open space will be applied where subsurface archaeological remains are incorporated to differentiate the area. Objective CH09 Recognise the importance of archaeology or historic landscapes and the connectivity between sites, where it exists, in order to safeguard them from developments that would unduly sever or disrupt the relationship and/or inter-visibility between sites. Objective CH10 Co-operate with other agencies in the assessment of the potential for climate change to impact on coastal, riverine, inter-tidal and sub-tidal sites and their environments including shipwreck sites. Objective CH11 Encourage reference to or incorporation of significant archaeological finds into development schemes, where appropriate and sensitively designed, through layout, displays, signage, plaques, information panels and by using historic place names and the Irish language where appropriate. Objective CH12 Promote best practice for archaeological excavation by ensuring that they are undertaken according to best practice as outlined by the National Monuments Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, The National Museum and the Institute of Archaeologists of Ireland. Objective CH13 Actively support the dissemination of the findings of archaeological investigations and excavations through the publication of excavation reports thereby promoting public awareness and appreciation of the value of archaeological resources. Objective CH14 Identify Zones of Archaeological Notification that contain clusters of Recorded Monuments or have a significant history of the discovery of archaeological sites, features and objects in order to allow for their designation, protection of their setting and environs. Objective CH15 Raise public awareness of the cultural heritage and improve legibility by providing appropriate signage or interpretation in areas, sites, villages, and buildings of archaeological and historic significance. Objective CH16 Develop and implement the findings of the Community Archaeology Strategy for Fingal. Objective CH17 Support the growth of cultural tourism in the County, including the potential for niche heritage based tourism products by facilitating the development of heritage events, infrastructure such as heritage trails, walkways and cycleways etc. and activities such as community excavation. Objective CH18 Manage the archaeological sites and monuments that Fingal County Council owns or is responsible for according to best practice and according to Conservation Plans where they exist Objective CH20 Ensure that any development, modification, alteration, or extension affecting a Protected Structure and/or its setting is sensitively sited and designed, is compatible with the special character, and is appropriate in terms of the proposed scale, mass, height, density, layout, materials, impact on architectural or historic features, and junction with the existing Protected Structure. Objective CH21 Seek that the form and structural integrity of the Protected Structure is retained in any redevelopment and that the relationship between the Protected Structure and any complex of adjoining buildings, designed landscape features, or designed views or vistas from or to the structure is conserved.	**Design Objectives** **Objective DS1** Ensure that all development at Dublin Airport will be of high quality design and finishes to reflect Dublin Airport's status as an international gateway airport. **Objective DS2** A design framework shall be undertaken by daa along with other relevant stakeholders, which shall identify materials, design themes and structural typologies for built form within the Airport campus for completion within six months of the adoption of the Dublin Airport Local Area Plan for agreement with the Planning Authority. Each planning application for development of built form within the Airport eastern campus shall comply with the material use and design themes established in the design framework. **Objective DS3** Any proposals for development of terminal extensions, or for new terminals shall adhere to the requirements of the design framework, unless alternatives are expressly agreed with the Planning Authority. **Objective DS4** Require that all planning applications be accompanied by a design statement to demonstrate the key principles for Airport design as set out in Fig. 7.2 of this LAP along with the requirements of the agreed design framework. **Archaeology Objectives** **Objective AR1** Ensure archaeological remains within the LAP area are identified and fully considered at the very earliest stages of the development process and that schemes are designed to avoid impacting on the archaeological heritage. **Objective AR2** Protect the archaeological resource by favouring the preservation in situ or at a minimum, preservation by record of archaeological sites, monuments, features or objects in their settings. **Objective AR3** Require proposals for linear development over one kilometre in length; proposals for development involving ground clearance of more than half a hectare; or developments in proximity to areas with a density of known archaeological monuments and history of discovery; to include an Archaeological Impact Assessment and refer such applications to the relevant Prescribed Bodies. **Architectural Heritage Objectives** **Objective AH1** Have particular regard to the conservation and protection of the 1937 Old Central Terminal Building and its setting. **Objective AH2** Ensure as far as is consistent with the development of necessary airport facilities, the conservation of the architectural heritage within the LAP area and in the areas immediately adjoining the plan area. **Objective AH3** Seek the reuse and retention of the Protected Structures within the LAP lands. **Cultural Heritage Objectives (Appendix I Strategy for St. Margaret's Special Policy Area)** **Objective CH1** Preserve, protect and enhance the natural, built and cultural heritage features that form the basis of local attractions for St. Margaret's. **Objective CH2** Protect those buildings and structures of archaeological, architectural or historic importance and the settings thereof, which are indicated on the Record of Monuments & Places, Record of Protected Structures and in the current Fingal Development Plan 2017-2023. **Objective CH3** Retain, appreciate and revitalise appropriately the vernacular heritage of St. Margaret's by deterring the replacement of good quality vernacular buildings with modern structures and by protecting (through the use of ACAs, the RPS and in the normal course of development management) vernacular buildings where they contribute to the character of the area.

Environmental Component	Mitigation already in force – from the Fingal Development Plan	Mitigation from the Draft Local Area Plan
	Objective CH22 Encourage the sympathetic and appropriate reuse, rehabilitation and retention of Protected Structures and their grounds including public access seeking that the Protected Structure is conserved to a high standard, and the special interest, character and setting of the building preserved. In certain cases the relaxation of site zoning restrictions may be considered in order to secure the preservation and conservation of the Protected Structure where the use proposed is compatible with the existing structure and this will only be permitted where the development is consistent with conservation policies and the proper planning and sustainable development of the area Objective CH25 Ensure that proposals for large scale developments and infrastructure projects consider the impacts on the architectural heritage and seek to avoid them. The extent, route, services and signage for such projects should be sited at a distance from Protected Structures, outside the boundaries of historic designed landscapes, and not interrupt specifically designed vistas. Where this is not possible the visual impact must be minimised through appropriate mitigation measures such as high quality design and/or use of screen planting. Objective CH26 Prevent the demolition or inappropriate alteration of Protected Structures. Objective CH28 Carry out an audit and assess the condition of all Protected Structures within the Council's ownership and devise a management/maintenance plan for these structures. Objective CH29 Ensure that measures to up-grade the energy efficiency of Protected Structures and historic buildings are sensitive to traditional construction methods and materials and do not have a detrimental physical, aesthetic or visual impact on the structure. They should follow the principles and direction given in the Department of Arts, Heritage and the Gaeltacht's publication Energy Efficiency in Traditional Buildings.	**Objective CH4** Promote and facilitate the preservation of Dunsoghly Castle Complex and the appropriate and sympathetic development of this important heritage asset as a future heritage attraction having regard to the special significance of the site, in consultation with the appropriate heritage bodies and other relevant stakeholders. **Objective CH5** Support and facilitate the interpretation of important archaeological, architectural and historic features of the area. **Objective CH6** Support the appropriate and sympathetic provision of noise insulation to St. Margaret's Church in consultation with relevant church and heritage bodies. **Objective CH7** Promote the conservation, enhancement, public access and enjoyment of the archaeological, natural and built heritage as important elements in the enhancement of the area. **Environmental Enhancement Objectives (Appendix I Strategy for St. Margaret's Special Policy Area)** **Objective EE1** Encourage and facilitate environmental improvements to the physical fabric of the policy area. **Objective EE2** Prepare a set of design principles for the public realm as part of the 'Local Enhancement Action Plan' to guide environmental improvements in the area.
Landscape	Objective NH32 Support the aims and objectives of the European Landscape Convention by implementing the relevant objectives and actions of the National Landscape Strategy 2015-2025. Objective NH33 Ensure the preservation of the uniqueness of a landscape character type by having regard to the character, value and sensitivity of a landscape when determining a planning application. Objective NH34 Ensure development reflects and, where possible, reinforces the distinctiveness and sense of place of the landscape character types, including the retention of important features or characteristics, taking into account the various elements which contribute to their distinctiveness such as geology and landform, habitats, scenic quality, settlement pattern, historic heritage, local vernacular heritage, land-use and tranquility. Objective NH37 Ensure that new development meets high standards of siting and design. Objective NH38 Protect skylines and ridgelines from development. Objective NH48 Participate in and actively support the work of the Dublin Bay Biosphere Partnership. Objective NH49 Develop and implement a Biosphere work programme within the County in support of the work of the Dublin Bay Biosphere Partnership. Objective GI26 Maximise the use and potential of existing parks, open space and recreational provision, both passive and active, by integrating existing facilities with proposals for new development and by seeking to upgrade existing facilities where appropriate. Objective GI27 Provide a range of accessible new parks, open spaces and recreational facilities accommodating a wide variety of uses (both passive and active), use intensities and interests. Objective GI36 Ensure green infrastructure provision responds to and reflects landscape character including historic landscape character, conserving, enhancing and augmenting the existing landscapes and townscapes of Fingal which contribute to a distinctive sense of place.	n/a

Section 10 Monitoring Measures

10.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This section details the measures that will be used in order to monitor the likely significant effects of implementing the Plan.

Monitoring can enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

10.2 Indicators and Targets

Monitoring is based around indicators that allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified in Section 5 and used in the evaluation. Each indicator to be monitored is accompanied by the target(s) that were identified with regard to the relevant strategic actions.

Table 10.1 overleaf shows the indicators and targets to be used for monitoring the likely significant environmental effects of implementing the Plan, if unmitigated. The measures selected are those that were developed through the SEA process for the Fingal Development Plan and finalised in 2017.

The Monitoring Programme may be updated to deal with specific environmental issues - including unforeseen effects - as they arise. Such issues may be identified by the Council or identified to the Council by other agencies.

10.3 Reporting and Responsibility

A stand-alone Monitoring Report on the significant environmental effects of implementing the Plan will be prepared during implementation of the Plan, in advance of the beginning of the review of the Plan. This report will address the indicators set out below.

The Council is responsible for the implementation of the SEA Monitoring Programme including ongoing review of indicators and targets, collating existing relevant monitored data, the preparation of monitoring evaluation report(s), the publication of these reports and, if necessary, the carrying out of corrective action.

Table 10.1 Selected Indicators, Targets and Monitoring Sources

Environmental Component	SEO No.	Selected Indicator(s)	Selected Target(s)	Source(s)
Biodiversity, Flora and Fauna	1	Number of programmed actions achieved in Development Plan period (2017-2023)	Update the Biodiversity Action Plan (2010-2015) with a clear programme for delivery of actions	Fingal Biodiversity Section (yearly reporting)
		Not available (n/a)	Develop a Green Infrastructure Strategy within the lifetime of the Development Plan	
Population and Human Health	2	Number of people living and working in Fingal	Increase the number of people living and working in Fingal compared to the 2016 Census base findings	Census 2016 and 2021 (to be calculated in line with available Census data)
		The 2nd Fingal Development Plan SEA Monitoring Indictor and Target under this SEO are not directly relevant to the Airport LAP area; no additional measures are required		Fingal Planning Department
	3	Number of breaches of air quality limits	Compliance with air quality legislation	EPA Air Quality Monitoring Annual Report (nearest stations applicable to Fingal) (yearly reporting)
		Number of measures implemented (Fingal Environment Department, Noise Section, yearly reporting)	Undertake a review as per the Dublin Agglomeration Noise Action Plan of the areas within Fingal identified as being exposed to high levels of noise and develop a programme of implementation of the mitigation measures within the lifetime of the Development Plan	Fingal Planning Department (Noise Section) (yearly reporting)
Soil	4	Percentage of development within brownfield and infill compared to greenfield	Higher rate of brownfield and infill development as opposed to greenfield development	Fingal Planning Department (yearly reporting)
Water	5	% increase in waters achieving and maintaining at least 'good status'	Implementation of the Programme of Measures in the ERBD River Basin Management Plan	EPA and DECLG National River Basin District 2017 Programme of Measures (reporting in line with EPA available data)
		Comply with the recommendations of the Fingal Groundwater Protection Scheme	No. of planning permissions granted in areas identified as vulnerable under Groundwater Protection Scheme	Fingal Water Department and Planning

Environmental Component	SEO No.	Selected Indicator(s)	Selected Target(s)	Source(s)
Air and Climatic Factors[60]	6	Percentage increase in walking, cycling and public transport modes	10% increase in the number of people using sustainable transport modes (rail, bus, cycling walking) against current 2011 Travel to Work Modes. (target also linked to No. 3 PHH2 above)	National Travel Survey 2014 Census 2016 and Fingal Transport Department
	7	No. of high vulnerable development applications permitted within lands in the 1% AEP and 0.1% AEP	No new high vulnerable development applications, as defined by the OPW the Planning System and Flood Risk Management Guidelines (2009), within lands that fall within the 1% AEP and 0.1% AEP	Fingal Water Department and Planning (yearly reporting)
		Percentage of new residential buildings granted planning with A3 or higher BER	All new buildings to have an A3 or higher BER	Fingal Planning and SEAI (yearly reporting)
Cultural Heritage	8	n/a	Develop a code of practice for the management of architectural heritage in private ownership	
Material Assets	9	Percentage of planning permissions within 500m of a bus stop and 1km of a railway	Require all new residential planning permissions to be within 500m of bus stop and 1km of railway station.	Fingal Planning Department (Both distances to be calculated by road and reported yearly)
		Available capacity for treatment of phased development	Phased development in line with wastewater capacity	Fingal Planning & Water Services Department (yearly reporting)
Landscape	10	Number of programmed objectives and policies achieved in Development Plan period	Fingal Development Plan SEA Monitoring Targets for Landscape are not directly relevant to the Airport LAP area; no additional targets are required	Fingal Planning Department

[60] Note that since the start of 2012, emissions from all flights from, to and within the European Economic Area are included in the EU Emissions Trading System (ETS). Airlines are required to monitor, report and verify their emissions and to surrender allowances against those emissions. Airlines receive tradable allowances covering a certain level of emissions from their flights per year and must purchase allowances to cover any shortfall between their allocated sum of free emissions allowances and their actual emissions, as reported annually. The Department of Communications, Climate Action and Environment and the Department of Transport, Tourism and Sport work collaboratively to address the environmental impact of aviation. Both Departments are fully committed to pursuing an agenda in favour of reducing emissions and have worked to ensure that Ireland makes an informed contribution to discussions relating to development of the EU ETS.

Appendix I SEA Determination

Comhairle Contae Fhine Gall
Fingal County Council

An Roinn um Pleanáil agus Infrastruchtúr Straitéiseach
Planning and Strategic Infrastructure Department

SEA Determination

Strategic Environmental Assessment (SEA) Screening Determination under:

Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004), as amended by the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011 (SI No. 201 of 2011)

for the:

Draft Dublin Airport Local Area Plan 2020-2026

This is an SEA determination regarding whether or not implementation of the Plan would be likely to have significant effects on the environment under the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004), as amended by the Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011 (SI No. 201 of 2011).

Taking into account the provisions of the above Regulations, the Council have determined that the Draft Dublin Airport Local Area Plan would have the potential to result in significant environmental effects on multiple environmental components. As a result, SEA is required to be undertaken on the Plan. Further details of these effects are provided in the SEA Environmental Report to accompany the Draft Plan.

DMurray
Signatory:
A/SENIOR PLANNER

Date: 30th **August 2019**

Appendix II Relationship with Legislation and Other Plans and Programmes

This appendix is not intended to be a full and comprehensive review of EU Directives, the transposing regulations or the regulatory framework for environmental protection and management. The information is not exhaustive and it is recommended to consult the Directive, Regulation, Plan or Programme to become familiar with the full details of each.

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
European Level			
SEA Directive (2001/42/EC)	• Contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development. • Provide for a high level of protection of the environment by carrying out an environmental assessment of plans and programmes which are likely to have significant effects on the environment.	• Carry out and environmental assessment for plans or programmes referred to in Articles 2 to 4 of the Directive. • Prepare an environmental report which identifies, describes and evaluates the likely significant effects on the environment of implementing the plan or programme and reasonable alternatives that consider the objectives and the geographical scope of the plan or programme. • Consult with relevant authorities, stakeholders and public allowing sufficient time to make a submission. • Consult other Member States where the implementation of a plan or programme is likely to have transboundary environmental effects. • Inform relevant authorities and stakeholders on the decision to implement the plan or programme. • Issue a statement to include requirements detailed in Article 9 of the Directive. • Monitor and mitigate significant environmental effects identified by the assessment.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EIA Directive (2011/92/EU as amended by 2014/52/EU)	• Requires the assessment of the environmental effects of public and private projects which are likely to have significant effects on the environment. • Aims to assess and implement avoidance or mitigation measures to eliminate environmental effects, before consent is given of projects likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects. Those projects are defined in Article 4.	• All projects listed in Annex I are considered as having significant effects on the environment and require an EIA. • For projects listed in Annex II, a "screening procedure" is required to determine the effects of projects on the basis of thresholds/criteria or a case by case examination. This should take into account Annex III. • The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case and in accordance with Articles 4 to 12, the direct and indirect effects of a project on the following factors: human beings, fauna and flora, soil, water, air, climate and the landscape, material assets and the cultural heritage, the interaction between each factor. • Consult with relevant authorities, stakeholders and public allowing sufficient time to make a submission before a decision is made.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Habitats Directive (92/43/EEC)	• Promote the preservation, protection and improvement of the quality of the environment, including the conservation of natural habitats and of wild fauna and flora.	• Propose and protect sites of importance to habitats, plant and animal species. • Establish a network of European sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, to enable the natural habitat types and the	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
	• Contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora. • Maintain or restore to favourable conservation status, natural habitats and species of wild fauna and flora of community interest. • Promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements.	species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range. • Carry out comprehensive assessment of habitat types and species present. • Establish a system of strict protection for the animal species and plant species listed in Annex IV.	bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Birds Directive (2009/147/EC)	• Conserve all species of naturally occurring birds in the wild state including their eggs, nests and habitats. • Protect, manage and control these species and comply with regulations relating to their exploitation. • The species included in Annex I shall be the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.	• Preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species of birds referred to in Annex 1. • Preserve, maintain and establish biotopes and habitats to include the creation of protected areas (Special Protection Areas). • Ensure the upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones, re-establish destroyed biotopes and creation of biotopes. • Measures for regularly occurring migratory species not listed in Annex I is required as regards their breeding, moulting and wintering areas and staging posts along their migration routes. The protection of wetlands and particularly wetlands of international importance.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Nitrates Directive (91/676/EC)	• Reducing water pollution caused or induced by nitrates from agricultural sources and - preventing further such pollution.	Ireland's Nitrates Action Programme is designed to prevent pollution of surface waters and ground water from agricultural sources and to protect and improve water quality. Ireland's third NAP came into operation in 2014. Each Member State's NAP must include: • a limit on the amount of livestock manure applied to the land each year; • set periods when land spreading is prohibited due to risk; and • set capacity levels for the storage of livestock manure.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Integrated Pollution Prevention Control Directive (2008/1/EC)	• The purpose of this Directive is to achieve integrated prevention and control of pollution arising from the activities listed in Annex I. It lays down measures designed to prevent or, where that is not practicable, to reduce emissions in the air, water and land from the abovementioned activities, including measures concerning waste, in order to achieve a high level of protection of the environment taken as a whole, without prejudice to Directive 85/337/EEC and other relevant Community provisions.	The IPPC Directive is based on several principles: • an integrated approach; • best available techniques; • flexibility; and • public participation.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Plant Protection (products) Directive 2009/127/EC	• The Directive aims at reducing the risks and impacts of pesticide use on human health and the environment by introducing different targets, tools and measures such as Integrated Pest Management or National Action Plans.	• The Framework Directive applies to pesticides which are plant protection products. • Regarding pesticide application equipment already in professional use, the Framework Directive introduces requirements for the inspection and maintenance to be carried out on such equipment.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes,

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
			etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Renewables Directive (2009/28/EC)	• The Renewable Energy Directive establishes an overall policy for the production and promotion of energy from renewable sources in the EU. • It requires the EU to fulfil at least 20% of its total energy needs with renewables by 2020 – to be achieved through the attainment of individual national targets. • All EU countries must also ensure that at least 10% of their transport fuels come from renewable sources by 2020.	• The Directive promotes cooperation amongst EU countries (and with countries outside the EU) to help them meet their renewable energy targets. • The Directive specifies national renewable energy targets for each country, taking into account its starting point and overall potential for renewables. • EU countries set out how they plan to meet these targets and the general course of their renewable energy policy in national renewable energy action plans. • Progress towards national targets is measured every two years when EU countries publish national renewable energy progress reports.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Indirect Land Use Change Directive (2012/0288(COD))	• When biofuels are produced on existing agricultural land, the demand for food and feed crops remains, and may lead to someone producing more food and feed somewhere else. This can imply land use change (by changing e.g. forest into agricultural land), which implies that a substantial amount of CO_2 emissions are released into the atmosphere. • The Directive seeks to make biofuels used in the EU more sustainable and will help us to reduce further Greenhouse Gas emissions and encourage greater market penetration of advanced biofuels.	• Limit the contribution that conventional biofuels (with a risk of Indirect Land Use Change Directive emissions) make towards attainment of the targets in the Renewable Energy Directive. • Improve the greenhouse gas performance of biofuel production processes (reducing associated emissions) by raising the greenhouse gas saving threshold for new installations subject to protecting installations already in operation on 1st July 2014. • Encourage a greater market penetration of advanced (low-Indirect Land Use Change Directive) biofuels by allowing such fuels to contribute more to the targets in the Renewable Energy Directive than conventional biofuels. • Improve the reporting of greenhouse gas emissions by obliging Member States and fuel suppliers to report the estimated indirect land-use change emissions of biofuels.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Alternative Fuels Infrastructure Directive (2014/94/EU)	• This Directive establishes a common framework of measures for the deployment of alternative fuels infrastructure in the Union in order to minimise dependence on oil and to mitigate the environmental impact of transport.	• This Directive sets out minimum requirements for the building-up of alternative fuels infrastructure, including recharging points for electric vehicles and refuelling points for natural gas and hydrogen, to be implemented by means of Member States' national policy frameworks, as well as common technical specifications for such recharging and refuelling points, and user information requirements.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Energy Efficiency Directive (2012/27/EU)	• Establishes a set of binding measures to help the EU reach its 20% energy efficiency target by 2020. • Under the Directive, all EU countries are required to use energy more efficiently at all stages of the energy chain, from production to final consumption.	• Energy distributors or retail energy sales companies have to achieve 1.5% energy savings per year through the implementation of energy efficiency measures. • EU countries can opt to achieve the same level of savings through other means, such as improving the efficiency of heating systems, installing double glazed windows or insulating roofs.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
		• The public sector in EU countries should purchase energy efficient buildings, products and services. • Every year, governments in EU countries must carry out energy efficient renovations on at least 3% (by floor area) of the buildings they own and occupy. • Energy consumers should be empowered to better manage consumption. This includes easy and free access to data on consumption through individual metering. • National incentives for SMEs to undergo energy audits. • Large companies will make audits of their energy consumption to help them identify ways to reduce it. • Monitoring efficiency levels in new energy generation capacities.	environmental protection and management.
EU Seveso Directive (2012/18/EU)	• This Directive lays down rules for the prevention of major accidents which involve dangerous substances, and the limitation of their consequences for human health and the environment, with a view to ensuring a high level of protection throughout the Union in a consistent and effective manner.	The Seveso Directive is well integrated with other EU policies, thus avoiding double regulation or other administrative burden. This includes the following related policy areas: • Classification, labelling and packaging of chemicals. • The Union's Civil Protection Mechanism. • The Security Union Agenda including CBRN-E and Protection of critical infrastructure. • Policy on environmental liability and on the protection of the environment through criminal law. • Safety of offshore oil and gas operations.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Union Biodiversity Strategy to 2020	• Aims to halt or reverse biodiversity loss and speed up the EU's transition towards a resource efficient and green economy. • Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible.	• Outlines six targets and twenty actions to aid European Union in halting the loss to biodiversity and eco-system services. • The six targets cover: o Full implementation of EU nature legislation to protect biodiversity. o Maintaining, enhancing and protecting for ecosystems, and green infrastructure. o Ensuring sustainable agriculture, and forestry. o Sustainable management of fish stocks. o Reducing invasive alien species. o Addressing the global need to contribute towards averting global biodiversity loss.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Green Infrastructure Strategy	Aims to create a robust enabling framework in order to promote and facilitate Green Infrastructure (GI) projects.	• Promoting GI in the main EU policy areas. • Supporting EU-level GI projects. • Improving access to finance for GI projects. • Improving information and promoting innovation.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
UN Kyoto Protocol (2nd Kyoto Period), the Second European Climate Change Programme (ECCP	The UN Kyoto Protocol set of policy measures to reduce greenhouse gas emissions.	• The Kyoto Protocol is implemented through the European Climate Change Programme (ECCP II).	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
II), Paris climate conference (COP21) 2015 (Paris Agreement)	The Second European Climate Change Programme (ECCP II) aims to identify and develop all the necessary elements of an EU strategy to implement the Kyoto Protocol. At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal. The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2°C.	• EU member states implement measures to improve on or compliment the specified measures and policies arising from the ECCP. • Under COP21, governments agreed to come together every 5 years to set more ambitious targets as required by science; report to each other and the public on how well they are doing to implement their targets; track progress towards the long-term goal through a robust transparency and accountability system.	combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU 2020 Climate and Energy Package	• Binding legislation which aims to ensure the European Union meets its climate and energy targets for 2020. • Aims to achieve a 20% reduction in EU greenhouse gas emissions from 1990 levels. • Aims to raise the share of EU energy consumption produced from renewable resources to 20%. • Achieve a 20% improvement in the EU's energy efficiency.	Four pieces of complimentary legislation: • Reform of the EU Emissions Trading System (EU ETS) to include a cap on emission allowances in addition to existing system of national caps. • Member States have agreed national targets for non-EU ETS emissions from countries outside the EU. • Meet the national renewable energy targets of 16% for Ireland by 2020. • Preparing a legal framework for technologies in carbon capture and storage.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU 2030 Framework for Climate and Energy	• A 2030 Framework for climate and energy, including EU-wide targets and policy objectives for the period between 2020 and 2030 that has been agreed by European countries. • Targets include a 40% cut in greenhouse gas emissions compared to 1990 levels, at least a 27% share of renewable energy consumption and at least 27% energy savings compared with the business-as-usual scenario.	To meet the targets, the European Commission has proposed the following policies for 2030: • A reformed EU emissions trading scheme (ETS). • New indicators for the competitiveness and security of the energy system, such as price differences with major trading partners, diversification of supply, and interconnection capacity between EU countries. • First ideas for a new governance system based on national plans for competitive, secure, and sustainable energy. These plans will follow a common EU approach. They will ensure stronger investor certainty, greater transparency, enhanced policy coherence and improved coordination across the EU.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
The Clean Air for Europe Directive (2008/50/EC) **(EU Air Framework Directive)** **Fourth Daughter Directive (2004/107/EC)**	• The CAFE Directive merges existing legislation into a single directive (except for the fourth daughter directive). • Sets new air quality objectives for PM2.5 (fine particles) including the limit value and exposure related objectives. • Accounts for the possibility to discount natural sources of pollution when assessing compliance against limit values. • Allows the possibility for time extensions of three years (PM10) or up to five years (NO2, benzene) for complying with limit values, based on conditions and the assessment by the European Commission. • The Fourth Daughter Directive lists pollutants, target values and monitoring requirements for the following: arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air.	• Sets objectives for ambient air quality designed to avoid, prevent or reduce harmful effects on human health and the environment as a whole. • Aims to assess the ambient air quality in Member States on the basis of common methods and criteria. • Obtains information on ambient air quality in order to help combat air pollution and nuisance and to monitor long-term trends and improvements resulting from national and community measures. • Ensures that such information on ambient air quality is made available to the public. • Aims to maintain air quality where it is good and improving it in other cases. • Aims to promote increased cooperation between the Member States in reducing air pollution.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
Noise Directive (2002/49/EC)	The Noise Directive - Directive 2002/49/EC relating to the assessment and management of environmental noise - is part of an EU strategy setting out to reduce the number of people affected by noise in the longer term and to provide a framework for developing existing Community policy on noise reduction from source.	The Directive requires competent authorities in Member States to: • Draw up strategic noise maps for major roads, railways, airports and agglomerations, using harmonised noise 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 Directive does not set any limit value, nor does it prescribe the measures to be used in the action plans, which remain at the discretion of the competent authorities.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Floods Directive (2007/60/EC)	• Establishes a framework for the assessment and management of flood risks. • Reduce adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods in the Community.	• Assess all water courses and coast lines at risk from flooding through Flood Risk Assessment. • Prepare flood hazard maps and flood risk maps outlining the extent or potential of flooding and assets and humans at risk in these areas at River Basin District level (Article 3(2) (b)) and areas covered by Article 5(1) and Article 13(1) (b) in accordance with paragraphs 2 and 3. • Implement flood risk management plans and take adequate and coordinated measures to reduce flood risk for the areas covered by the Articles listed above. • Inform the public and allow the public to participate in planning process.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Water Framework Directive (2000/60/EC)	• Establish a framework for the protection of water bodies to include inland surface waters, transitional waters, coastal waters and groundwater and their dependent wildlife and habitats. • Preserve and prevent the deterioration of water status and where necessary improve and maintain "good status" of water bodies. • Promote sustainable water usage. • The Water Framework Directive repealed the following Directives: o The Drinking Water Abstraction Directive. o Sampling Drinking Water Directive. o Exchange of Information on Quality of Surface Freshwater Directive. o Shellfish Directive. o Freshwater Fish Directive. o Groundwater (Dangerous Substances) Directive. o Dangerous Substances Directive.	• Protect, enhance and restore all water bodies and meet the environmental objectives outlined in Article 4 of the Directive. • Achieve "good status" for all waters. • Manage water bodies based on identifying and establishing river basins districts. • Involve the public and streamline legislation. • Prepare and implement a River Basin Management Plan for each river basin districts identified and a Register of Protected Areas. • Establish a programme of monitoring for surface water status, groundwater status and protected areas. • Recover costs for water services.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Groundwater Directive (2006/118/EC)	• Protect, control and conserve groundwater. • Prevent the deterioration of the status of all bodies of groundwater. • Implements measures to prevent and control groundwater pollution, including criteria for assessing good groundwater chemical status and criteria for the	• Meet minimum groundwater standards listed in Annex 1 of Directive. • Meet threshold values adopted by national legislation for the pollutants, groups of pollutants and indicators of pollution which have been identified as contributing to the characterisation of bodies or groups of bodies of	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes,

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	identification of significant and sustained upward trends and for the definition of starting points for trend reversals.	groundwater as being at risk, also taking into account Part B of Annex II.	etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Drinking Water Directive (98/83/EC)	• Improve and maintain the quality of water intended for human consumption. • Protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.	• Set values applicable to water intended for human consumption for the parameters set out in Annex I. • Set values for additional parameters not included in Annex I, where the protection of human health within national territory or part of it so requires. The values set should, as a minimum, satisfy the requirements of Article 4(1) (a). • Implement all measures necessary to ensure that regular monitoring of the quality of water intended for human consumption is carried out, in order to check that the water available to consumers meets the requirements of this Directive and in particular the parametric values set in accordance with Article 5. • Ensure that any failure to meet the parametric values set in accordance with Article 5 is immediately investigated in order to identify the cause. • Ensure that the necessary remedial action is taken as soon as possible to restore its quality and shall give priority to their enforcement action. • Undertake remedial action to restore the quality of the water where necessary to protect human health. • Notify consumers when remedial action is being undertaken except where the competent authorities consider the non-compliance with the parametric value to be trivial.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Urban Waste Water Treatment Directive (91/271/EEC)	• This Directive concerns the collection, treatment and discharge of urban waste water and the treatment and discharge of waste water from certain industrial sectors. • The objective of the Directive is to protect the environment from the adverse effects of waste water discharges.	• Urban waste water entering collecting systems shall before discharge, be subject to secondary treatment. • Annex II requires the designation of areas sensitive to eutrophication which receive water discharges. • Establishes minimum requirements for urban waste water collection and treatment systems in specified agglomerations to include special requirements for sensitive areas and certain industrial sectors.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Environmental Liability Directive (2004/35/EC) as amended by Directive 2006/21/EC, Directive 2009/31/EC and Directive 2013/30/EU	• Establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage.	• Relates to environmental damage caused by any of the occupational activities listed in Annex III, and to any imminent threat of such damage occurring by reason of any of those activities; damage to protected species and natural habitats caused by any occupational activities other than those listed in Annex III, and to any imminent threat of such damage occurring by reason of any of those activities, whenever the operator has been at fault or negligent. • Where environmental damage has not yet occurred but there is an imminent threat of such damage occurring, the operator shall, without delay, take the necessary preventive measures.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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		• Where environmental damage has occurred the operator shall, without delay, inform the competent authority of all relevant aspects of the situation and take all practicable steps to immediately control, contain, remove or otherwise manage the relevant contaminants and/or any other damage factors in order to limit or to prevent further environmental damage and adverse effects on human health or further impairment of services and the necessary remedial measures, in accordance with Article 7. • The operator shall bear the costs for the preventive and remedial actions taken pursuant to this Directive. • The competent authority shall be entitled to initiate cost recovery proceedings against the operator. • The operator may be required to provide financial security guarantees to ensure their responsibilities under the directive are met. • The Environmental Liability Directive has been amended through a number of Directives that are not of significant relevance to the SEA for the Guidelines. Implementation of the Environmental Liability Directive is contributed towards by a Multi-Annual Work Programme 'Making the Environmental Liability Directive more fit for purpose' that is updated annually to changing developments, growing knowledge and new needs.	
European Convention on the Protection of the Archaeological Heritage (Valletta 1992)	• The aim of this (revised) Convention is to protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study.	The Valletta Convention makes the conservation and enhancement of the archaeological heritage one of the goals of urban and regional planning policies. The Convention sets guidelines for the funding of excavation and research work and publication of research findings. It also deals with public access, in particular to archaeological sites, and educational actions to be undertaken to develop public awareness of the value of the archaeological heritage. It also constitutes an institutional framework for pan-European co-operation on the archaeological heritage, entailing a systematic exchange of experience and experts among the various States.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Convention of the Protection of the Architectural Heritage of Europe (Granada 1995)	• The main purpose of the Convention is to reinforce and promote policies for the conservation and enhancement of Europe's heritage. It also affirms the need for European solidarity with regard to heritage conservation and is designed to foster practical co-operation among the Parties. It establishes the principles of "European co-ordination of conservation policies" including consultations regarding the thrust of the policies to be implemented.	• The reinforcement and promotion of policies for protecting and enhancing the heritage within the territories of the parties. • The affirmation of European solidarity with regard to the protection of the heritage and the fostering of practical co-operation between states and regions.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Council of Europe Framework Convention on the Value of Cultural Heritage for Society (Faro 2005)	• Cultural heritage is a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment	• Recognise that rights relating to cultural heritage are inherent in the right to participate in cultural life, as defined in the Universal Declaration of Human Rights. • Recognise individual and collective responsibility towards cultural heritage.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and

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	resulting from the interaction between people and places through time. • A heritage community consists of people who value specific aspects of cultural heritage which they wish, within the framework of public action, to sustain and transmit to future generations.	• Emphasise that the conservation of cultural heritage and its sustainable use have human development and quality of life as their goal. • Take the necessary steps to apply the provisions of this Convention concerning the role of cultural heritage in the construction of a peaceful and democratic society. • Greater synergy of competencies among all the public, institutional and private actors concerned.	bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Landscape Convention 2000	• The developments in agriculture, forestry, industrial and mineral production techniques, together with the practices followed in town and country planning, transport, networks, tourism and recreation, and at a more general level, changes in the world economy, have in many cases accelerated the transformation of landscapes. The Convention expresses a concern to achieve sustainable development based on a balanced and harmonious relationship between social needs, economic activity and the environment. It aims to respond to the public's wish to enjoy high quality landscapes.	• Promote protection, management and planning of landscapes. • Organise European co-operation on landscape issues.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
The Seventh Environmental Action Programme (EAP) of the European Community (2013-2020)	It identifies three key objectives: • to protect, conserve and enhance the Union's natural capital; • to turn the Union into a resource-efficient, green, and competitive low-carbon economy; and • to safeguard the Union's citizens from environment-related pressures and risks to health and wellbeing.	Four so called "enablers" will help Europe deliver on these objectives (goals): • Better implementation of legislation. • Better information by improving the knowledge base. • More and wiser investment for environment and climate policy. • Full integration of environmental requirements and considerations into other policies. Two additional horizontal priority objectives complete the programme: • To make the Union's cities more sustainable. • To help the Union address international environmental and climate challenges more effectively.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Bern Convention (Convention on the Conservation of European Wildlife and Natural Habitats)	The convention has three main aims: • to conserve wild flora and fauna and their natural habitats; • to promote cooperation between states; and • to give particular attention to endangered and vulnerable species including endangered and vulnerable migratory species.	The Parties • Recognise the intrinsic value of nature • Seek to ensure the conservation of nature in their countries, paying particular attention to planning and development policies and pollution control. • Look at implementing the Bern Convention in central Eastern Europe and the Caucus. • Take account of the potential impact on natural heritage by other policies. • Promote education and information of the public, ensuring the need to conserve species is understood and acted upon. • Develop an extensive number of species action plans, codes of conducts, and guidelines, at their own initiative or in co-operation with other organisations. • Created the Emerald Network, an ecological network made up of Areas of Special Conservation Interest.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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Bali Road Map (2007)	The overall goals of the project are twofold: • To increase national capacity to co-ordinate ministerial views, participate in the UNFCCC process, and negotiate positions within the timeframe of the Bali Action Plan; and • To assess investment and financial flows to address climate change for up to three key sectors and/or economic activities.	The Bali Action Plan is centred on four main building blocks: mitigation; adaptation; technology; and financing.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Cancun Agreements (2010)	Set of decisions taken at the COP 16 Conference in Cancun in 2010 which addresses a series of key issues in the fight against climate change. Cancun Agreements' main objectives cover: • Mitigation • Transparency of actions • Technology • Finance • Adaptation • Forests • Capacity building	Among the most prominent agreements is the establishment of a Green Climate Fund to transfer money from the developed to developing world to tackle the impacts of climate change.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Doha Climate Gateway (2012)	Set of decisions taken at the COP 18 meeting in Doha in 2012 which pave the way for a new agreement in Paris in 2015.	The following actions were committed to by governments at this conference: • Set out a timetable to adopt a universal climate agreement by 2015 (to come into effect in 2020); • Complete the work under Bali Action Plan and to focus on new completing new targets; • Strengthen the aim to cut greenhouse gases and help vulnerable countries to adapt; • Amend Kyoto Protocol to include a new commitment period for cutting down the greenhouse gases emissions; and • Provide the financial and technology support and new institutions to allow clean energy investment and sustainable growth in developing countries.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU Common Agricultural Policy	• To improve agricultural productivity, so that consumers have a stable supply of affordable food; and • To ensure that EU farmers can make a reasonable living.	• ensuring viable food production that will contribute to feeding the world's population, which is expected to rise considerably in the future; • Climate change and sustainable management of natural resources; • Looking after the countryside across the EU and keeping the rural economy alive.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
EU REACH Regulation (EC 1907/2006)	• Aims to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances.	The aims are achieved by applying REACH, namely: • Registration, • Evaluation, • Authorisation; and • Restriction of chemicals.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and

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		REACH also aims to enhance innovation and competitiveness of the EU chemicals industry.	bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Stockholm Convention	• The objective of the Stockholm Convention is to protect human health and the environment from Persistent Organic Pollutant (POPs).	• Prohibit and/or eliminate the production and use, as well as the import and export, of the intentionally produced POPs that are listed in Annex A to the Convention • Restrict the production and use, as well as the import and export, of the intentionally produced POPs that are listed in Annex B to the Convention • Reduce or eliminate releases from unintentionally produced POPs that are listed in Annex C to the Convention • Ensure that stockpiles and wastes consisting of, containing or contaminated with POPs are managed safely and in an environmentally sound manner • To target additional POPs • Other provisions of the Convention relate to the development of implementation plans, information exchange, public information, awareness and education, research, development and monitoring, technical assistance, financial resources and mechanisms, reporting, effectiveness evaluation and non-compliance	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Ramsar Convention	The Convention's mission is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world".	Under the "three pillars" of the Convention, the Contracting Parties commit to: • Work towards the wise use of all their wetlands; • Designate suitable wetlands for the list of Wetlands of International Importance (the "Ramsar List") and ensure their effective management; and • Cooperate internationally on transboundary wetlands, shared wetland systems and shared species.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
OSPAR Convention	The OSPAR Convention is the most important outcome of a meeting of the Oslo and Paris Commissions meeting in Paris in 1992. The mission of OSPAR is to conserve marine ecosystems and safeguard human health in the North-East Atlantic by preventing and eliminating pollution; by protecting the marine environment from the adverse effects of human activities; and by contributing to the sustainable use of the seas.	OSPAR's work is organised under six strategies: • Biodiversity and Ecosystem Strategy • Eutrophication Strategy • Hazardous Substances Strategy • Offshore Industry Strategy • Radioactive Substances Strategy • Strategy for the Joint Assessment and Monitoring Programme These six strategies fit together to underpin the ecosystem approach. For each strategy a programme of work is designed and implemented annually.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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European 2020 Strategy for Growth	Europe 2020 sets out a vision of Europe's social market economy for the 21st century and puts forward three mutually reinforcing priorities: • Smart growth: developing an economy based on knowledge and innovation; • Sustainable growth: promoting a more resource efficient, greener and more competitive economy; • Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.	In order to reach these priorities, the Commission proposes five quantitative targets to fulfil by 2020: 1. 75 % of the population aged 20-64 should be employed; 2. 3% of the EU's GDP should be invested in R&D; 3. the "20/20/20" climate/energy targets should be met (including an increase to 30% of emissions reduction if the conditions are right); 4. the share of early school leavers should be under 10% and at least 40% of the younger generation should have a tertiary degree; 5. 20 million less people should be at risk of poverty.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)	CORSIA is an emission mitigation approach for the global airline industry, and it aims to stabilize net CO_2 emissions from international civil aviation at 2020 levels.	CORSIA comprises of three implementation phases: the pilot phase (2021-2023), a first phase (2024-2026) and a second phase (2027-2035): • From 2021 until 2026, only flights between states that volunteer to participate in the pilot and/or first phase will be subject to offsetting requirements. • From 2027, all international flights will be subject to offsetting requirements.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Level			
Ireland 2040 - Our Plan, the National Planning Framework, (replacing the National Spatial Strategy 2002-2020) and the National Development Plan (2018-2027)	• The National Planning Framework is the Government's high-level strategic plan for shaping the future growth and development of to the year 2040. It is a framework to guide public and private investment, to create and promote opportunities for people, and to protect and enhance the environment - from villages to cities, and everything around and in between. • The National Development Plan sets out the investment priorities that will underpin the successful implementation of the new National Planning Framework. This will guide national, regional and local planning and investment decisions in Ireland over the next two decades, to cater for an expected population increase of over 1 million people.	The National Planning Framework published alongside the National Development Plan yields ten National Strategic Outcomes as follows: 1. Compact Growth 2. Enhanced Regional Accessibility 3. Strengthened Rural Economies and Communities 4. Sustainable Mobility 5. A Strong Economy, supported by Enterprise, Innovation and Skills 6. High-Quality International Connectivity 7. Enhanced Amenity and Heritage 8. Transition to a Low-Carbon and Climate-Resilient Society 9. Sustainable Management of Water and other Environmental Resources 10. Access to Quality Childcare, Education and Health Services	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Planning, Land Use and Transport Outlook 2040 (in preparation)	The PLUTO will take account of forecasted future economic and demographic scenarios, affordability considerations and relevant Government policies and will: 1. Quantify in broad terms the appropriate scale of financial investment in land transport over the long term; 2. Consider how fiscal, environmental and technological developments might impact on this investment; and, 3. Identify strategic priorities for future investment to ensure land transport infrastructure provision facilitates the objectives of Project Ireland 2040.	In preparation	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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Planning and Development Act 2000 (as amended)	• The core principal objectives of this Act are to amend the Planning Acts of 2000 – 2009 with specific regard given to supporting economic renewal and sustainable development.	• Development, with certain exceptions, is subject to development control under the Planning Acts and the local authorities grant or refuse planning permission for development, including ones within protected areas. • There are, however, a range of exemptions from the planning system. Use of land for agriculture, peat extraction and afforestation, subject to certain thresholds, is generally exempt from the requirement to obtain planning permission. • Additionally, Environmental Impact Assessment (EIA) is required for a range of classes and large scale projects. • Under planning legislation, Development Plans must include mandatory objectives for the conservation of the natural heritage and for the conservation of European sites and any other sites which may be prescribed. There are also discretionary powers to set objectives for the conservation of a variety of other elements of the natural heritage.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (Statutory Instrument Number (SI No. 435 of 2004) and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004), as amended	• The purpose of these Regulations is to transpose into Irish law Directive 2001/42/EC of 27 June 2001 (O.J. No. L 197, 21 July 2001) on the assessment of the effects of certain plans and programmes on the environment — commonly known as the Strategic Environmental Assessment (SEA) Directive.	• Combined, the Regulations transpose the requirements of the SEA Directive.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011, as amended)	• These Regulations provide a new for the implementation in Ireland of Council Directive 92/43/EEC on habitats and protection of wild fauna and flora (as amended) and for the implementation of Directive 2009/147/EC of the European Parliament and of the Council on the protection of wild birds.	• They provide, among other things, for: the appointment and functions of authorized officers; identification, classification and other procedures relative to the designation of Community sites. • The Regulations have been prepared to address several judgments of the CJEU against Ireland, notably cases C-418/04 and C-183/05, in respect of failure to transpose elements of the Birds Directive and the Habitats Directive into Irish law.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Waste Management Act 1996, as amended	• To make provision in relation to the prevention, management and control of waste; to give effect to provisions of certain acts adopted by institutions of the European communities in respect of those matters; to amend the Environmental Protection Agency Act, 1992, and to repeal certain enactments and to provide for related matters.	• The Waste Management Act contains a number of key legal obligations, including requirements for waste management planning, waste collection and movement, the authorisation of waste facilities, measures to reduce the production of waste and/or promote its recovery.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities Environmental Objectives (Freshwater Pearl Mussel)	• The purpose of these Regulations is to support the achievement of favourable conservation status for freshwater pearl mussels.	Actions: • Set environmental quality objectives for the habitats of the freshwater pearl mussel populations named in the First Schedule to these Regulations that are within the boundaries	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in

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Regulations 2009 (S.I 296 of 2009)		of a site notified in a candidate list of European sites, or designated as a Special Area of Conservation, under the European Communities (Natural Habitats) Regulations, 1997 (S.I. No. 94/1997). • Require the production of sub-basin management plans with programmes of measures to achieve these objectives. • Set out the duties of public authorities in respect of the sub-basin management plans and programmes of measure	combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. 9 of 2010), as amended	• To amend the European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010) to make further provision to implement Commission Directive 2014/80/EU of 20 June 2014 amending Annex II to Directive 2006/118/EC of the European Parliament and of the Council on the protection of groundwater against pollution and deterioration.	The substances and threshold values set out in Schedule 5 to S.I. No. 9 of 2010 have been reviewed and amended where necessary, based on existing monitoring information and international guidelines on appropriate threshold values. • Part A of Schedule 6 has been amended to include changes to the rules governing the determination of background levels for the purposes of establishing threshold values for groundwater pollutants and indicators of pollution. • Part B of Schedule 6 has been amended to include nitrites and phosphorus (total) / phosphates among the minimum list of pollutants and their indicators which the Environmental Protection Agency (EPA) must consider when establishing threshold values • Part C of Schedule 6 amends the information to be provided to the Minister by the EPA with regard to the pollutants and their indicators for which threshold values have been established	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2014 (S.I. No. 31 of 2014)	• These Regulations, which give effect to Irelands 3rd Nitrates Action Programme, provide statutory support for good agricultural practice to protect waters against pollution from agricultural sources	The Regulations include measures such as: • Periods when land application of fertilisers is prohibited; • Limits on the land application of fertilisers; • Storage requirements for livestock manure; and • Monitoring of the effectiveness of the measures in terms of agricultural practice and impact on water quality.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Climate Action and Low Carbon Development Act 2015	• An Act to provide for the approval of plans by the Government in relation to climate change for the purpose of pursuing the transition to a low carbon, climate resilient and environmentally sustainable economy.	When considering a plan or framework, for approval, the Government shall endeavour to achieve the national transition objective within the period to which the objective relates and shall, in endeavouring to achieve that objective, ensure that such objective is achieved by the implementation of measures that are cost effective and shall, for that purpose, have regard to: • The ultimate objective specified in Article 2 of the United Nations Framework Convention on Climate Change done at New York on 9 May 1992 and any mitigation commitment entered into by the European Union in response or otherwise in relation to that objective; • The policy of the Government on climate change; • Climate justice;	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
		• Any existing obligation of the State under the law of the European Union or any international agreement referred to in section 2; and • The most recent national greenhouse gas emissions inventory and projection of future greenhouse gas emissions, prepared by the Agency.	
The Sustainable Development Goals National Implementation Plan (2018 – 2020)	• National Implementation Plan 2018 - 2020 is in direct response to the 2030 Agenda for Sustainable Development and provides a whole-of-government approach to implement the 17 Sustainable Development Goals (SDGs). • The Plan provides a 'SDG Matrix' which identifies the responsible Government Departments for each of the 169 targets. It also includes a 'SDG Policy Map' indicating the relevant national policies for each of the targets.	The Plan identifies four strategic priorities to guide implementation: • Awareness: raise public awareness of the SDGs; • Participation: provide stakeholders opportunities to engage and contribute to follow-up and review processes, and further develop national implementation of the Goals; • Support: encourage and support efforts of communities and organisations to contribute towards meeting the SDGs, and foster public participation; and • Policy alignment: develop alignment of national policy with the SDGs and identify opportunities for policy coherence.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Infrastructure and Capital Investment Plan (2016-2021)	• €27 billion multi-annual Exchequer Capital Investment Plan, which is supported by a programme of capital investment in the wider State sector, and which over the period 2016 to 2021 will help to lay the foundations for continued growth in Ireland.	• This Capital Plan reflects the Government's commitment to supporting strong and sustainable economic growth and raising welfare and living standards for all. • It includes allocations for new projects across a number of key areas and funding to ensure that the present stock of national infrastructure is refreshed and maintained.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Ireland's National Renewable Energy Action Plan 2010 (Irish Government submission to the European Commission)	• 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.	• The NREAP sets out the Member State's national targets for the share of energy from renewable sources to be consumed in transport, electricity and heating and cooling in 2020, and demonstrates how the Member State will meet its overall national target established under the Directive.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Strategy for Renewable Energy (2012-2020)	• The Government's overarching strategic objective is to make renewable energy an increasingly significant component of Ireland's energy supply by 2020, so that at a minimum it will achieve its legally binding 2020 target in the most cost efficient manner for consumers. • Of critical importance is the role which the renewable energy sector plays in job creation and economic activity as part of the Government's action plan for jobs.	This document sets out five strategic goals, reflecting the key dimensions of the renewable energy challenge to 2020: • Increasing on and offshore wind, • Building a sustainable bioenergy sector, • Fostering R&D in renewables such as wave & tidal, • Growing sustainable transport; and • Building out robust and efficient networks.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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National Climate Mitigation Plan 2017	• The Plan represents an initial step to set Ireland on a pathway to achieve the deep decarbonisation required in Ireland by mid-century in line with the Government's policy objectives.	The National Mitigation Plan focuses on the following issues: • Climate Action Policy Framework; • Decarbonising Electricity Generation; • Decarbonising the Built Environment; • Decarbonising Transport; and • An Approach to Carbon Neutrality for Agriculture, Forest and Land Use Sectors.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Policy Position on Climate Action and Low Carbon Development (2014)	• The National Policy Position provides a high-level policy direction for the adoption and implementation by Government of plans to enable the State to move to a low carbon economy by 2050. • Statutory authority for the plans is set out in the Climate Action and Low Carbon Development Act 2015.	National climate policy in Ireland: • Recognises the threat of climate change for humanity; • Anticipates and supports mobilisation of a comprehensive international response to climate change, and global transition to a low-carbon future; • Recognises the challenges and opportunities of the broad transition agenda for society; and • Aims, as a fundamental national objective, to achieve transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Clean Air Strategy (in preparation)	• The Clean Air Strategy will provide the strategic policy framework necessary to identify and promote integrated measures across government policy that are required to reduce air pollution and promote cleaner air while delivering on wider national objectives.	• Having a National Strategy will provide a policy framework by which Ireland can develop the necessary policies and measures to comply with new and emerging EU legislation. • The Strategy should also help tackle climate change. • The Strategy will consider a wider range of national policies that are relevant to clean air policy such as transport, energy, home heating and agriculture. • In any discussion relating to clean air policy, the issue of people's health is paramount and this will be a strong theme of the Strategy.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Eirgrid's Grid25 Strategy and associated Grid25 Implementation Programme 2011 -2016	• Eirgrid's mission is to develop, maintain and operate a safe, secure, reliable, economical and efficient transmission system for Ireland; "*Our vision is of a grid developed to match future needs, so it can safely and reliably carry power all over the country to the major towns and cities and onwards to every home, farm and business where the electricity is consumed and so it can meet the needs of consumers and generators in a sustainable way.*"	• Grid25, EirGrid's roadmap to uprate the electricity transmission grid by 2025, continues to be implemented so as to increase the capacity of the grid, to satisfy future demand, and to help Ireland meet its target of 40 per cent of electricity from renewable energy by 2020.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Strategy for the Future Development of National and Regional Greenways (2018)	• The objective of the Strategy is to assist in the strategic development of nationally and regionally significant Greenways in appropriate locations constructed to an appropriate standard in order to deliver a quality experience for all Greenways users. • It also aims to increase the number and geographical spread of Greenways of scale and quality around the country over the next 10 years with a consequent significant increase in the number of people using	• A Strategic Greenway network of national and regional routes, with a number of high capacity flagship routes that can be extended and/or link with local Greenways and other cycling and walking infrastructure; • Greenways of scale and appropriate standard that have significant potential to deliver an increase in activity tourism to Ireland and are regularly used by overseas visitors, domestic visitors and locals thereby contributing to a healthier society through increased physical activity;	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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	Greenways as a visitor experience and as a recreational amenity.	• Greenways that provide a substantially segregated off road experience linking places of interest, recreation and leisure in areas with beautiful scenery of different types with plenty to see and do; • Greenways that provide opportunities for the development of local businesses and economies; and • Greenways that are developed with all relevant stakeholders in line with an agreed code of practice.	
National Water Resources Plan (in preparation)	• The National Water Resources Plan is a plan on how to provide a safe, secure and reliable water supply to customers for the next 25 years, without causing adverse impact on the environment. • The objective of the Plan is to set out how we intend to maintain the supply and demand for drinking water over the short, medium and long term whilst minimising the impact on the environment.	The key objectives of the plan are to: • Identify areas where there are current and future potential water supply shortfalls, taking into account normal and extreme weather conditions • Assess the current and future water demand from homes, businesses, farms, and industry • Consider the impacts of climate change on Ireland's water resources • Develop a drought plan advising measures to be taken before and during drought events • Develop a plan detailing how we deal with the material that is produced as a result of treating drinking water • Identify, develop and assess options to help meet potential shortfalls in water supplies • Assess the water resources available at a national level including lakes, rivers and groundwater	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Strategic Plan for Aquaculture Development (2014-2020)	Vision: *"Aquaculture in RC is economically, socially and ecologically sustainable, with a developed infrastructure, strong human potentials and an organized market. The consumption of aquaculture products is equal or above EU average, while the technological development of the sector is among the best in the EU."*	General development and growth objectives of marine and freshwater aquaculture (2014-2020): • Strengthen the social, business and administrative environment for aquaculture development; • Increase in the total production to 24,050 tonnes while adhering to the principles of economic, social and ecological sustainability; and • Improvement of the perception and increase in the national consumption of aquaculture products.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Construction 2020, A Strategy for a Renewed Construction Sector	• Construction 2020 sets out a package of measures agreed by the Government and is aimed at stimulating activity in the building industry. • The Strategy aims both to increase the capacity of the sector to create and maintain jobs, and to deliver a sustainable sector, operating at an appropriate level. It seeks to learn the lessons of the past and to ensure that the right structures and mechanisms are in place so that they are not repeated.	This Strategy therefore addresses issues including: • A strategic approach to the provision of housing, based on real and measured needs, with mechanisms in place to detect and act when things are going wrong; • Continuing improvement of the planning process, striking the right balance between current and future requirements; • The availability of financing for viable and worthwhile projects; • Access to mortgage finance on reasonable and sustainable terms; • Ensuring we have the tools we need to monitor and regulate the sector in a way that underpins public confidence and worker safety; • Ensuring a fit for purpose sector supported by a highly skilled workforce achieving high quality and standards; and	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
		• Ensuring opportunities are provided to unemployed former construction workers to contribute to the recovery of the sector.	
Sustainable Development: A Strategy for Ireland (1997)	• The overall aim of this Strategy is to ensure that economy and society in Ireland can develop to their full potential within a well-protected environment, without compromising the quality of that environment, and with responsibility towards present and future generations and the wider international community.	• The Strategy addresses all areas of Government policy, and of economic and societal activity, which impact on the environment. It seeks to re-orientate policies as necessary to ensure that the strong growth Ireland enjoys and seeks to maintain will be environmentally sustainable.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Landscape Strategy for Ireland 2015-2025 and National Landscape Character Assessment (pending preparation)	• The National Landscape Strategy will be used to ensure compliance with the European Landscape Convention and to establish principles for protecting and enhancing the landscape while positively managing its change. It will provide a high-level policy framework to achieve balance between the protection, management and planning of the landscape by way of supporting actions. • Landscape Strategy Vision: *"Our landscape reflects and embodies our cultural values and our shared natural heritage and contributes to the well-being of our society, environment and economy. We have an obligation to ourselves and to future generations to promote its sustainable protection, management and planning."*	The objectives of the National Landscape Strategy are to: • Implement the European Landscape Convention by integrating landscape into the approach to sustainable development; • Establish and embed a public process of gathering, sharing and interpreting scientific, technical and cultural information in order to carry out evidence-based identification and description of the character, resources and processes of the landscape; • Provide a policy framework, which will put in place measures at national, sectoral - including agriculture, tourism, energy, transport and marine - and local level, together with civil society, to protect, manage and properly plan through high quality design for the sustainable stewardship of the landscape; and • Ensure that we take advantage of opportunities to implement policies relating to landscape use that are complementary and mutually reinforcing and that conflicting policy objectives are avoided in as far as possible.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Hazardous Waste Management Plan (EPA) 2014-2020	• This Plan sets out the priorities to be pursued over the next six years and beyond to improve the management of hazardous waste, taking into account the progress made since the previous plan and the waste policy and legislative changes that have occurred since the previous plan was published. Section 26 of the Waste Management Act 1996 as amended, sets out the overarching objectives for the National Hazardous Waste Management Plan. In this context, the following objectives are included as priorities for the revised Plan period: • To prevent and reduce the generation of hazardous waste by industry and society generally; • To maximise the collection of hazardous waste with a view to reducing the environmental and health impacts of any unregulated waste;	The revised Plan makes 27 recommendations under the following topics: • Prevention • Collection • Self-sufficiency • Regulation • Legacy issues • North-south cooperation • Guidance and awareness • Implementation	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
	• To strive for increased self-sufficiency in the management of hazardous waste and to minimise hazardous waste export; • To minimise the environmental, health, social and economic impacts of hazardous waste generation and management.		
Ministerial Guidelines such as Sustainable Rural Housing Guidelines and Flood Risk Management Guidelines	• The Department produces a range of guidelines designed to help planning authorities, An Bord Pleanála, developers and the general public and cover a wide range of issues amongst others, architectural heritage, child care facilities, landscape, quarries and residential density.	• The Minister issues statutory guidelines under Section 28 of the Act which planning authorities and An Bord Pleanála are obliged to have regard to in the performance of their planning functions.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Healthy Ireland Framework for Improved Health and Wellbeing 2013-2025 (Health Service Executive)	• The vision is: *"A Healthy Ireland, where everyone can enjoy physical and mental health and wellbeing to their full potential, where wellbeing is valued and supported at every level of society and is everyone's responsibility."*	These four goals are interlinked, interdependent and mutually supportive: • Goal 1: Increase the proportion of people who are healthy at all stages of life. • Goal 2: Reduce health inequalities. • Goal 3: Protect the public from threats to health and wellbeing. • Goal 4: Create an environment where every individual and sector of society can play their part in achieving a healthy Ireland.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Our Sustainable Future: A framework for Sustainable Development for Ireland 2012	A medium to long term framework for advancing sustainable development and the green economy in Ireland. It identifies spatial planning as a key challenge for sustainable development and sets a series of measures to address these challenges.	• Sets out the challenges facing us and how we might address them in making sure that quality of life and general wellbeing can be improved and sustained in the decades to come.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Smarter Travel – A Sustainable Transport Future – A New Transport Policy for Ireland 2009 – 2020 (2009)	• Outlines a policy for how a sustainable travel and transport system can be achieved. • Sets out five key goals: o To reduce overall travel demand. o To maximise the efficiency of the transport network. o To reduce reliance on fossil fuels. o To reduce transport emissions. o To improve accessibility to transport.	• Others lower level aims include: o reduce distance travelled by private car and encourage smarter travel, including focusing population growth in areas of employment and to encourage people to live in close proximity to places of employment. o ensuring that alternatives to the car are more widely available, mainly through a radically improved public transport service and through investment in cycling and walking. o improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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		o strengthening institutional arrangements to deliver the targets.	
Investing in our Future: A Strategic Framework for Investment in Land Transport– Department of Transport, Tourism And Sport	• This Framework sets out a set of priorities to guide the allocation of the State's investment to best develop and manage Ireland's land transport network over the coming decades.	The three priorities stated in Framework are: • Priority 1: Achieve steady state maintenance (meaning that the maintenance and renewal of the existing transport system is at a sufficient level to maintain the system in an adequate condition); • Priority 2: Address urban congestion; and • Priority 3: Maximise the value of the road network. In delivering on the steady state maintenance objective set out in Framework, the Plan includes for: • Planned replacement programme for the bus fleet operated under Public Service Obligation contracts; • Tram refurbishment and asset renewal in the case of light rail; and • To the extent within the Authority' remit, support for the operation of the existing rail network within the Greater Dublin Area.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Delivering a Sustainable Energy Future for Ireland – The Energy Policy Framework 2007 – 2020 (2007)	• White paper setting out a framework for delivering a sustainable energy future in Ireland. • Outlines strategic Goals for: o Security of Supply. o Sustainability of Energy. o Competitiveness of Energy Supply.	The underpinning Strategic Goals are: • Ensuring that electricity supply consistently meets demand. • Ensuring the physical security and reliability of gas supplies to Ireland. • Enhancing the diversity of fuels used for power generation • Delivering electricity and gas to homes and businesses over efficient, reliable and secure networks. • Creating a stable attractive environment for hydrocarbon exploration and production. • Being prepared for energy supply disruptions.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Adaptation Framework (NAF) 2018 and forthcoming regional, local and sectoral adaptation plans (including transport)	• NAF specifies the national strategy for the application of adaptation measures in different sectors and by local authorities in their administrative areas in order to reduce the vulnerability of the State to the negative effects of climate change and to avail of any positive effects that may occur.	• Adaptation under this Framework should seek to minimise costs and maximise the opportunities arising from climate change. • Adaptation actions range from building adaptive capacity (e.g. increasing awareness, sharing information and targeted training) through to policy and finance based actions. • Adaptation actions must be risk based, informed by existing vulnerabilities of our society and systems and an understanding of projected climate change. • Adaptation actions taken to increase climate resilience must also consider impacts on other sectors and levels of governance.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Developing Resilience to Climate Change in the Irish Transport Sector (Climate Adaptation Plan for the Transport Sector 2017)	• The Minister for Transport, Tourism and Sport has prepared a Transport Sectoral Adaptation Plan under the non-statutory National Climate Change Adaptation Framework, 2012. • This first Adaptation Plan examines the impacts of climate change and weather related events, both those impacts that have been observed and those projected for the future, on key transport services and infrastructure within the Irish Transport Sector.	• This Strategy supports action by promoting greater co-ordination and information sharing between Member States with the aim of ensuring that adaptation considerations are addressed in all relevant EU policies. • It sets out a framework and mechanisms for developing preparedness in respect of current and future climate impacts across the EU.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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Governments White Paper 'Ireland's Transition to a Low Carbon Energy Future' (2015 – 2030)	The White Paper sets out a vision and a framework to guide Irish energy policy between now and 2030. A complete energy policy update informed by the vision to transform Ireland into a low carbon society and economy by 2050.	2030 will represent a significant milestone, meaning: • Reduced GHG emissions from the energy sector by between 80% and 95% • Ensuring that secure supplies of competitive and affordable energy remain available to citizens and businesses.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Renewable Energy Action Plan (2010)	• Sets out the Member State's national targets for the share of energy from renewable sources to be consumed in transport, electricity and heating and cooling in 2020, and demonstrates how the Member State will meet its overall national target established under the Directive.	Including Ireland's 16% target of gross final consumption to come from renewables by 2020.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Energy Efficiency Action Plan for Ireland (2009 – 2020)	• This is the second National Energy Efficiency Action Plan for Ireland.	• The Plan reviews the original 90 actions outlined in the first Plan and updates/renews/removes them as appropriate.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Wildlife Act of 1976 **Wildlife (Amendment) Act, 2000**	• The act provides protection and conservation of wild flora and fauna.	• Provides protection for certain species, their habitats and important ecosystems • Give statutory protection to NHAs • Enhances wildlife species and their habitats • Includes more species for protection	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Actions for Biodiversity (2017-2021) Ireland's National Biodiversity Plan	• Sets out strategic objectives, targets and actions to conserve and restore Ireland's biodiversity and to prevent and reduce the loss of biodiversity in Ireland and globally.	• To mainstream biodiversity in the decision-making process across all sectors. • To substantially strengthen the knowledge base for conservation, management and sustainable use of biodiversity. • To increase awareness and appreciation of biodiversity and ecosystems services. • To conserve and restore biodiversity and ecosystem services in the wider countryside.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

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		• To conserve and restore biodiversity and ecosystem services in the marine environment. • To expand and improve on the management of protected areas and legally protected species. • To substantially strengthen the effectiveness of international governance for biodiversity and ecosystem services.	
National Broadband Plan (2012)	• Sets out the strategy to deliver high speed broadband throughout Ireland.	The Plan sets out: • A clear statement of Government policy on the delivery of High Speed Broadband. • Specific targets for the delivery and rollout of high speed broadband and the speeds to be delivered. • The strategy and interventions that will underpin the successful implementation of these targets. • A series of specific complementary measures to promote implementation of Government policy in this area.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
The Planning System and Flood Risk Management – Guidelines for Planning Authorities (2009)	• Sets out comprehensive mechanisms for the incorporation of flood risk identification, assessment and management into the planning process. • Ensures flood risk is a key consideration in preparing land use plans and in the assessment of planning applications. • Implementation of the Guidelines is through actions at national, regional, local authority and site-specific levels. • Planning authorities and An Bord Pleanála are required to have regard to the Guidelines in carrying out their functions under the Planning Acts.	• Avoid inappropriate development in areas at risk of flooding. • Avoid new developments increasing flood risk elsewhere, including that which may arise from surface water run-off. • Ensure effective management of residual risks for development permitted in floodplains. • Avoid unnecessary restriction of national, regional or local economic and social growth. • 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 2009 Flood Risk Management Guidelines were amended by Circular PL 2/2014 (Department of the Environment, Community and Local Government) that provides advice on the use of OPW flood mapping in assessing planning applications and clarifies some advice from the 2009 Guidelines.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
European Communities (Water Policy) Regulations of 2003 (SI 722 of 2003) **European Communities (Water Policy) Regulations of 2003 (SI 350 of 2014)** **European Communities Environmental Objectives (Surface waters) Regulations of 2009 (SI 272 of 2009)**	• Transpose the Water Framework Directive into legislation. • Outlines the general duty of public authorities in relation to water. • Identifies the competent authorities in charge of water policy (amended to Irish Water in 2013) and gives EPA and the Central Energy Regulator the authority to regulate and supervise their actions.	• Provides for river basin management planning. • Requires the public to be informed and consulted on the Plan and for progress reports to be published. • Implements a Register of protected areas, Classification systems and Monitoring programmes for water bodies. • Allows the competent authority to recover the cost of damage/destruction of status of water body. • Outlines environmental objectives and programme of measures and environmental quality standards for priority substances. • Outlines criteria for assessment of groundwater. • Outlines environmental objectives to be achieved for surface water bodies. • Outlines surface water quality standards. • Establishes threshold values for the classification and protection of surface waters against pollution and deterioration in quality.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
European Communities Environmental Objectives (Groundwater) Regulations of 2010 (SI 9 of 2010)	• Transpose the requirements of the Groundwater Directive 2006/118/EC into Irish Legislation.	• Outlines environmental objectives to be achieved for groundwater bodies of groundwater against pollution and deterioration in quality. • Sets groundwater quality standards. • Outlines threshold values for the classification and protection of groundwater.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Water Pollution Acts 1977 to 1990	• The Water Pollution Acts allow Local Authorities the authority regulate and supervise actions relating to water in their division.	The Water Pollution Acts enable local authorities to: • Prosecute for water pollution offences. • Attach appropriate pollution control conditions in the licensing of effluent discharges from industry, etc., made to waters. • Issue notices ("Section 12 notices") to farmers, etc., specifying measures to be taken within a prescribed period to prevent water pollution. • issue notices requiring a person to cease the pollution of waters and requiring the mitigation or remedying of any effects of the pollution in the manner and within the period specified in such notices; • Seek court orders, including High Court injunctions, to prevent, terminate, mitigate or remedy pollution/its effects. • Prepare water quality management plans for any waters in or adjoining their functional areas.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Water Services Act 2007 **Water Services (Amendment) Act 2012** **Water Services Act (No. 2) 2013**	• Provides the water services infrastructure. • Outlines the responsibilities involved in delivering and managing water services. • Identifies the authority in charge of provision of water and waste water supply. • Irish Water was given the responsibility of the provision of water and wastewater services in the amendment act during 2013, therefore these services are no longer the responsibility of the 34 Local Authorities in Ireland.	Key strategic objectives include: • Ensuring Irish Water delivers infrastructural projects that meet key public health, environmental and economic objectives in the water services sector. • Ensuring the provision of adequate water and sewerage services in the gateways and hubs listed in the National Spatial Strategy, and in other locations where services need to be enhanced. • Ensuring good quality drinking water is available to all consumers of public and group water supplies, in compliance with national and EU drinking water standards • Ensuring the provision of the remaining infrastructure needed to provide secondary wastewater treatment, for compliance with the requirements of the EU Urban Wastewater Treatment Directive. • Promoting water conservation through Irish Water's Capital Investment Plan, the Rural Water Programme and other measures. • Monitoring the on-going implementation of septic tanks inspection regime and the National Inspection Plan for Domestic Waste Water Treatment Systems. • Ensuring a fair funding model to deliver water services.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
		• Overseeing the establishment of an economic regulation function under the Central Energy Regulator.	
Irish Water's Water Services Strategic Plan 2015 and associated Proposed Capital Investment Plan (2014-2016)	• This Water Services Strategic Plan sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. It details current and future challenges which affect the provision of water services and identifies the priorities to be tackled in the short and medium term.	Six strategic objectives as follows: • Meet Customer Expectations. • Ensure a Safe and Reliable Water Supply. • Provide Effective Management of Wastewater. • Protect and Enhance the Environment. • Support Social and Economic Growth. • Invest in the Future.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Food Harvest 2020	• Food Harvest 2020 is a roadmap for the Irish food industry, as it seeks to innovate and expand in response to increased global demand for quality foods. It sets out a vision for the potential growth in agricultural output after the removal of milk quotas.	• Seeks for the improvement of all agricultural sectors at all levels in terms of sustainability, environmental consideration and marketing development.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Agri-vision 2015 Action Plan	Outlines the vision for agricultural industry to improve competitiveness and response to market demand while respecting and enhancing the environment.		Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Rural Environmental Protection Scheme (REPS) **Agri-Environmental Options Scheme (AEOS)** **Green, Low-Carbon, Agri-environment Scheme (GLAS)**	• Agri-environmental funding schemes aimed at rural development for the environmental enhancement and protection. • GLAS is the new replacement for REPS and AEOS which are both expiring.	• Establish best practice farming methods and production methods in order to protect landscapes and maximise conservation. • Protect biodiversity, endangered species of flora and fauna and wildlife habitats. • Ensure food is produced with the highest regard to the environment. • Implement nutrient management plans and grassland management plans. • Protect and maintain water bodies, wetlands and cultural heritage.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Rural Development Programme	• The National Rural Development Programme, prepared by the Department of Agriculture, Fisheries and Food, sets out a national programme based on the EU framework for rural development and prioritises improving the competitiveness of agriculture, improving the environment and improving the quality of life in rural areas	At a more detailed level, the programme also: • Supports structural change at farm level including training young farmers and encouraging early retirement, support for restructuring, development and innovation; • Aims to improve the environment, biodiversity and the amenity value of the countryside by support for land	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
		management through funds such as Natura 2000 payments etc.; and • Aims to improve quality of life in rural areas and encouraging diversification of economic activity through the implementation of local development strategies such as non-agricultural activities	of the regulatory framework for environmental protection and management.
National Forestry Programme (2014-2020)	• Represents Ireland's proposals for 100% State aid funding for a new Forestry Programme for the period 2014-2020.	Measures include the following: • Afforestation and Creation of Woodland • NeighbourWood Scheme • Forest Roads • Reconstitution Scheme • Woodland Improvement Scheme • Native Woodland Conservation Scheme • Knowledge Transfer and Information Actions • Producer Groups • Innovative Forest Technology • Forest Genetic Reproductive Material • Forest Management Plans	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
River Basin Management Plan	• River Basin Management Plans set out the measures planned to maintain and improve the status of waters.	• Aim to protect and enhance all water bodies and meet the environmental objectives outlined in Article 4 of the Water Framework Directive. • Identify and manages water bodies. • Establish a programme of measures for monitoring and improving water quality. • Involve the public through consultations.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Peatlands Strategy (2015-2025)	This Strategy aims to provide a long-term framework within which all of the peatlands within the State can be managed responsibly in order to optimise their social, environmental and economic contribution to the well-being of this and future generations.	Objectives of the Strategy: • To give direction to Ireland's approach to peatland management. • To apply to all peatlands, including peat soils. • To ensure that the relevant State authorities and state owned companies that influence such decisions contribute to meeting cross-cutting objectives and obligations in their policies and actions. • To ensure that Ireland's peatlands are sustainably managed so that their benefits can be enjoyed responsible. • To inform appropriate regulatory systems to facilitate good decision making in support of responsible use. • To inform the provision of appropriate incentives, financial supports and disincentives where required. • To provide a framework for determining and ensuring the most appropriate future use of cutover and cutaway bogs. To ensure that specific actions necessary for the achievement of its objectives are clearly identified and delivered by those involved in or responsible for peatlands management or for decisions affecting their management.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
Flood Risk Management Plans arising from National Catchment Flood Risk Assessment and Management Programme	• The national Catchment Flood Risk Assessment and Management (CFRAM) programme commenced in Ireland in 2011 and is being overseen by the Office of Public Works. The CFRAM Programme is intended to deliver on core components of the National Flood Policy, adopted in 2004, and on the requirements of the EU Floods Directive.	CFRAM Studies have been undertaken for all River Basin Districts. The studies are focusing on areas known to have experienced flooding in the past and areas that may be subject to flooding in the future either due to development pressures or climate change. Flood Risk and Hazard mapping, including Flood Extent Mapping, was finalised in 2017. The final outputs from the studies are the CFRAM Plans, finalised in 2018. The Plans define the current and future flood risk in the River Basin Districts and set out how this risk can be managed.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Draft National Bioenergy Plan 2014 – 2020	The Draft Bioenergy Plan sets out a vision as follows: • Bioenergy resources contributing to economic development and sustainable growth, generating jobs for citizens, supported by coherent policy, planning and regulation, and managed in an integrated manner.	Three high level goals, of equal importance, based on the concept of sustainable development are identified: • To harness the market opportunities presented by bioenergy in order to achieve economic development, growth and jobs. • To increase awareness of the value, opportunities and societal benefits of developing bioenergy. • To ensure that bioenergy developments do not adversely impact the environment and its living and non-living resources.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Draft Renewable Electricity Policy and Development Framework (Department of Communications, Climate Action and Environment) 2016	Goal: To optimise the opportunities in Ireland for renewable electricity development on land at significant scale, to serve both the All Island Single Electricity Market and any future regional market within the European Union, in accordance with European and Irish law, including Directive 2009/28/EC: On the promotion of the use of energy from renewable resources.	Objective: To develop a Policy and Development Framework for renewable electricity generation on land to serve both the All Island Single Electricity Market and any future regional market within the European Union, with particular focus on large scale projects for indigenous renewable electricity generation. This will, inter alia, provide guidance for planning authorities and An Bord Pleanála.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Alternative Fuels Infrastructure for the Transport Sector (Department of Transport, Tourism and Sport) 2017- 2030	This Framework sets targets to achieve an appropriate level of alternative fuels infrastructure for transport, which is relative to national policy and Irish market needs. Non-infrastructure-based incentives to support the use of the infrastructure and the uptake of alternative fuels are also included within the scope of the Framework.	Targets for alternative fuel infrastructure include the following: • AFV forecasts • Electricity targets • Natural gas (CNG, LNG) targets • Hydrogen targets • Biofuels targets • LPG targets • Synthetic and paraffinic fuels targets	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Food Wise 2025 (Department of Agriculture, Fisheries and Marine)	Food Wise 2025 sets out a ten year plan for the agri-food sector. It underlines the sector's unique and special position within the Irish economy, and it illustrates the potential which exists for this sector to grow even further.	Food Wise 2025 identifies ambitious and challenging growth projections for the industry over the next ten years including: • 85% increase in exports to €19 billion. • 70% increase in value added to €13 billion. • 60% increase in primary production to €10 billion. • The creation of 23,000 additional jobs all along the supply chain from producer level to high end value added product development.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
National Cycle Network Scoping Study 2010	• Outlines objectives and actions aimed at developing a strong cycle network in Ireland. • Sets out 19 specific objectives, and details the 109 actions, aimed at ensuring that a cycling culture is developed.	• Sets a target where 10% of all journeys will be made by bike by 2020. • Proposes the planning, infrastructure, communication, education and stakeholder participations measures required to implement the initiative.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Policy Framework for Alternative Fuels Infrastructure for Transport in Ireland 2017 to 2030	• This National Policy Framework on Alternative Fuels Infrastructure for Transport represents the first step in communicating our longer term national vision for decarbonising transport by 2050, the cornerstone of which is our ambition that by 2030 all new cars and vans sold in Ireland will be zero-emissions capable. • By 2030 it is envisaged that the movement in Ireland to electrically-fuelled cars and commuter rail will be well underway, with natural gas and biofuels developing as major alternatives in the freight and bus sectors.	This policy set out to achieve five key goals in transport: • Reduce overall travel demand; • Maximise the efficiency of the transport network; • Reduce reliance on fossil fuels; • Reduce transport emissions; and • Improve accessibility to transport. These goals remain the cornerstone of transport policy and are fully aligned to the objectives of this National Policy Framework.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Aviation Policy for Ireland 2015	• enhance Ireland's connectivity by ensuring safe, secure and competitive access responsive to the needs of business, tourism and consumers • foster the growth of aviation enterprise in Ireland to support job creation and position Ireland as a recognised global leader in aviation • maximise the contribution of the aviation sector to Ireland's economic growth and development	The Policy contains 73 specific actions in relation to 9 different aspects of aviation policy with a view to enabling the Irish aviation industry to build on its strong reputation to compete effectively in the global aviation market place.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Ireland's 2019 Action Plan for Aviation Emissions Reduction	• This action plan provides an overview of the actions undertaken by Ireland and Irish stakeholders, either alone or in collaboration with others such as the European Union, in order to mitigate the effects of climate change • The objective of the Plan is to enable Ireland to meet its EU targets to reduce its carbon emissions by 30 per cent between 2021 and 2030 and lay the foundations for achieving net zero carbon emissions by 2050	Measures outlines in the Plan include ongoing programmes of fleet renewal by Irish registered airlines, moving to better fuel-efficient engines and a range of air traffic management and airport operational improvements.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Regional / County / Local Level			
Eastern and Midlands Regional Economic and Spatial Strategy 2019	The Regional Spatial and Economic Strategy provides a long-term strategic planning and economic framework for the Eastern and Midlands Region in order to support the implementation of the National Planning Framework.	• The Eastern and Midlands Regional Economic and Spatial Strategy includes provisions for its twelve constituent local authorities: Fingal County Council, Dublin City Council, South Dublin County, Dún Laoghaire-Rathdown County Council; Louth County Council, Kildare County Council, Meath County Council, Wicklow County Council, Longford County Council, Laois County Council, Offaly County Council and Westmeath County Council.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
			environmental protection and management.
Greater Dublin Area (GDA) Transport Strategy (2016-2035)	• This Strategy sets out how transport will be developed across the Greater Dublin Area, covering Dublin, Meath, Wicklow and Kildare. • Vision Statement: *"The GDA by 2022 is an economically vibrant, active and sustainable international Gateway Region, with strong connectivity across the GDA Region, nationally and worldwide; a region which fosters communities living in attractive, accessible places well supported by community infrastructure and enjoying high quality leisure facilities; and promotes and protects across the GDA green corridors, active agricultural lands and protected natural areas."* • Full SEA and Stage 2 AA have been undertaken on this Strategy.	Core principles deriving from the strategic vision: • Dublin as the capital city of Ireland and a major European centre shall grow and progress, competing with other cities in the EU, and serving a wide range of international, national, regional and local needs. • The Dublin and Mid-East Regions will be attractive, vibrant locations for industry, commerce, recreation and tourism and will be a major focus for economic growth within the Country. • The GDA, through its ports and airport connections will continue to be the most important entry/exit point for the country as a whole, and as a Gateway between the European Union and the rest of the World. Access to and through the GDA will continue to be a matter of national importance. • Development in the GDA shall be directly related to investment in integrated high quality public transport services and focused on compact urban form. • Development within the existing urban footprint of the Metropolitan Area will be consolidated to achieve a more compact urban form • Development in the Hinterland Area will be focused on the high quality integrated growth and consolidation of development in key identified towns, separated from each other by extensive areas of strategic green belt land devoted to agriculture and similar uses.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Integrated Implementation Plan 2019-2024	The Transport Strategy for the Greater Dublin Area 2016-2035, which established an overall framework for transport investment over the next two decades and was subject to full SEA and Stage 2 AA, is a key policy shaping the six-year Integrated Infrastructure Plan. The priorities in the Integrated Infrastructure Plan align with the objectives and priorities set out in the Transport Strategy, focused on improving public and sustainable transport	The Implementation Plan identifies investment proposals for a number of areas including: • Bus; • Light Rail; • Heavy Rai; • Integration Measures and Sustainable • Transport Investment; • Integrated Service Plan; and • Integration and Accessibility.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Greater Dublin Area Cycle Network Plan	• Sets out a ten year cycling strategy for Counties Dublin, Kildare, Meath and Wicklow • Plan to increase regions cycle network dramatically • The Plan refers to the EuroVelo International Cycle Route Network of the European Cyclists Federation is a network of 15 long distance cycle routes connecting and uniting the whole European continent. Two of these routes are in Ireland including EV2 from Galway through Dublin to London, Berlin, Warsaw and Moscow.	Aims to identify and determine: • The Urban Cycle Network at the Primary, Secondary and Feeder level. • The Inter-Urban Cycle Network linking the relevant sections of the Urban Network including the elements of the National Cycle Network within the Greater Dublin Area including linkages to key transport locations outside of urban areas such as airports and ports. • The Green Route Network being cycle routes for development of tourist, recreational and leisure purposes.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
Water Quality Management Plans	• Ensure that the quality of waters covered by the plan is maintained. • Maintain and improve the quantity and quality of water included in the Plan scope.	• Monitoring of water bodies against quality standards. • Outlines management programmes for water catchments. • Purpose is to maintain and improve the quantity and quality of groundwater.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
NPWS Conservation Plans and/or Conservation Objectives for SACs and SPAs	Aims: • To identify and evaluate the features of interest for a site. • To set clear objectives for the conservation of the features of interest. • To describe the site and its management. • To identify issues (both positive and negative) that might influence the site. • To set out appropriate strategies/management actions to achieve the objectives.	• Conservation objectives for SACs and SPAs (i.e. sites within the Natura 2000 network) have to be set for the habitats and species for which the sites are selected. • These objectives are used when carrying out appropriate assessments for plans and projects that might impact on these sites.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Groundwater Protection Schemes	• A Groundwater Protection Scheme 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.	• 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.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Fingal Economic and Community Plans (LECP) 2016-2021	• The overarching vision for each LECP is: "to promote the well-being and quality of life of citizens and communities".	• The purpose of the LECP, as provided for in the Local Government Reform Act 2014, is to set out, for a six-year period, the objectives and actions needed to promote and support the economic development and the local and community development of the relevant local authority area, both by itself directly and in partnership with other economic and community development stakeholders.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
Development Plans, including: **Fingal Development Plan 2017-2023, Dublin City Development Plan 2016-2022, South Dublin County Development Plan 2016-2022, Meath County Development Plan 2013-2019, and Kildare County Development Plan 2017-2023.** **Local Area Plans, including:** **Rivermeade Local Area Plan 2018-2024, Portmarnock South Local Area Plan 2018-2023, Baldoyle - Stapolin Local Area Plan 2013-2019, Kinsaley Local Area Plan 2017-2023, Donabate Local Area Plan 2016-2022 and Cherryhound Local Area Plan 2012-2018 (as extended to 2022).**	• Outline planning objectives for land use development and activities. • Strategic framework for planning and sustainable development integrating higher level provisions, including those set out in National Planning Framework and Regional Economic and Spatial Strategy, at local level. • Set out the policies and proposals to guide development in the specific Local Authority/local area.	• Identify and provide for future infrastructure, development and zoning required. • Protect and enhances amenities and environment. • Guide planning authority in assessing proposals. • Aim to guide development in the area and the amount of nature of the planned development. • Aim to promote sustainable development. • Provide for economic development and protect natural environmental, heritage.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Dublin Airport Central Masterplan 2016	• Serves as a design framework for the future development of lands strategically located adjacent to Dublin Airport.	• Key guiding principles include those relating to: urban design and quality space making; movement and circulation; economic conditions; and environmental and building sustainability.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Biodiversity Action Plans including Fingal Biodiversity Action Plan 2018-2023	• Aims to protect, conserve, enhance and restore biodiversity and ecosystem services across all spectrums.	• Outlines the status of biodiversity and identifies species of importance. • Outlines objectives and targets to be met to maintain and improve biodiversity. • Aims to increase awareness.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Heritage Plans including Fingal Heritage Plan 2018-2023	• Aims to highlight the importance of heritage at a strategic level.	• Manage and promote heritage as well as increase awareness. • Aims to conserve and protect heritage.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for

Legislation, Plan, Scheme etc.	Summary of high level aim / purpose / objective	Summary of lower level objectives, actions etc.	Relevance to the Plan
			environmental protection and management.
Regional Waste Management Plans including Eastern-Midlands Region Waste Management Plan 2015-2021	These plans (for the Connacht-Ulster, Southern, and Eastern-Midlands regions) give effect to national and EU waste policy, and address waste prevention and management (including generation, collection and treatment) over the period 2015-2021.	To manage wastes in a safe and compliant manner, a clear strategy, policies and actions are required.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Draft Climate Change Action Plans 2019 - 2024	Dublin's four local authorities have joined together to develop Climate Change Action Plans as a collaborative response to the impact that climate change is having, and will continue to have, on the Dublin Region and its citizens. While each plan is unique to its functional area, they are unified in their approach to climate change adaptation and mitigation, and their commitment to lead by example in tackling this global issue.	These Plans include actions for: Energy and Buildings, Transport, Flood Resilience, Nature-Based Solutions and Resource Management. The actions seek to facilitate: • A 33% improvement in the Councils' energy efficiency by 2020. • A 40% reduction in the Councils' greenhouse gas emissions by 2030. • Make Dublin a climate resilient region, by reducing the impacts of future climate change - related events. • Actively engage and inform citizens on climate change.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Noise Action Plans including Noise Action Plan for Dublin Airport 2019-2023 and Draft Noise Action Plan for Fingal County 2019-2023	These Plans are prepared in accordance with the requirements of the Environmental Noise Regulations 2006. These Regulations give effect to the EU Directive 2002/49/EC relating to the assessment and management of environmental noise. This Directive sets out a process for managing environmental noise in a consistent manner across the EU and the Noise Regulations set out the approach to meeting the requirements of the Directive.	• Inform and consult the public about noise exposure, its effects and the measures which may be considered to address noise problems. • Address strategic noise issues by requiring competent authorities to draw up action plans to manage noise issues and their effects. • Reduce noise, where possible, and maintain the environmental acoustic quality where it is good.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans, programmes, etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Appendix III SEA Scoping Submissions and Responses

SEA Scoping submissions received from the following environmental authorities are responded to below: Department of Culture, Heritage and the Gaeltacht (DCHG); Environmental Protection Agency (EPA); Inland Fisheries Ireland, operating under the Department of Communications, Climate Action and Environment (DCCAE); and Meath County Council (MCC).

Ref.	Submission Text	Response
Submission from DCHG		
DCHG 1	**Nature Conservation** **Comments on SEA Scoping Report** This Department notes that in table 4.2, under the heading of "Biodiversity and flora and fauna", that protected species have not been mentioned under the heading of "positive effects likely to occur". This Department recommends this is changed to reflect species protected under the Wildlife Acts of 1976 to 2018, as well as species listed on the annexes of the Birds and Habitats Directives. This Department also notes that bats, if they are on site, are likely to be negatively impacted by lights. This Department recommends that mitigation measures are proposed for bats, should they occur on site.	The description of effects provided by the SEA takes account of this part of the submission. The Fingal Development Plan includes various provisions relating to the protection of bats including, for example, Objectives DMS152, DMS168, NH08 and NH09.
DCHG 2	Please find below some general comments on SEA scoping. **Context of submission** This submission is made in the context of this Department's role in relation to nature conservation, including as an environmental authority under SEA legislation. The observations primarily concern the issues of biodiversity, fauna and flora, and are offered to assist the Local Authority and its consultants in meeting its obligations in relation to nature conservation, and relevant Directives and national legislation and obligations in these regards when preparing the plan or programme and the SEA Environmental Report. The observations are not exhaustive and are made without prejudice to any observations or recommendations that may be made by the Minister and this Department in the future. **General outline** General points on obligations relating to nature conservation below, which are relevant to the plan/programme/SEA, are followed by text on components of biodiversity, relationships with other environmental issues, sources of information, etc. Appendices. **Links with appropriate assessment** This Department notes that in the absence of a draft Plan, appropriate assessment (AA) screening cannot be carried out at this stage. However, SEA must also include consideration of the likely significant effects on European sites whether or not an appropriate assessment is required. **Integration of Biodiversity, Flora and Fauna, and associated obligations, into the Plan** SEA must assess the likely significant effects on biodiversity, flora and fauna. Biodiversity is generally defined as the variety of life on earth. An outline of key elements of biodiversity of potential relevance to the plan and plan area is given in Appendix 1, and includes sites, habitats, species of includes flora and fauna and ecological networks. There are interrelationships between biodiversity, flora and fauna and most other environmental issues, including population, human health, water, soil, air, climatic factors, landscape, and possibly architectural and archaeological heritage, and the potentially significant effects of the plan on these interdependencies should be explored and assessed in the SEA. The plan or programme should be developed to integrate biodiversity considerations in a positive, proactive and precautionary way, and this should be reflected in the text and content of the plan, including its aims, objectives and policies, as well as in maps, e.g. land use zonings, and suitability categorisations or preferential areas or routes for infrastructural components and interconnections, and for certain developments or land use types. In general, no areas should be identified or targeted for future development or changes in land use without the availability of basic information on the ecological sensitivities of the lands in question, such as a habitat or ecological constraints map, *i.e.* the precautionary principle should apply. This will serve to ensure that plan-making is robust, informed and evidence-based, and that the expectations or concerns of various parties are better managed, particularly in relation to the likely or realistic development potential of certain areas.	Noted.
DCHG 3	**The Plan** The Plan should include objectives to conserve and maintain key elements of biodiversity within the Plan area and its zone of influence, and to ensure it does not contribute to biodiversity losses or deterioration.	Environmental protection and management measures within the LAP area may have beneficial effects on environmental protection and management beyond the Plan area. The provisions of the Fingal Development Plan, including those relating to environmental protection and management, are in force within the Plan area and beyond. Impacts upon

Ref.	Submission Text	Response
		biodiversity, including any losses, will be mitigated by provisions contained within both the LAP and the Development Plan.
DCHG 4	If a Plan/Programme contains measures that involve the use of new technologies, the implications of which for biodiversity are unclear or unknown, authorities are advised to include commitments to undertake scientific research to improve and expand understanding of the significant effects that may arise.	Measures contained within the Plan have been considered by the SEA process and this involved the identification of effects and appropriate mitigation where relevant.
DCHG 5	Your particular attention is drawn to Regulation 27 of the European Communities (Birds and Natural Habitats) Regulations, 2011-2015 (referred to as the 2011 Regulations), as this places particular duties on all public authorities in relation to European sites that should be reflected in the plan commitments and the associated assessments. Among other things, this includes a duty to exercise all functions, including consent functions, in compliance with, and so as to secure compliance with, the requirements of the Habitats and Birds Directives and the 2011 Regulations. Public authorities are obliged, when exercising their functions, to take appropriate steps to avoid in European sites the deterioration of natural habitats and the habitats of species, as well as disturbance of species for which a site has been designated insofar as this disturbance could be significant in relation to the objectives of the Habitats Directive (see also Section 177S of the Planning and Development Act, 2000 as amended. All public authorities are advised to incorporate such obligations into their plans and programmes, and associated assessments, as required and relevant. The Department would also like to draw attention to Part 5 of the Birds and Natural Habitats Regulations (and to S177AE of the Planning and Development Acts) and the obligations these place on public authorities, including local authorities that are planning authorities, whether in its capacity as a planning authority or in any other capacity, in relation to screenings for appropriate assessment, and appropriate assessment as may be required. Plans/Programmes should modify commitments or incorporate mitigation measures to ensure compliance with the requirements of Article 6 of the Habitats Directive, and all relevant aspects of the transposing legislation. This includes, for example, obligations in relation to the retention of all records of or in relation to AA screenings, AA conclusions and the reasons therefore, amongst other things (Regulation 61 Retention of Records of the 2011 Regulations). Authorities should also pay particular attention to the requirements of the relevant national legislation when undertaking screenings, Natura Impact Statements or Reports, and appropriate assessments, as these set out or clarify particular standards and processes that are not yet fully reflected in some national guidance documents. In order to assist authorities in the preparation of a Natura Impact Statement[1], some key requirements and clarifications in relation to NIS are set out later in this submission.	Noted.
DCHG 6	**Implications of the Plan/Programme, or modification thereof, for Biodiversity, Flora and Fauna** Plans and programmes may significantly affect nature conservation, biodiversity, flora and fauna in a number of ways, depending on the measures to be included within the Plan and the methods of implementation. It should be considered whether the Plan will give rise to some or all of the impacts and effects listed below. This is not an exhaustive list and additional effects may arise that will need to be considered in the assessments required. - Permanent and/or temporary habitat loss - Permanent and/or temporary habitat fragmentation - Habitat deterioration - Vegetation or community changes (*e.g.* from land use change as well as direct changes to the environment, *e.g.* through emissions, fertilisation, lighting *etc.*) - Changes to soil nutrient status - Changes to physical structure of habitats (*e.g.* creeks and pans in salt meadows) - Disturbance or damage to breeding, roosting, feeding areas - Changes to distribution of species - Introduction or expansion of barriers to movement, dispersal, migration - Introduction or increase of collision risk - Other impacts that may affect productivity and breeding success - Changes to water quality, such as eutrophication, sedimentation *etc.* - Changes to natural processes of sedimentation and erosion - Changes to drainage, hydrology, hydromorphology, sub-surface flows, flooding regimes *etc.* - Changes to ecosystem services and functions, such as pollination, water attenuation and flood mitigation, climate change mitigation and adaption (such as carbon storage and sinks *etc.*) - Introduction or spread of invasive species. Competent authorities and consultants acting on their behalf are also advised to undertake reviews of peer-reviewed and grey literature to enhance their understanding of the implications for nature conservation of their proposed Plan/Programme and to ensure that they have identified the full range of potential effects that should be considered in the assessment. They are also advised to review the publications on the NPWS website for this purpose (details are provided below).	Effects considered by the SEA encompass such issues.

Ref.	Submission Text	Response
DCHG 7	**Scope of the Strategic Environmental Assessment** The Biodiversity, Flora and Fauna section, and related sections (such as water, soil *etc.*) of the Environmental Report should be undertaken by or in conjunction with a suitably qualified ecologist(s) and other specialists as necessary, and in conjunction with the Natura Impact Statement (or Natura Impact Report, in the case of a land-use plan being prepared pursuant to the Planning and Development Acts). This will facilitate full integration of biodiversity issues and concerns, particularly in relation to nature conservation sites, protected species, and ecological corridors and stepping stones. The EPA's *Integrated Biodiversity Impact Assessment Practitioner's Manual* is of particular relevance in this regard. The Environmental Report is required by the SEA Directive (2001/42/EC) to contain information on the environmental characteristics of the areas likely to be significantly affected by the plan or programme, or modification thereof.	Noted. The SEA is being informed by relevant expertise, including ecological. The SEA will follow elements of Integrated Biodiversity Assessment as detailed in the cited publication.
DCHG 8	**Strategic Environmental Objectives** The Environmental Report is required to contain environmental protection objectives. For biodiversity, flora and fauna, these should integrate with the objectives and obligations of other Directives, legislation, plans and policies such as, but not only, the following: • Birds and Habitats Directives, • Water Framework Directive and the Floods Directive, • Environmental Liabilities Directive • Wildlife Acts, 1976-2018 • European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477/2011) and amendments (SI 290 of 2013, SI 499 of 2013 and SI 355 of 2015) • European Union Biodiversity Strategy 2020 • National Biodiversity Plan 2017-2021 • National Peatlands Strategy • All-Ireland Pollinator Plan 2015-2020 Regard should also be had to other key national policies and commitments made to resolve legal proceedings taken against the State by the European Court of Justice, such as the Programme of Measures to resolve "the Birds Case" (Case C418/04)[2]. Strategic Environmental Objectives should be included for all nature conservation sites (not only European sites), protected species, and ecological corridors and stepping stones as outlined in this submission (Appendix 1), and to address key threats arising from the Plan, such as the spread of invasive species.	Noted. The SEOs used by the SEA encompass such legislation, plans, programmes etc.
DCHG 9	**Scope of Environmental Report** Elements of biodiversity, flora and fauna of potential relevance to the SEA are set out in Appendix 1. The scope of the SEA should include data gathering, analysis and assessment of the implications for each of the elements listed, paying particular attention to the likely and realistic effects of the plan.	Biodiversity, flora and fauna considerations for the SEA encompass such elements.
DCHG 10	**Data/information sources**	Data/information sources listed in the submission are used as relevant.
DCHG 11	**SEA Guidance**	SEA Guidance listed in the submission is used as relevant.
DCHG 12	**SEA Monitoring** The monitoring programme should be clearly set out and developed in such a manner as to ensure it will identify the effects on the environment that are likely to arise, or will arise, and to monitor the effectiveness of any mitigation on which the assessment relies. While it may be considered efficient to use monitoring programmes that are already in place and run by other authorities, it is important to establish that these are in fact designed in such a way that they will identify the effects anticipated from the particular plan in question. As such, it is important to understand the objectives, methodologies, parameters, assumptions *etc.* of any existing monitoring programme that is proposed to be used in such a way. It is advisable to clearly set out where responsibilities for monitoring programmes lie, their frequency, their reporting/publication arrangements, as well as the procedures that will be put in place to ensure that there is a response mechanism to any unforeseen or undesirable negative effects/results and an undertaking of remedial action, if necessary.	Noted.
DCHG 13	**Plan Specific Issues** This Department previously commented on the draft Implementation Plan 2013-2018. Similar issues will no doubt arise when drafting the new plan. In particular, proposed objectives that could have a negative impact on the natural heritage would include the proposed electrification of the line north of Malahide and any continuing development or modification of the GDA Cycle Network Plan of December 2013. In addition any proposal for the twin tracking of the rail lines north and south of Dublin, in order to increase capacity, has the potential to have a negative impact on the natural heritage. With regard to greenways, reference should be made to the proposed new National Greenway Strategy currently being drafted. Issues such as those listed above will most likely result in the Plan screening in for AA and a NIS will need to be produced. It is advised that where a policy or issue is being addressed in the Plan that is likely to have a significant effect on a European site, this should be clearly noted and the proposal should: • be a statement of the problem that needs to be addressed • state what issues may arise under Article 6.3 of the Habitats Directive that will require assessment and that alternative solutions may need to be considered to avoid such an impact • stress that in deciding on a solution, it will be necessary to comply fully with Article 6. 3 (and, if warranted, Article 6.4, including compensatory measures) of the Habitats Directive • and refer to the accompanying AA screening and/or NIS. It is recommended that the final version of the Plan should highlight any changes made to the Plan as a result of the findings of the SEA Environmental Report and AA screening/NIS.	These "Plan Specific Issues" appear to relate to a different Plan and may have been included in error. Nonetheless, these issues have been taken into account as relevant.

Ref.	Submission Text	Response
DCHG 14	**Natura Impact Statement and Appropriate Assessment**	These issues are considered by the AA screening process as relevant.
Submission from EPA		
EPA 1	The Environmental Protection Agency (EPA) acknowledges your notice, dated the 26th June 2018, regarding the above and notes its contents. We are one of the five environmental authorities specified in the SEA Regulations. Our role as an SEA environmental authority focuses on promoting full integration of the findings of the SEA into the plan and advocating that the key environmental challenges for Ireland are addressed. The EPA's functions as an SEA environmental authority do not include approving or enforcing SEAs or plans. As a priority, we focus our efforts on reviewing and commenting on key sector plans. For land use plans at county and local level, we provide a 'self-service approach' via our guidance document 'SEA of Land Use Plans – EPA Recommendations and Resources'. This document is updated regularly, and is attached for your consideration. Where we provide specific comments on plans and programmes, our comments will focus on the EPA's remit and areas of expertise (in particular water, air, climate change, waste, resource efficiency, noise, radon and the inter-relationships between these and other relevant topics e.g. biodiversity), as appropriate and relevant to the particular plan or programme.	Noted.
EPA 2	**SEA Determination** We note that the SEA will be carried out for the Draft Dublin Airport Local Area Plan (the Plan).	Noted.
EPA 3	**Comments on the Plan** Some noise-specific comments to consider are provided in Appendix I of this submission.	Noted – these issues are taken into account by the Plan-preparation and SEA process as relevant.
EPA 4	**Available Guidance** Guidance on the SEA Process, including an SEA Pack, Integration Guidance, SEA Checklist, List of SEA Spatial Information Sources and guidance on Integrating Climate Change into SEA, is available on the EPA website and should be considered in the preparation of the SEA. This can be consulted at the following address: http://www.epa.ie/pubs/advice/ea/ Guidance on *Developing and Assessing Alternatives in SEA* (EPA, 2015) is also available at:: http://www.epa.ie/pubs/advice/ea/developingandassessingalternativesinsea.html	This guidance has been considered and will be kept on file for reference throughout the SEA process.
EPA 5	***EPA State of the Environment Report 2016*** The EPA has published our latest 'State of the Environment Report' - *Ireland's Environment 2016 – An Assessment (EPA, 2016)*. The recommendations, key issues and challenges described within this report should be taken into account, as relevant and appropriate to the Plan area.	This report has been considered and will be kept on file for reference throughout the SEA process, as relevant and appropriate to the Plan.
EPA 6	**SEA WebGIS Search and Reporting Tool** The EPA WebGIS Search and Reporting application is an online GIS based web application that will allow users to explore, interrogate and produce an indicative report on key aspects of the environment in specific geographic areas. These reports are indicative and will provide an overview of key aspects of the environment within a specific plan area. This may be used to inform the SEA screening and scoping stages for Plans and Programmes with reference in the first instance to the land use sector, though it is also applicable to other sector plans. It may be accessed via www.edenireland.ie	EPA maps have been considered and will be considered throughout the SEA process.
EPA 7	**River Basin Catchment Management Tool** The EPA WFD Application provides a single point of access to catchment data which will be useful for a range of catchment science and management purposes, not just those that are specific to the Water Framework Directive. The Application is accessible through EDEN https://wfd.edenireland.ie/ and is available to public agencies.	EPA WFD data has been considered and will be considered throughout the SEA process.
EPA 8	**Infrastructure Planning** In proposing the Plan, and any related amendments, variations etc. of the Plan, and in implementing the Plan, adequate and appropriate infrastructure should be in place, or required to be put in place, to service any development proposed and authorised during the lifetime of the Plan.	Noted.
EPA 9	**Appropriate Assessment** The requirements of Article 6 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, the Habitats Directive should be taken into account. Appropriate Assessment, in accordance with the Directive is required for: "*Any plan or project not directly connected with or necessary to the management of the site (Natura 2000 sites) but likely to have significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the sites conservation Objectives…*" The National Parks and Wildlife Service (NPWS) should be consulted regarding screening of the *Plan* for Appropriate Assessment. Where Appropriate Assessment is required, any findings or recommendations should be incorporated into the SEA and *Plan*, as appropriate.	These issues are considered by the AA process as relevant.
EPA 10	**Environmental Authorities** Under the SEA Regulations *(S.I. No. 436 of 2004*, as amended by *S.I. No. 201 of 2011)*, notice should also be given to the following: • The Minister for Housing, Planning and Local Government • Minister for Agriculture, Food and the Marine, and the Minister for Communications, Climate Action and Environment, where it appears to the planning authority that the	Notice has already been given to the relevant authorities.

Ref.	Submission Text	Response
	plan or programme, or modification of the plan or programme, might have significant effects on fisheries or the marine environment • where it appears to the competent authority that the plan or programme, or amendment to a plan or programme, might have significant effects in relation to the architectural or archaeological heritage or to nature conservation, the Minister for Culture, Heritage and the Gaeltacht, and • any adjoining planning authority whose area is contiguous to the area of a planning authority which prepared a draft plan, proposed variation or local area plan.	
EPA 11	A copy of your decision regarding the determination, including, as appropriate, the reasons for not requiring an environmental assessment, should be made available for public inspection at your offices, on your website and should also be notified to any Environmental Authorities already consulted.	The SEA Determination is included within the SEA Environmental Report and made available as required.
EPA 12	Should you have any queries or require further information in relation to the above please contact the undersigned. I would be grateful if an acknowledgement of receipt of this submission could be sent electronically to the following address: sea@epa.ie.	Noted.
Submission from Inland Fisheries Ireland, operating under the DCCAE		
IFI 1	The LAP must recognise that protection of the aquatic environment/habitat not only requires the protection of water quality but also necessitates the protection and maintenance of physical habitat and hydrological processes and regimes.	The SEA highlights LAP/ Development Plan provisions that contribute towards environmental protection and management, including provisions that will contribute towards the protection of water quality, habitats and hydrological processes and regimes.
IFI 2	To insure that impacts from development do not interfere with the aquatic environment it is essential that those areas adjacent to waterways (riparian buffer zones) are managed in a manner which will lessen impacts to these habitats. A riparian/buffer zone is a vegetated area near a stream, which helps shade and partially protect a stream from the impact of adjacent land uses. It is a discrete ecological and geographical entity. It is the point of contact between the land (i.e. the terrestrial ecosystem) and the freshwater body (i.e. the aquatic ecosystem). It plays a key role in protecting/improving water quality in associated watercourses (streams, rivers, and lakes), thus providing environmental benefits. All of the watercourses within the LAP are under considerable pressure from urbanisation. The riparian/buffer zone must be sufficiently wide to protect the watercourse. Riparian buffers in addition to water quality benefits (bank stabilisation, interception of nutrients, sediments and pesticides) also provide habitat benefits in terms of providing shade, enhancing instream diversity (overhanging vegetation creates niches and supplies invertebrates and leaf-litter into the aquatic zone) and help mitigate habitat fragmentation by providing connectivity i.e. as linear features in the landscape. Riparian zones can reduce fragmentation by connecting isolated habitats, thereby creating greater structural diversity and critical mass. Protection of aquatic zones can require riparian/buffer zones of up to 50m. The width of the riparian/buffer zone will depend on factors such as land use, land topography (e.g. slope), soil type, channel width/gradient and critical habitats to be protected. There appears to be an over prominence on protected areas and species in the SEA scoping report. The 1997 Habitats Regulations and Special Areas of Conservation (SAC) Directive does not extend to the inclusion of all aquatic habitats of fish bearing importance or of amenity value. Therefore the reliance of the SEA on these area designations solely will exclude significant numbers of waterways which are in need of protection. The LAP and SEA must provide for the maintenance and improvement of all watercourses and riparian habitats. The impacts of poorly designed river/stream crossing structures can be serious in terms of habitat loss. Prevention of the free upstream migration of fish species Salmon Trout, Eel and Lamprey effectively results in the loss of spawning habitat upstream of the barrier to migration. This could have serious implications for the populations of fish species concerned and contravenes the legal obligation under the Water Framework Directive to protect the ecological status of river catchments and channels. Indeed, it is an offence under the Fisheries Acts to prevent the free passage of fish. When crossings are being designed for crossing fisheries waters, consideration must be given to the following biological criteria: species of fish required to safely pass; size of fish required to pass (life stage); time of year in which fish passage is required; and, high and low design passage flows etc. Bridges and bottomless culverts have the least impact on fish passage. IFI recommends that the LAP should include a clear policy on the use of clear span structures on fisheries waters and that IFI should be consulted on any such proposed developments. Where existing structures are providing an obstacle to the passage of fish a fish friendly retrofit should be installed. As stated in the draft scoping report the LAP contains a number of watercourses, the Ward supports an important population of Atlantic salmon in addition to Sea trout and Brown trout populations. The Mayne River and tributaries including the Cuckoo are currently non salmonid however this was historically a salmonid system and lost its status primarily because of poor water quality as a result of urbanisation. Water quality remains moderately polluted however we are confident that salmonid status could be restored. IFI are currently working with Fingal County Council on a project to reintroduce salmonids naturally to the system. The Sluice supports a resident population of Brown trout.	This information is considered by the SEA process. The description of the baseline and effects included in this SEA Environmental Report have provided relevant emphasis to aquatic habitats and flora and fauna, including non-designated habitats and flora and fauna. The specific information provided on the Ward, Mayne, Cuckoo and Sluice rivers/streams has been included in this SEA Environmental Report.
Submission from MCC		
MCC 1	Please find hereunder the comments of Meath County Council in respect of the Draft Strategic Environmental Assessment Scoping Report for the Dublin Airport Local Area Plan. Meath County Council welcomes the opportunity to comment on the process and looks forward to continued co-operation with and between both Authorities; with particular reference to social, cultural and economic development and the protection of the environment.	Noted. These issues are taken into account during the Plan-preparation and/or SEA processes as relevant.
MCC 2	There is a cross-county dimension to many environmental issues such as water quality, habitat and species loss and cross-county cooperation is therefore vital to protect the environment across the two counties and the wider region. It is important that both Local Authorities have the same high standards with regard to the protection of the environment. A divergence of standards would be detrimental to the conservation of our shared natural heritage for future generations. It is therefore considered necessary that there should be a good level of consistency between Plans in adjoining authorities. In this regard it is important that cognisance should be taken of the policies and objective of the Meath County Development Plan 2013-2019 as amended, with particular reference to: Core Strategy, Settlement Strategy and Housing, Economic Development Strategy, Social Strategy, Transport, Water Drainage and Environmental Services, Energy, Cultural and National Assets, Rural Development, Development Management Guidelines and Standards, and Strategic Flood Risk Assessment.	Noted. These issues are taken into account during the Plan-preparation and/or SEA processes as relevant.
MCC 3	Cognisance should also be had to a number of important sites designated for nature conservation and geological sites which straddle the County boundaries including the Laytown Dunes / Nanny Estuary pNHA, Nanny Estuary SPA and the Boyne Coast and Estuary SAC. Invasive species is also an important environmental cross border issue. Cooperation on invasive species has been, and will continue to be necessary.	The SEA and AA Screening take into account relevant designations. The SEA highlights LAP/ Development Plan provisions that contribute towards environmental protection and management, including those relating to invasive species.

Ref.	Submission Text	Response
MCC 4	In general terms, the following are also considered to be amongst the main environmental issues of particular importance to be considered in the preparation of the SEA. The measures set out in the recently adopted River Basin Management Plan 2018-2021. To work with the EPA and other stakeholders in implementing the National Ambient Air Quality Monitoring Programme 2017 – 2022. To work with the OPW and other Stakeholders in managing flood risk at County and Regional level and particularly in assisting with the implementation of the measures set out in the Flood Risk Management Plans published by the Government in May 2018. To liaise, support and work with Irish Water in the development and upgrade of water supply systems and waste water systems so as to ensure that the County has an adequate, sustainable and economic supply of suitable quality piped water and waste water for all users. That in accordance with the provisions of the National Mitigation Plan 2017, and the National Adaptation Framework 2018 that the Local Authorities working with all other stakeholders implement the necessary measures, that sets Ireland on a pathway to achieve the level of decarbonisation required, to implement climate resilience actions and ensuring climate adaptation considerations are mainstreamed into all local, regional and national policy making. To ensure that appropriate developments receive planning and licensing approval in accordance with the Regional Waste Management Plan 2015 -2021 The need to continue to promote awareness of and promote an increase in the amount of waste that is re-used and recycled to reflect the objectives of the waste hierarchy.	The SEA takes into account these issues and highlight LAP/ Development Plan provisions that contribute towards environmental protection and management, including provisions relating to these issues.
MCC 5	**Strategic Transport links** The Dublin – Belfast Economic corridor is acknowledged within the National Planning Framework as the *'largest economic agglomeration on the island of Ireland'*. This corridor is the national entry point to the island and it is a policy of the NPF to support and *'promote the economic potential of the corridor and develop it as a distinct spatial area'*. Dublin Airport is strategically located directly adjacent to the M1 national motorway and the N2 national primary Dublin – Derry route both of which are strategically important routes for the future growth of Meath. It is therefore important that economic strategies in corresponding council areas recognise the role of the corridor and the business bases located within this corridor. It may be beneficial to recognise in the Local Area Plan the joint approach taken to date to development in the M1 economic corridor and the potential benefits of this approach for the successful development of the area. Meath County Council views the N2 corridor as a vital economic artery which is essential to facilitate strategic traffic movement and to maintain and improve accessibility to employment areas. The importance of this North-South route and its role in opening up the island economy post Brexit is recognised within both the National Development Plan 2018-2027 and the NPF. The recently approved NTA Strategy for the Greater Dublin Area 2016-2035 includes an objective to provide enhancements of the N2/M2 national route inclusive of a bypass of Slane and to provide for *inter alia* additional capacity on the non-motorway sections of this route and to address safety issues in Slane village associated with, in particular, heavy goods vehicles. The National Development Plan makes particular reference to and prioritises the upgrade of the N2 from Rath Roundabout to Kilmoon Cross section of road. While the delivery of these improvements is welcomed by Meath County Council it is considered prudent that a full strategy for the N2 is outlined in order to fully deliver upon the economic potential of the region. In light of the above, Meath County Council have asked the TII to set out their strategy for upgrading the N2 route. Given that the future growth of Dublin Airport will be intrinsically linked to the carrying capacity of the surrounding strategic road network we suggest that FCC give consideration to including an objective in their Local Area plan supporting the N2 upgrade and indicating their willingness to co-operate with TII and Meath County Council to secure its delivery. When reviewing the Dublin Airport Local Area Plan, regard must be had to the zoning objectives of the Ashbourne Local Area Plan. MCC consider that Ashbourne is intrinsically linked to the development of Dublin Airport as a European Hub as it is part of the overall eco-system that can absorb the relocation of existing businesses that are no longer suited to their location at the Airport. Ashbourne can provide suitable sites in close proximity to allow these businesses to relocate and expand if required.	Noted. The Fingal Development Plan with which the LAP must be consistent provides full recognition to the Dublin-Belfast Economic Corridor and its importance. This information is considered in the preparation of the Plan.
MCC 6	**Conclusion** Meath County Council respectfully requests that the relevant issues raised above are fully considered in the Strategic Environmental Assessment for the Dublin Airport Local Area Plan. Please do not hesitate to contact us if you require clarification of any of the issues raised in this submission or any further information on Meath County Council policies or strategies which is necessary for the finalisation of the Strategic Environmental Assessment.	Noted.

SEA ENVIRONMENTAL REPORT

APPENDIX IV – NON-TECHNICAL SUMMARY

FOR THE

DRAFT
DUBLIN AIRPORT
LOCAL AREA PLAN 2020-2026

Fingal County Council

County Hall

Swords

County Dublin

Comhairle Contae Fhine Gall

Fingal County Council

September 2019

Table of Contents

Section 1 Introduction and Terms of Reference

This is the Non-Technical Summary of the Environmental Report for the Draft Dublin Airport Local Area Plan 2020-2026. The purpose of the Environmental Report is to provide a clear understanding of the likely environmental consequences of decisions regarding the adoption and implementation of the Plan. The Environmental Report has been prepared as part of a Strategic Environmental Assessment (SEA) process that is being undertaken by CAAS Ltd. on behalf of Fingal County Council.

What is an SEA?

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

Why is it needed?

The SEA has been carried out in order to comply with the provisions of the Planning and Development (SEA) Regulations, as amended, and in order to contribute towards sustainable development and environmental protection and management. The output of the process is an Environmental Report that should be read in conjunction with the Draft Plan.

How does it work?

All of the main environmental issues in the area were assembled and considered by the team who prepared the Draft Plan. This helped them to devise a Draft Plan that contributes towards the protection and management of environmental sensitivities. It also helped to identify wherever potential conflicts between the Draft Plan and the environment exist and enabled these conflicts to be mitigated.

The SEA was scoped in consultation with designated environmental authorities.

What is included in the Environmental Report that accompanies the Draft Plan?

The Environmental Report contains the following information:

- A description of the environment and the key environmental issues;
- A description and assessment of alternatives for the Plan;
- An assessment of the provisions of the Plan; and,
- Mitigation measures, which will avoid/reduce the environmental effects of implementing the Plan and will contribute towards compliance with important environmental protection legislation.

Difficulties Encountered during the SEA process

The degree to which effects can be fully determined at this level of decision-making is limited, as the Plan will be implemented through lower tier decision-making and associated environmental assessments, where relevant. Nonetheless, a comparative evaluation of the various alternatives and a robust assessment of Plan provisions against Strategic Environmental Objectives (see Section 3.12), taking into account the existing environment and policy framework, can be provided.

The degree to which the evolution of the existing environment in the absence of the LAP can be fully determined is also limited due to uncertainty as to whether or not the existing planning framework would change to compensate for the absence of the LAP. Notwithstanding this uncertainty, such a description can be provided while acknowledging this uncertainty.

What happens at the end of the process?

An SEA Statement is prepared which summarises, inter alia, how environmental considerations have been integrated into the Plan.

Section 2 The Draft Local Area Plan

Fingal County Council intends make a new Local Area Plan (LAP) for Dublin Airport under Section 20 of the Planning and Development Act 2000 (as amended). The Plan will set out an overall strategy for the proper planning and sustainable development over the years 2020-2026. The overarching **Vision** for the Plan is: *'To facilitate and manage the sustainable growth of Dublin Airport in a manner that reflects its status as Ireland's premier aviation gateway whilst safeguarding the core operational function of the Airport and supporting neighbouring communities, the economy and the environment.'* The LAP presents an **opportunity** to provide an updated strategy for the continued growth of Dublin Airport in line with relevant aviation, planning and environmental policy within the context of a sustainable growth framework. The planning policy supporting the continued growth of Dublin Airport is outlined in Chapter 2 of the LAP and sets the context against which the LAP is framed. The LAP will be in effect for a period of 6 years following its adoption, unless otherwise extended, as provided for under Section 19 of the Planning and Development Act 2019.

Specifically, the LAP provides a **detailed planning framework to**: facilitate the capacity enhancements and operational improvements that are required within the short to medium term for Dublin Airport; and outline the community, environmental and supporting infrastructure and surface access measures necessary to support the airport's growth. The LAP specifically considers the environmental effects associated with airport growth at global level (the need to reduce emissions, tackle climate change and build resilience to the impacts of climate change) and at local level (noise, air quality, water quality, waste, traffic, natural and built heritage and community). The LAP recognises that uncongested surface access and increased use of public transport greatly reduces the environmental impacts of airports and are essential to their sustainable growth. The LAP also includes measures intended to mitigate and manage environmental effects.

The South Fingal Transport Study 2019 was carried out on behalf of Fingal County Council to inform the LAP process in accordance with the requirements of the Fingal Development Plan. This study seeks to aid the proper planning and sustainable development of the South Fingal area including Dublin Airport lands through providing a coherent sustainable transport and smarter travel approach. The study identifies the key transport infrastructural requirements needed to facilitate the planned growth of the airport to 2027. The Dublin Airport LAP is underpinned and informed by the findings and recommendations of the study.

The Draft Plan sits within a **hierarchy of land use forward planning strategic actions**. **Objective DAO2** of the **Fingal Development Plan 2017-2023** seeks to *'Prepare and implement a new Local Area Plan for Dublin Airport which will accommodate the future sustainable growth and development of the airport lands while also facilitating the efficient and effective operation of Dublin Airport in accordance with the requirements of the Local Area Plan and proper planning and sustainable development'*. The provisions of the Draft Plan are informed by the robust policy framework in place at national, regional and local level supporting the continued development, growth and expansion of Dublin Airport, including for the first time its development as a secondary European hub airport:

- The **Fingal Development Plan 2017-2023**, already provides for land use zoning and other policies and objectives that are in force and must be adhered to by the LAP; and
- The objectives of **other higher level plans and programmes** (such as the National Planning Framework and associated National Development Plan 2018, the Fingal Development Plan 2017-2023, the Eastern and Midland Regional Spatial and Economic Strategy and the Irish Aviation Policy 2015) that provide for the development, growth in traffic and expansion in connections at Dublin Airport.

The **National Aviation Policy** (Department of Transport, Tourism and Sport, 2015) and the **National Planning Framework** (Government of Ireland, 2018) both emphasise the importance of the airport for the future prosperity of Ireland, as well as the Dublin City Region. Data from 2018 indicated that the airport reached 31.5 million passengers, with growth rates expected to continue to rise over the next 10 to 25 years. The Local Area Plan is subject to a number of high-level environmental protection policies and objectives with which it must comply. For example, the LAP includes various provisions that will contribute towards the objectives of the **wide policy framework relating to climate mitigation and adaptation**, including the Emissions Trading Scheme Directive, the Alternative Fuels Infrastructure Directive, the Energy Efficiency Directive, the Climate Action and Low Carbon Development Act 2015, the National Mitigation Plan 2017, the National Adaptation Framework 2018, the Action Plan for Aviation Emissions Reduction 2019 and the Climate Action Plan 2019.

Section 3 The Environmental Baseline

3.1 Introduction

The summary of the environmental baseline of Dublin Airport is described in this section. This baseline together with the Strategic Environmental Objectives, which are identified in Section 3.12, is used in order to identify, describe and evaluate the likely significant environmental effects of implementing the Draft Plan and in order to determine appropriate monitoring measures.

3.2 Likely Evolution of the Environment in the Absence of the Draft Plan

The LAP provides an updated strategy for the continued growth of Dublin Airport in line with relevant aviation, planning and environmental policy within the context of a sustainable growth framework.

The degree to which the evolution of the existing environment in the absence of the LAP can be fully determined is limited due to uncertainty as to whether or not the existing planning framework would change to compensate for the absence of the LAP, through, for example, varying the Fingal Development Plan. In addition it is uncertain as to what changes to the planning framework would occur, if any, in the absence of the LAP.

In the absence of the LAP, the continued development, growth and expansion of Dublin Airport, would be likely to occur at the LAP lands. However, responses to constraints such as surface access infrastructure capacity issues would be less coordinated and more uncertain and difficult to predict. Nonetheless, there already exists a robust policy framework at national, regional and local level, supporting the continued development, growth and expansion of Dublin Airport.

The Draft Plan includes various provisions that would be likely to improve environmental protection and sustainable development. In the absence of the Plan, the framework for environmental protection and sustainable development would be less comprehensive. The positive effects identified by this assessment (see Table 5.1) would not occur as a result of the Plan being implemented; however, they may occur as a result of the wider planning framework.

The Draft Plan includes various provisions that would have the potential to result in significant adverse environmental effects, if unmitigated. The potential significant adverse effects identified by this assessment (see Table 5.1) would not occur as a result of the Plan being implemented; however, they would remain present as a result of the wider planning framework within which they would be mitigated by parts of that framework relating to sustainable development and environmental protection and management.

3.3 Biodiversity and Flora and Fauna

There are limited ecological sensitivities within the LAP lands. There is however potential for the LAP to impact upon sensitivities in the wider region, including those downstream, some of which are designated, because of the existence of direct pathways to these designated sensitivities. Provisions contributing towards the protection and management of ecological sensitivities have been integrated into the LAP.

The main airport campus – including Terminals 1 and 2 in the east and the airfield, including runways in the west – and the campus' immediate environs are entirely artificial in character, comprising existing roads, car parks, buildings and landscape planting. There are a number of treelines, hedgerows and some small areas of amenity grassland, all of which are of limited ecological value.

The upstream stretches of a number of streams that drain the LAP lands are found within and adjacent to the LAP area. These streams support aquatic biodiversity, flora and fauna.

There are also various ecological designations within the wider region, including those downstream of the Plan area. **Key ecological sensitivities** comprise:

- Aquatic and riverine ecology, including riparian zones[1] of the Mayne River[2], Cuckoo Stream, Ward River[3], Broadmeadow River, Sluice River and Santry River; and
- Coastal areas, marine and transitional waters and associated aquatic ecology of Broadmeadow Estuary (Malahide), Baldoyle Estuary and Bull Island (Dublin Bay).

European Sites comprise:

- Special Areas of Conservation[4] (SACs), including candidate SACs; and
- Special Protection Areas[5] (SPAs).

There are 18 **European Sites** (10 SACs and 8 SPAs) within 15 km of the Plan boundary and none of them are located within or adjacent to the Plan area. The nearest European Sites are Malahide Estuary SAC and SPA located c. 3km to the north-east and Baldoyle Bay SAC and SPA located c. 5km to the east, both downstream of the Plan area. These sites are mapped on Figure 3.1.

Natural Heritage Areas (NHAs) are designated due to their national conservation value for ecological and/or geological/geomorphological heritage. They cover nationally important semi-natural and natural habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes. NHAs are designated under the Wildlife (Amendment) Act 2000. Proposed NHAs (pNHAs) were published on a non-statutory basis in 1995, but have not since been statutorily proposed or designated. There are no NHAs and pNHAs occurring inside the Plan boundary. There are 19 pNHAs within 15 km of the Plan area. The closest pNHAs to the Plan area are Santry Demense (c. 1.2 km to the south of the Plan area), Feltrim Hill (c. 1.8 km to the north-east of the Plan area), Malahide Estuary (c. 3.5 km to the east of the Plan area) and Sluice River Marsh (upstream of Baldoyle Estuary, c. 4.4 km to the east of the LAP area).

The findings of **habitats surveys** (undertaken as part of Environmental Impact Statement for the north runway in 2005) show that the general area is used by various insects, a range of bird species, bats, mammals including badger, hedgehog and Irish hare, and amphibians such as frog and smooth newt. Based on this information it is likely that parts of the remaining area covered by the Plan is similar in nature.

The Plan area is adjacent to the outer Transition Zone of the Dublin Bay United Nations Educational, Scientific and Cultural Organization (UNESCO) **Biosphere Reserve** in North Bull Island.

Fingal Nature Development Areas are designated locations where nature conservation can be combined with existing activities such as farming, forestry, quarrying and recreation (e.g. golf courses). Fingal County Council has identified a number of areas and landuses in the County with potential for biodiversity enhancement. There are two Nature Development areas adjacent to the south and north of the Plan boundary (as shown on Figure 3.2).

3.4 Population and Human Health

Population

There are 21 houses occupied, 10 houses unoccupied and 3 derelict houses within the Plan area (Fingal County Council Rural House Count, 2018). The closest settlement to the airport is the adjacent St. Margaret's to the west. In 2018, the airport accommodated 31.5 million passengers. The total economic impact of Dublin Airport therefore amounts to 129,700 jobs in Ireland, equivalent to 114,900 full-time jobs, earning a total €9.8 billion in GVA contributions to the national economy, representing 3.1% of total Gross Domestic Product[6]. Residents, those employed and passengers have the potential to interact with various environmental components including material assets, air and climatic factors and water quality.

[1] Riparian/buffer zone is a vegetated area near a stream, which helps shade and partially protect a stream from the impact of adjacent land uses. It plays a key role in protecting and improving water quality in associated water courses. All of the watercourses within the Plan area are under considerable pressure from urbanisation.

[2] The Mayne River and tributaries including the Cuckoo Stream are currently non-salmonid; however this was historically a salmonid system and lost its status primarily because of poor water quality as a result of urbanisation (source: Inland Fisheries Ireland SEA Scoping Submission).

[3] The Ward River supports populations of Atlantic salmon, sea trout and brown trout (source: Inland Fisheries Ireland SEA Scoping Submission).

[4] SACs have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora due to their conservation value for habitats and species of importance in the European Union. The Habitats Directive seeks to establish Natura 2000, a network of protected areas throughout the EU. It is the responsibility of each member state to designate SACs to protect habitats and species, which, together with the SPAs designated under the 1979 Birds Directive, form Natura 2000.

[5] SPAs have been selected for protection under the 1979 European Council Directive on the Conservation of Wild Birds - referred to as the Birds Directive - due to their conservation value for birds of importance in the European Union.

[6] The standard measure of the value added created through the production of goods and services in a country during a certain period.

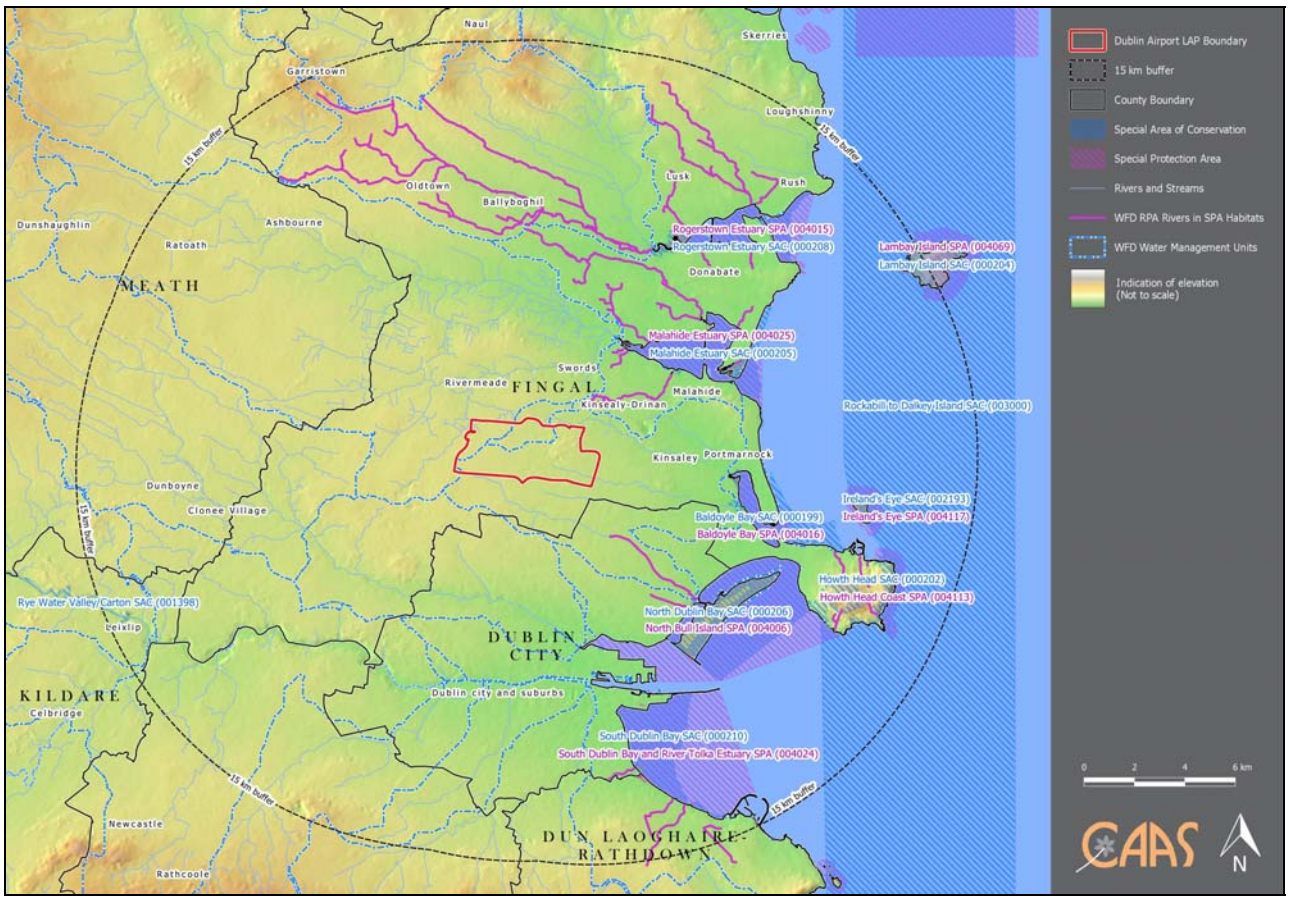

Figure 3.1 European Sites within 15 km buffer of Dublin Airport Local Area Plan

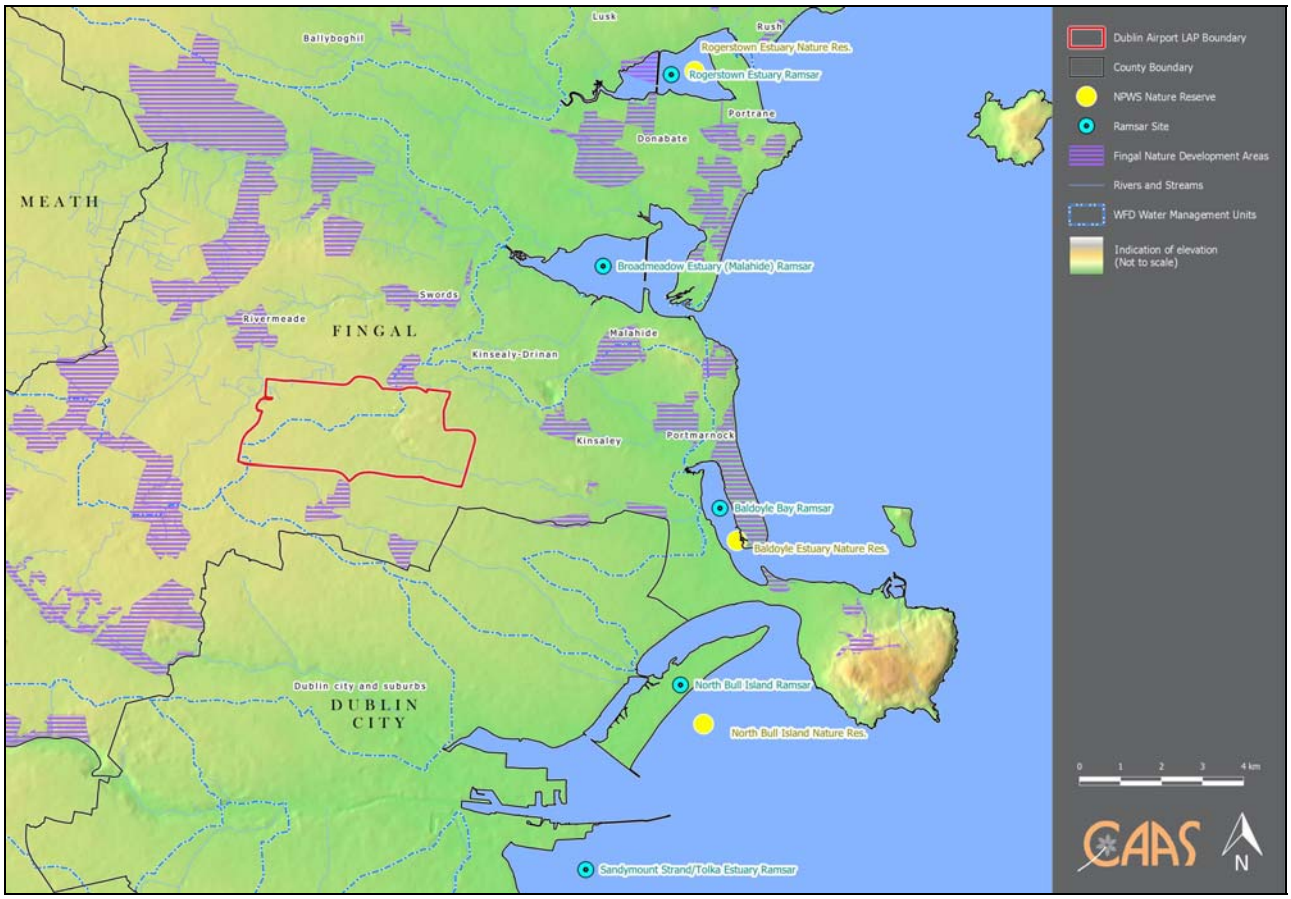

Figure 3.2 Other ecologically-related designations in the wider area

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

Noise Interactions and Public Safety Zones
Noise can have a significant and disruptive effect on everyday life and it has been identified by the WHO as the second greatest environmental cause of health problems (after air quality). The extensive studies into the links between environmental noise exposure and health have considered transportation noise sources including road, rail and aircraft with responses being found to differ depending upon source. The available research has shown evidence supporting the association of environmental noise (including aircraft noise) with negative health outcomes including cardiovascular disease, cognitive impairment, sleep disturbance, annoyance and wellbeing (impacts on quality of life and mental health).

Inner and Outer Noise and Public Safety Zones delineated for the airport and integrated into the Fingal Development Plan 2017-2023 cover a significant portion of north County Dublin and Fingal County Council's administrative area. These zones contribute towards the protection of human health and the successful operation of the airport and have implications for land uses and developments across an area that is multiple times the size of the Plan area lands.

SEVESO (COMAH) Sites
Seveso sites are industrial sites that, because of the presence of dangerous substances in sufficient quantities, present a major accident hazard. There is currently one Lower Tier Establishment SEVESO Site located within Dublin Airport Plan Area, namely CLH Aviation on Corballis Road. CLH Aviation manages the fuel storage terminal at Dublin Airport.

Existing Problems
Noise interactions with human health present an existing conflict. This conflict has been mitigated by various means through the Draft Plan and the existing planning framework.

3.5 Soil

The majority of the Plan area is covered by **urban soils** that have been disturbed, transported or manipulated by human activity in the urban environment and are often overlain by a non-agricultural, man-made surface layer. Urban soils have a combination of characteristics that differ from natural soils. These characteristics are due to alterations in both physical and chemical soil properties that cause long-term deviation from the natural state.

As is the case with other historically developed areas across the country, there is **potential for contamination** at local sites within the Plan area, especially where land uses occurred in the past in the absence of the high standards of today's environmental protection legislation. Contaminating substances could include those arising from unmanaged fuelling or de-icing activities. In the absence of mitigation, contaminated materials have the potential to adversely impact upon human health, water quality and habitats and species.

There are two **historic landfills** identified within the Plan area: at Sandyhill in the west of the Plan area (where a waste licence was previously issued for a waste transfer station); and adjacent to Castlemote House in the north east of the Plan area. There are also a number of historic landfills identified in the wider area that are potential sources of contaminants.

Much of the Plan area is underlain by carboniferous limestone till subsoils and geological formations and there is a range of groundwater vulnerability[7] ratings across the site (from "extreme – rock at or near

[7] Groundwater Vulnerability is a term used to represent the intrinsic geological and hydrogeological characteristics that determine the ease with which groundwater may be contaminated by human activities. Groundwater vulnerability maps are based on the type and thicknesses of subsoils and the presence of karst or limestone features. Groundwater is most at risk where the subsoils are absent or thin and, in areas of karstic limestone.

surface or karst" to "extreme" to "high" to "moderate" to "low"). Vulnerability at the two historic landfills within the Plan area is rated as "high" or "extreme". As is provided for by the Fingal Development Plan, the highest standards of remediation[8], and where appropriate to consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land.

Provisions of the Fingal Development Plan contribute towards the protection of 21 **County Geological Sites** that were identified by a 2007 audit. There are no such sites within the Airport Plan area and the closest are: Feltrim Quarry (c. 3.5 km to the east); Huntstown Quarry (c. 5 km to the west); and Glasnevin Cemetery (c. 5 km to the south).

3.6 Water

Dublin Airport is located within the Eastern River Basin District. Most of the LAP lands are located within the Mayne catchment that drains to Bull Island while a portion of the western half of the LAP lands are located within the Broadmeadow catchment that drains to Malahide Estuary.

The Water Framework Directive (WFD) requires that, subject to exemptions provided for by Article 4 of the WFD, member states implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all waters with the aim of achieving *good status*. WFD surface water status is mapped on Figure 3.3.

The Cuckoo Stream rises in the east of the site to the south of Terminal 2 and flows in an easterly direction until it confluences with the Mayne River to the north of Parkside housing estate. The Mayne River discharges to the Mayne Estuary (Baldoyle Estuary/Portmarnock and associated Baldoyle Estuary Nature Reserve). Both the Cuckoo Stream[9] and the Mayne River are identified by the EPA as being of *poor* status due to significant pressures from diffuse urban sources[10]. The status of the Mayne Estuary (Baldoyle Estuary/Portmarnock) is currently *unassigned*[11].

A number of streams rise in the north west of the LAP lands that flow into the Ward River. The Ward River and its tributaries flow into the Broadmeadow River that discharges to the Broadmeadow Estuary near Swords. The tributaries at the airport and the upper stretch of the Ward River are identified as being of *good* status; however, the lower stretch of the Ward River is identified as being *poor* status. Broadmeadow Estuary is identified as being of *moderate* status (this water body is impacted by excess nutrients from the discharge from the Swords waste water treatment plant, and from the upstream catchment areas of the Broadmeadow and Ward Rivers).

The Sluice River and its tributaries (Forest Little Stream, Wad Stream and Kealy's Stream) rise close to the north-eastern boundary of the LAP. The Sluice River discharges to Baldoyle Estuary/Portmarnock. The status of the Sluice River, its tributaries and Baldoyle Estuary/Portmarnock is currently *unassigned*.

The Santry River rises close to the Horizon Logistics Park to the immediate south of the Plan area. From its source to Coolock, the Santry River is identified as being of *poor* status, downstream of which the current status is *unassigned*. The Santry River is one of eight designated heavily modified water bodies in the Liffey and Dublin Bay Catchment, due to extensive flood protection. The Santry River drains to transitional

[8] Including as relevant those set out in the EPA's 2013 "Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites" and 2007 "Code of Practice: Environmental Risk Assessment for Unregulated Waste Disposal Sites"

[9] The daa are licensed by Fingal County Council (Trade Effluent Discharge License WPS/F/339) to discharge trade effluent to sewers from a storm water pollution control facility at the airport. A review of the analytical results submitted by the daa in fulfilment of their discharge compliance conditions for the years 2016 and 2017 was undertaken by Fingal County Council. Analysis of 2018 data is limited to date. In 2017, 12 samples were taken. The licence limit for Biological Oxygen Demand (BOD) were exceeded on two occasions and Chemical Oxygen Demand (COD) was exceed on one occasion. The reason for the exceedance is most likely to relate de-icing of pavements and aircraft. In 2016, 14 samples were taken. Two samples exceeded the BOD and COD limits in the licence. The reasons for these exceedances is also most likely to be de-icing. The frequency of sampling is not less than weekly during de-icing discharges when the divert mode is in operation. The daa have over the years implemented management practices to minimise the discharge of de-icing fluids to the surface water system by means of glycol recovery processes at the point of use on the aircraft stands. It should be noted that the diversion of the Cuckoo Stream during de-icing events is designed to protect the waters downstream of the airport.

[10] Diffuse urban pressures, caused by misconnections, leaking sewers, and run-off from paved and unpaved areas, such industrial estates, major road networks, and car parks for example, have been identified as a significant pressure in 17 river water bodies from Dublin City and major towns. The significant impacts are a combination of enrichment due to upward trends in orthophosphate and spikes in ammonia concentrations.

[11] There is a data gap relating to WFD surface water status data for certain waterbodies as ecological status for these water bodies is currently not identified; these water bodies are identified as unassigned when it comes to WFD status 2013-2015.

waters at North Bull Island, Dublin Bay. The status of transitional waters at North Bull Island, Dublin Bay is currently *unassigned*.

Coastal waters in the Irish Sea to the west of Fingal are either generally identified as being of *good status* or they are identified as being *unassigned*. The Malahide Bay coastal water is identified as being of *moderate status*, impacted by excess nutrients from the Broadmeadow Estuary and the Malahide waste water treatment plant. Improvements are planned and the expected date for meeting the objective of the WFD is estimated for 2027.

The WFD status (2010-2015) for most of the groundwater underlying the Dublin Airport Plan area is identified as being of *good status*, meeting the objectives of the WFD. The groundwater underlying the north eastern part of the Plan area is identified as *poor*. The significant pressures on this groundwater body relate to levels of Trichloroethylene (an industrial solvent). Groundwater status within the Plan area is shown on Figure 3.4.

A Strategic Flood Risk Assessment (SFRA) is being undertaken alongside the Draft Plan. The preparation of the Draft Plan, SEA and SFRA has taken place concurrently and the findings of the SFRA have informed both the Draft Plan and the SEA. There are a number of areas within the Plan area that are at elevated levels of flood risk. Sources of flood risk within the Plan area include the Cuckoo Stream, which drains part of the south of the Plan area, and the Forrest Little Stream, which drains part of the north-west of the Plan area. Flood zones within the Plan area that have been delineated by the SFRA are mapped on Figure 3.5. Please refer to SFRA report for more details on flooding issues.

Existing Problems

Subject to exemptions provided for by Article 4 of the WFD, based on available water data, certain surface and groundwater bodies will need improvement in order to comply with the objectives of the WFD. There are a number of areas within the Plan area that are at elevated levels of flood risk.

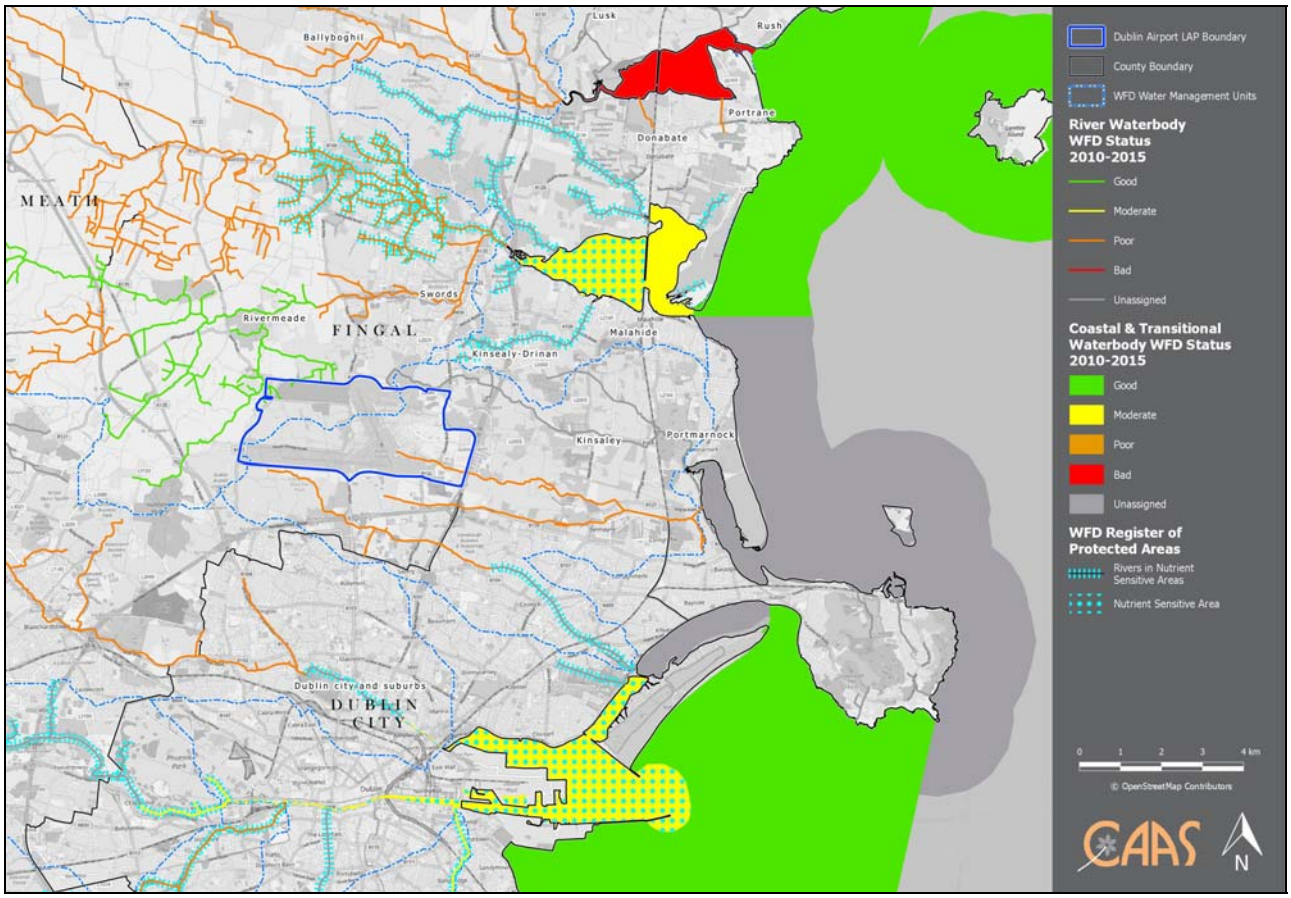

Figure 3.3 Surface Water Status in the wider area

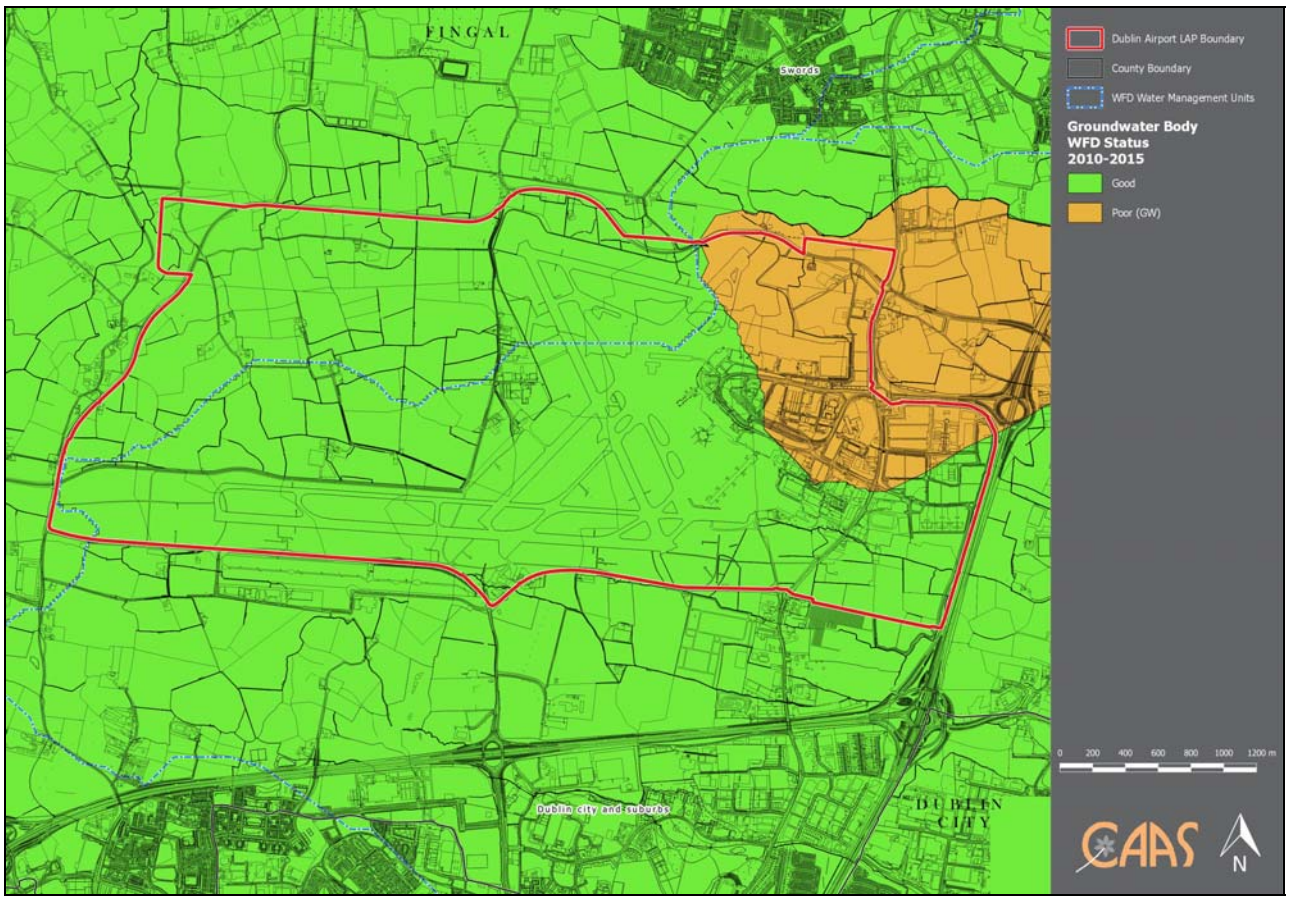

Figure 3.4 Groundwater Status within Dublin Airport Plan area

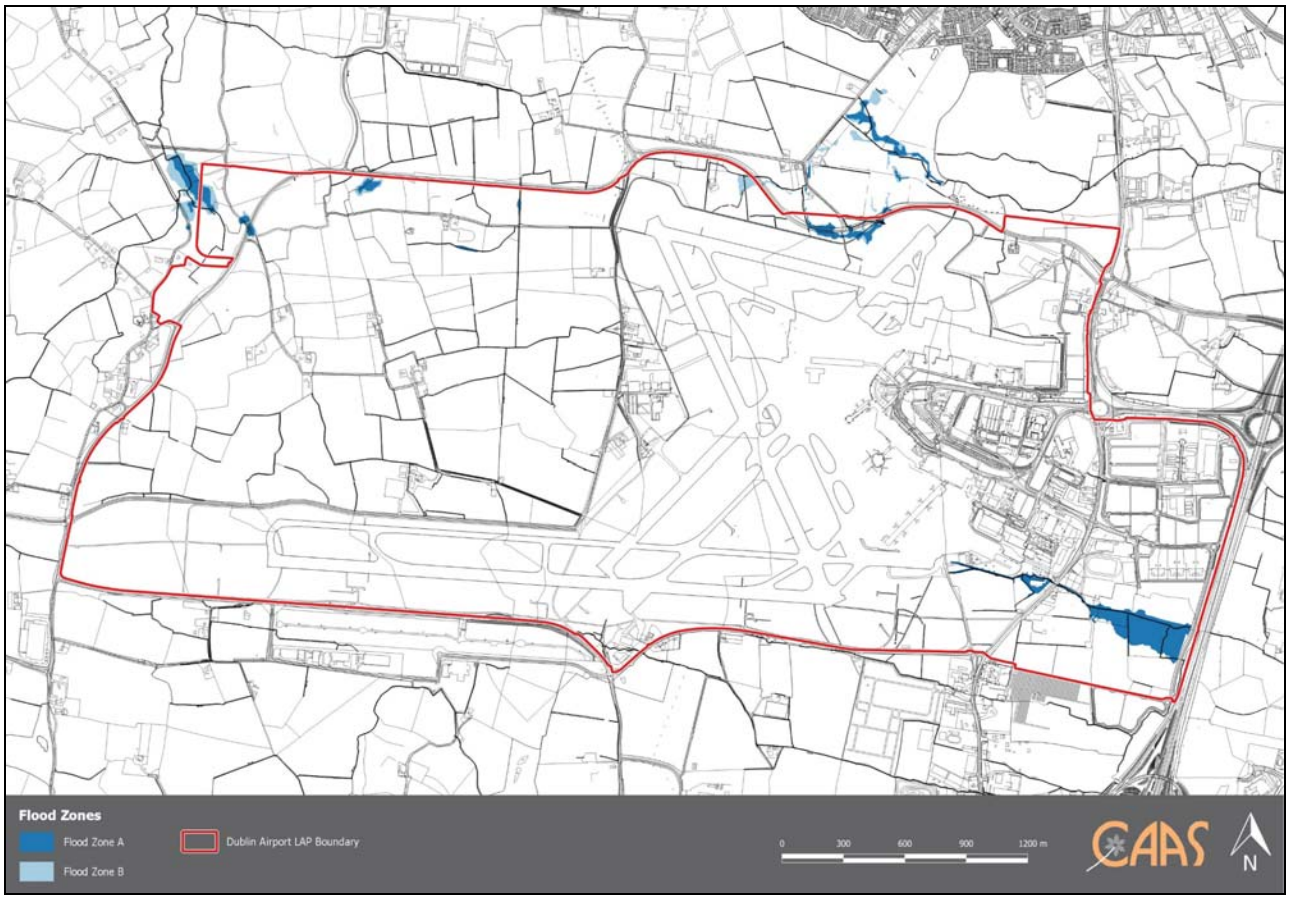

Figure 3.5 SFRA Flood Zones within the Plan area

3.7 Air and Climatic Factors

3.7.1 Climatic Factors

Total emissions of greenhouse gases by humans come from various sectors including transport, agriculture, energy industries, manufacturing combustion, industrial processes, residential developments, commercial services developments, waste management processes and Fluorinated gases equipment (such as refrigeration and fire protection systems). With regard to emissions from aviation, the European Commission has identified that Aviation is one of the fastest-growing sources of greenhouse gas emissions. Direct emissions from aviation[12] account for about 3% of the EU's total greenhouse gas emissions and more than 2% of global emissions.

There is a wide and detailed framework for reducing and limiting increases in emissions from the various contributory sectors. At EU level, these include Directive's on the EU Emissions Trading System, Effort Sharing, Carbon Capture and Storage, Transport/Alternative Fuels, Fluorinated Gases and Land Use (Forests and Agriculture).

The key issue relating to the Plan in the context of climatic factors relates to greenhouse gas emissions arising from transport – both land and air. Interactions with climatic factors are also present with other environmental components including flooding (see Section 3.6). The assessment – and this summary of the baseline – therefore largely concentrates on the transport sector and associated issues, such as alternative fuels and energy/fuel efficiency.

Emissions Targets

Greenhouse gases are the subject of agreements at international, EU and national level and associated emissions targets. Ireland's 2020 target is to achieve a 20% reduction of non-Emissions Trading Scheme (non-ETS) sector emissions (i.e. agriculture, transport[13], residential, commercial, non-energy intensive industry, and waste) on 2005 levels with annual binding limits set for each year over the period 2013-2020. New 2030 targets for EU Member States were adopted by the European Council in 2018. Ireland's 2030 target under the Effort Sharing Regulation is a 30% reduction of emissions compared to 2005 levels by 2030. There will be binding annual limits over the 2021-2030 period to meet that target.

In response to international objectives to reduce carbon emissions, the UN's International Civil Aviation Organisation (ICAO) adopted the following goal: "Limit or reduce the impact of aviation greenhouse gas emissions on the global climate". The global aviation industry, acting through ICAO, committed itself in its 2013 Resolution on Climate Change to adopting a 'basket of measures' consistent with that overarching goal:

- More innovative technologies, with the recommendation of a new CO_2 emissions standard for aircraft;
- More efficient operational procedures, including the adoption of a Global Air Navigation Plan;
- The use of sustainable alternative fuels, including biofuels; and
- EU Emissions Trading Scheme (EU ETS) which includes CO_2 emissions from aviation.

EU Emissions Trading Scheme

Emissions' trading is a market-based system to reduce the emissions of climate-damaging greenhouse gases. It is based on the principle of a 'Cap and Trade' system: the cap makes sure that CO_2 becomes a product and, thus, CO_2 is valued at a price, which is determined by the supply and demand at the (trading) market.

Since the start of 2012, emissions from all flights from, to and within the European Economic Area are included in the *EU Emissions Trading System* (ETS). The EU ETS is a cornerstone of the EU's policy to combat climate change and it is a key tool for reducing industrial greenhouse gas emissions cost-effectively. The first - and still by far the biggest - international system for trading greenhouse gas emission allowances, the EU ETS covers more than 11,000 power stations and industrial plants in 31 countries, as well as airlines. Airlines are required to monitor, report and verify their emissions and to surrender allowances against those emissions. Airlines receive tradable allowances covering a certain level of emissions from their flights per year and must purchase allowances to cover any shortfall between their allocated sum of free emissions allowances and their actual emissions, as reported annually.

[12] Information from the European Commission (2019) https://ec.europa.eu/clima/policies/transport/aviation_en

[13] Not including aviation but including combustion of fuel used in road, rail, navigation, domestic aviation and pipeline gas transport.

The Department of Communications, Climate Action and Environment and the Department of Transport, Tourism and Sport work collaboratively to address the environmental impact of aviation. Both Departments are fully committed to pursuing an agenda in favour of reducing emissions and have worked to ensure that Ireland makes an informed contribution to discussions relating to development of the EU ETS.

To support the planned development of a global *Carbon Offsetting and Reduction Scheme for International Aviation* (CORSIA) by the ICAO, the EU agreed in 2014 to limit the scope of aviation in the EU ETS to flights within the EEA. CORSIA will come into effect in 2021 and aims to stabilise global aviation emissions at 2020 levels by requiring airlines to offset any emissions growth after 2020 by purchasing eligible emission units generated by projects that reduce emissions in other sectors. As Ireland is a member of ICAO, Irish aircraft operators will have to offset any emissions growth after 2020 by purchasing eligible emission units, i.e. pay full carbon price.

Emissions Inventories and Projections

Ireland's *Final Greenhouse Gas Emissions 1990-2017* (EPA, 2019) details provisional estimates of greenhouse gas emissions for the period 1990-2017. For 2017, total national greenhouse gas emissions are estimated to be 60.74 million tonnes carbon dioxide equivalent (Mt CO_2eq). This is 0.9% lower (0.53 Mt CO_2eq) than emissions in 2016. Greenhouse gas emissions from the transport[14] sector decreased by 2.4% or 0.29 Mt CO_2eq in 2017. This is the first year of decreased emissions after four successive years of increases in transport emissions.

Ireland's Greenhouse Gas Emission Projections 2018-2040 (EPA, 2019) provides an assessment of Ireland's progress towards achieving its emission reduction targets out to 2020 and 2030 set under the EU Effort Sharing Decision (No. 406/2009/EC) and Effort Sharing Regulation (2018/842) for the years 2013-2020 and a longer-term assessment based on current projections. As identified under "Emissions Targets" above, in terms of 2030 reduction targets, the EU Effort Sharing Regulation requires that Ireland reduce its non-ETS emissions by 30% on 2005 levels by 2030. The latest projections indicate that Ireland will exceed the carbon budget over the period 2021-2030 by 52-67 Mt CO_2 equivalent with the gap potentially narrowing to 7-22 Mt CO_2 equivalent if both the ETS and Land Use, Land Use Change and Forestry flexibilities described in the Regulation are fully utilised.

A strong growth in emissions projections from the transport sector is attributed to a rise in fuel consumption particularly for diesel cars and diesel freight up to 2025. A projected accelerated deployment of electric vehicles between 2025 and 2030 does however result in a projected decline in emissions during this period.

With regard to emissions from aviation, the European Commission has identified that Aviation is one of the fastest-growing sources of greenhouse gas emissions. Direct emissions from aviation[15] account for about 3% of the EU's total greenhouse gas emissions and more than 2% of global emissions. *Ireland's 2019 Action Plan for Aviation Emissions Reduction* identifies that the figure for CO_2 emissions associated with Domestic aviation in Ireland was 9.8 kt of CO_2 in 2016. This is about 0.1% of overall transport emissions in Ireland. This figure has been reducing steadily since the mid-2000s. The level of aviation emissions in Ireland peaked in 2007, with 3,083 kt of CO_2 emitted by Irish airlines following a steady increase from 1996. Emissions for the most recent year for which data is available in the 2019 Action Plan shows that aviation emissions stood at 2251 kt in 2014. The Action Plan identifies that aviation emissions' percentage share of overall transport emissions in Ireland has remained relatively constant since 1990, at around 20%. The anticipated increase in emissions is expected to be less than the actual volume of air traffic due to improving aircraft technology and the significant increase in the acquisition by Irish operators of newer and more environmentally friendly aircraft. The Action Plan identifies that overall, without any intervention, it is expected that emissions will grow significantly in the future.

Under the baseline assumptions of traffic growth and fleet rollover with 2010 technology, the Action Plan identifies that CO_2 emissions would almost double for flights departing European airports. Modelling the impact of improved aircraft technology for the scenario with implemented measures indicates an overall 8.5% reduction of fuel consumption and CO_2 emissions in 2040 compared to the baseline. Whilst the data to model the benefits of Air Traffic Management improvements and sustainable alternative fuels may be less robust, they are nevertheless valuable contributions to reduce emissions further. Overall fuel efficiency, including the effects of new aircraft types and Air Traffic Management-related measures, is

[14] Not including aviation but including combustion of fuel used in road, rail, navigation, domestic aviation and pipeline gas transport.
[15] Information from the European Commission (2019) https://ec.europa.eu/clima/policies/transport/aviation_en

projected to improve by 24% between 2010 and 2040. Further, sustainable aviation fuels have the potential to reduce CO_2 emissions significantly on a lifecycle basis. Market-based measures Market-based measures are also expected to help to reach the goal of carbon-neutral growth.

Air Quality

Ambient air quality is an important environmental issue as it can interact with human health. Sources of emissions to air within and surrounding the LAP lands include the combustion engines of aircraft, aerosol-borne particulate matter from de-icing, fugitive emission of volatiles from fuelling and aircraft maintenance activities – as well as emissions from vehicular traffic using the road network that includes the M1 and M50 Motorways and the extensive parking and vehicular serving areas.

The daa undertakes a programme of voluntary air quality monitoring at Dublin Airport and in surrounding communities. Monitoring is undertaken using a stationary continuous air monitoring station located within the DAP boundary as well as at 10 separate locations outside the airport boundary. This programme measures levels of Nitrogen Dioxide (NO_2), Benzene (C_6H_6) and Particulate Matter (PM_{10}) at various locations and has been implemented each year since 2011.

The onsite and offsite data collected since implementation of the air quality monitoring programme has been generally found to be well within the limit values mandated in the Air Quality Standards Regulations. Offsite, the highest concentrations of Nitrogen Dioxide (NO_2) tend to be recorded adjacent to main roads around the airport, close to the vehicular emission source. The most recent Air Quality Monitoring Report from Q1 2019 has identified that:

- Onsite NO_2 and PM_{10} concentrations indicate that concentrations are below the relevant annual limit values and within the allowed criteria of short-term limit values.
- An onsite increase in levels of NO_2 are directly related to construction activity on the North Apron.
- Results for NO_2 indicate that the highest concentrations offsite are recorded at the bus depot at the airport, Ireland's busiest bus depot. The results for annual mean NO_2 concentration for this location indicate an exceedance of annual mean limit value of 40 µg/m³ for NO_2. The elevated readings are related to the volume of vehicular activity that occurs in the area. A11 is a new sampling point and daa is reviewing the results and implementing mitigation process to reduce emission levels.
- Diffusion tube results for benzene indicate that concentrations at all locations are well below the annual average limit value.

Noise[16]

The mitigation and control of aircraft noise is currently determined by legislation set out by a UN organisation called the International Civil Aviation Organization (ICAO) and the EU. The 'balanced approach' sets out a method of noise management that favours reduction of noise at the locations affected, through land-use planning and noise reduction measures. The Dublin Airport LAP is a land use plan for the purposes of effective land-use planning and safeguarding the use of the Airport. To help achieve this, noise zones relating to Dublin Airport have been in place for many years, with the current noise zones first contained in the Fingal Development Plan 2005-2011. The current noise zones are based on noise exposure from an expanded Dublin Airport including a new north runway. The proposed updated noise zones, which take into account best available scientific knowledge and most up to date policy guidance, are mapped on Figure 3.6.

Existing Problems

As detailed above:

- The latest greenhouse gas emission projections indicate that Ireland will exceed the non-ETS carbon budget over the period 2021-2030 by 52-67 Mt CO_2 equivalent.
- With regard to emissions from aviation, the European Commission has identified that Aviation is one of the fastest-growing sources of greenhouse gas emissions. Direct emissions from aviation account for about 3% of the EU's total greenhouse gas emissions and more than 2% of global emissions.
- Offsite, the highest concentrations of Nitrogen Dioxide (NO_2) tend to be recorded adjacent to main roads around the airport, close to the vehicular emission source. The most recent Air Quality Monitoring Report from Q1 2019 has identified inter alia that results for NO_2 indicate that the highest concentrations offsite are recorded at the bus depot at the airport, Ireland's busiest bus depot.
- A number of sensitive receptors in the area around the airport are subject to elevated noise levels. Areas where noise levels are highest are indicated by Noise Zone A on Figure 3.6. Proposed Variation No. 1 to the Fingal Development Plan 2017-2023 will facilitate the replacement of the older, current noise zones with these new noise zones that take into account best available scientific knowledge and most up to date policy guidance.

[16] Please also refer to Section 3.4.

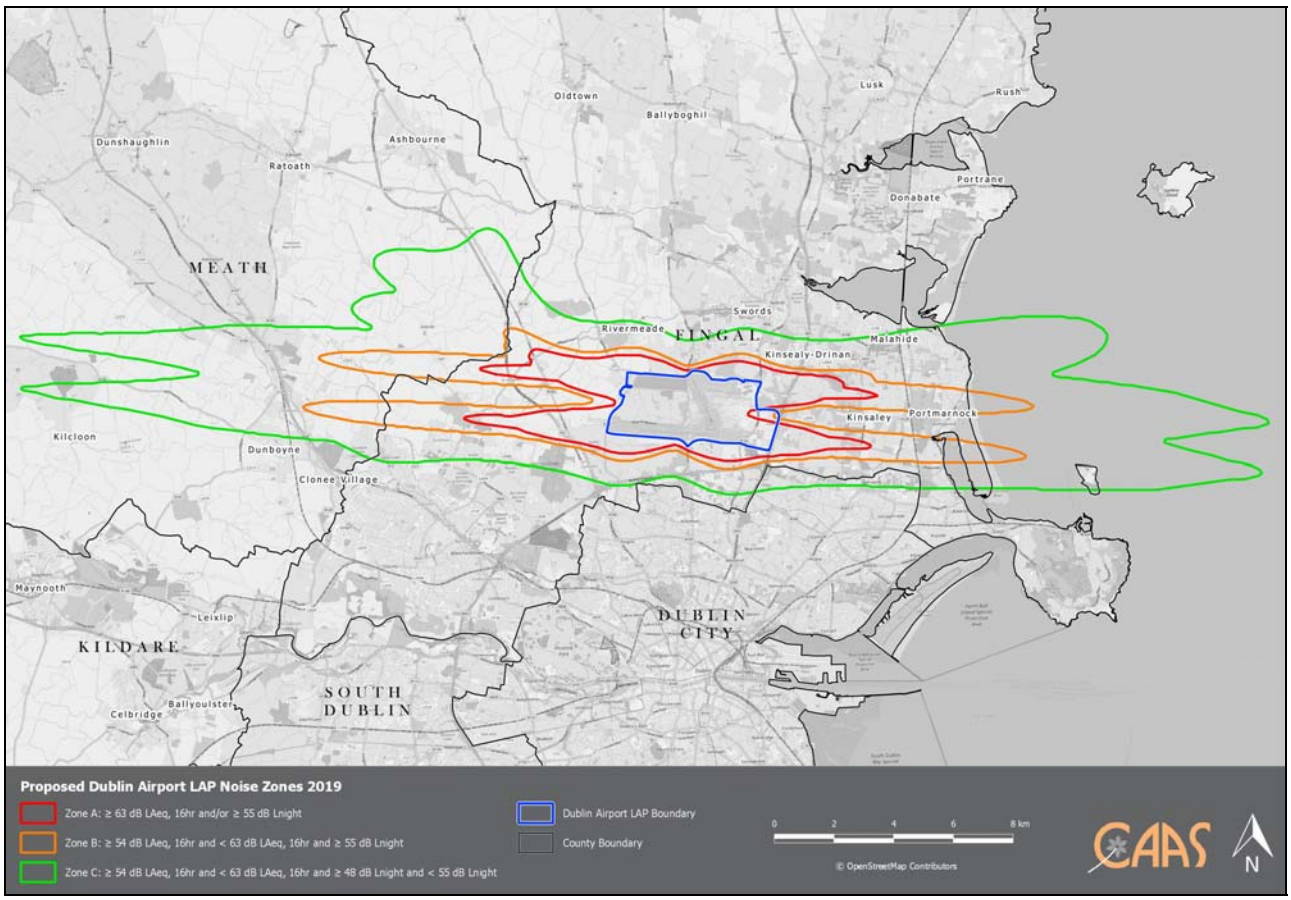

Figure 3.6 Proposed Dublin Airport Plan area Noise Zones (2019)

3.8 Material Assets

Resources that are valued and that are intrinsic to specific places are called 'material assets'. Material Assets relevant to this SEA include public assets and infrastructure (including settlements and urban/suburban areas, public open spaces, parks and recreational areas, public buildings and services and utility infrastructure), land and waste management. Other material assets covered by the SEA include archaeological and architectural heritage, natural resources of economic value, such as air and water.

Water Services Infrastructure

Dublin Airport is situated within the catchment of the North Fringe Sewer with effluent treated at Ringsend Waste Water Treatment Plant. In January 2014, Irish Water assumed responsibility for the provision of public water services, which included the transfer of responsibility for the Ringsend Wastewater Treatment Plant from Dublin City Council. Since taking on this responsibility, Irish Water have progressed upgrades to the plant and network, which will enable future population growth and ensure the plant operates to the highest possible environmental standards.

Dublin Airport and the surrounding area is located within the Ballycoolin Reservoir drinking water supply area. The area is served with trunk mains that have capacity to cater for additional future growth in the area including Dublin Airport. The current airport demand is met from an internal reservoir and boosting system which is under the control of the daa. A 25-year plan has been created by Irish Water for the Greater Dublin Area and a key apart of this plan is the proposed Water Supply Scheme to serve the region.

Transport Infrastructure

Dublin Airport is a key national asset, providing global connectivity to trade and tourism markets. Given its strategic national function, Dublin Airport is well located in terms of surface access, sitting on Ireland's core Trans-European Transport Network and on or adjacent to several key elements of the national road network such as the M1 Dublin-Belfast corridor, M2/N2 Dublin-Derry, M3/N3 Dublin-northwest and the M50 orbital motorway. The Airport is also well served by a number of public transport bus services such as the various local routes that run between Dublin City Centre and Dublin Airport and a number of regional and national bus services that run from Dublin Airport to a wide range of locations across Ireland. The mainline

Dublin-Belfast rail line is located some five kilometres to the east, whilst the proposed MetroLink light rail system from Dublin city centre to Swords will run in a tunnel directly beneath the Dublin Airport campus.

Fingal County Council has long recognised the important role that Dublin Airport plays in the economic and cultural development of the Country and the associated importance of safeguarding future accessibility in this regard. It is in this context that Fingal County Council has recently completed the South Fingal Transport Study, a technical transport planning study comprising strategic transport modelling and objective assessment of potential transport infrastructure in the area around Dublin Airport. Various recommendations from the Study are included in the Fingal Development Plan and in the Draft Dublin Airport Local Area Plan.

Waste Generation, Disposal and Management

Waste management within the Plan area is guided by the Eastern and Midlands Region Waste Management Plan 2015-2021 that provides a framework for the prevention and management of waste in a sustainable manner in 12 local authority areas, including Fingal County Council. Certain airside wastes (galley wastes) from international flights are disposed of by deep burial under licence from the Department of Agriculture, Food and the Marine (Animal Health and Welfare Division). There are two historic landfills identified within the Plan area and a number in the wider area.

Agricultural Land

The primary land use adjoining the Airport to the north, south and west is agricultural. The SEA for the Fingal Development Plan 2017-2023 provided a proxy for agricultural land quality by combining existing datasets relating to land cover and the predominant soil types mapped across Fingal.

Energy

The Airport's high-voltage electrical network is operated at 110 kilovolts and is currently supplied by the Dardistown Substation. The Dardistown Substation has two 40-megavolt amp transformers supplying four Airport ring networks namely Terminal 1, Terminal 2, campus and the airfield. The Airport is currently served by a 19-bar gas main from the Cloghran Ground Installation, located on Swords Road. This feeds a 315-millimetre diameter, 4-bar ring main within the Airport. There are currently no constraints associated with gas supply. The use of alternative fuels, including for electricity, forms a significant part of government policy to reduce transport emissions and contribute towards energy security.

Information Technology Communications

The Airport is currently serviced by a mixture of copper and fibre networks. These networks are currently served by two public node operator points within the Airport. These services enter the Airport through the R132 Swords Road.

Existing Problems

As identified by the Draft Local Area Plan, Dublin Airport is faced with a number of capacity constraints in the short to medium term on a range of key infrastructure to meet forecasted growth, including surface access, the existing runway, aircraft parking stands and passenger boarding gates. However, there are a number of key interventions identified by the Plan that will enable the capacity of the existing eastern campus to be maximised

3.9 Cultural Heritage

Archaeological Heritage

Archaeological heritage is protected under the National Monuments Acts (1930-2004), Natural Cultural Institutions Act 1997 and the Planning Acts. The Record of Monuments and Places (RMP) is an inventory, put on a statutory basis by amendment to the National Monuments Act 1994, of sites and areas of archaeological significance, numbered and mapped. It is available from the National Monuments Service and at archaeology.ie. There are number of listed archaeological sites and monuments within and surrounding the Plan area, including nine entries to RMP within the Plan area, as shown on Figure 3.7. These comprise: Ringfort, Cloghran (north-east of Plan area); Castle site, Corballis (east of Plan area); Holy Well, Toberbunnny (south-east of Plan area); Inn, Pickardstown (centre of Plan area); Enclosure, Harristown (south-west of Plan area); Dwelling site, Harristown (south-west of Plan area); Enclosure, Sandyhill (west of Plan area); Enclosure, Sandyhill (west of Plan area); and Ringfort, Shanganhill (south-west of Plan area). There are also a number of archaeological sites and features adjacent to the LAP lands, in areas such as St. Margaret's, Dunsoghly, Dubber and Cloghran. There are two historic graveyards

adjacent to the LAP lands, one at St. Margaret's and one at Dardistown. There is also the potential for unknown archaeological sites to be unearthed where new developments occur.

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. Protected Structures are defined in the Planning and Development Act 2000 as amended as structures, or parts of structures that are of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view. There are four Protected Structures located within the Plan area, including as shown on Figure 3.8 and listed below:

- Castlemoate House, Swords Road, Cloghran (north-east of Plan area);
- Old Central Terminal Building, Dublin Airport, Collinstown (north-east of Plan area);
- Windmill (in ruins), R122 Road, Millhead (west of Plan area); and
- Church of Our Lady Queen of Heaven, Dublin Airport, Corballis (west of Plan area).

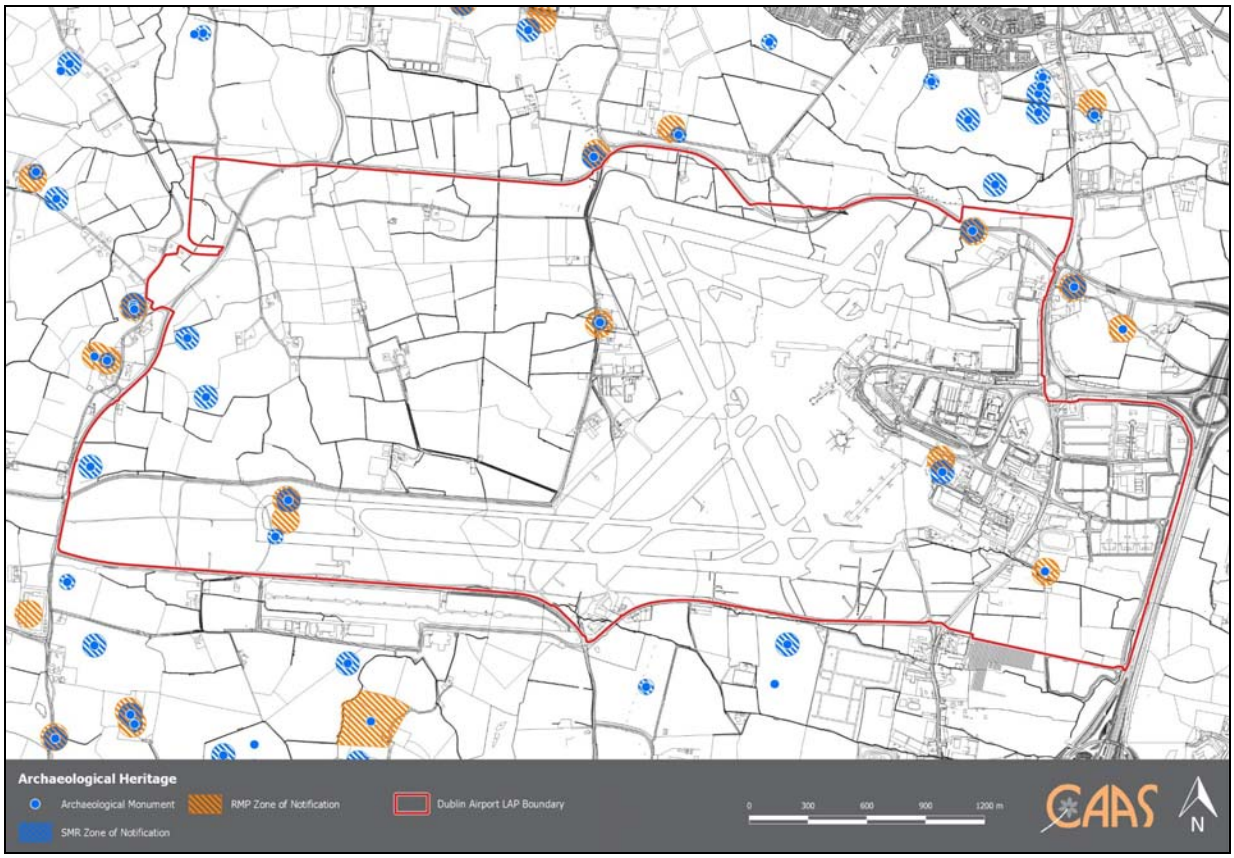

Figure 3.7 Archaeological Heritage

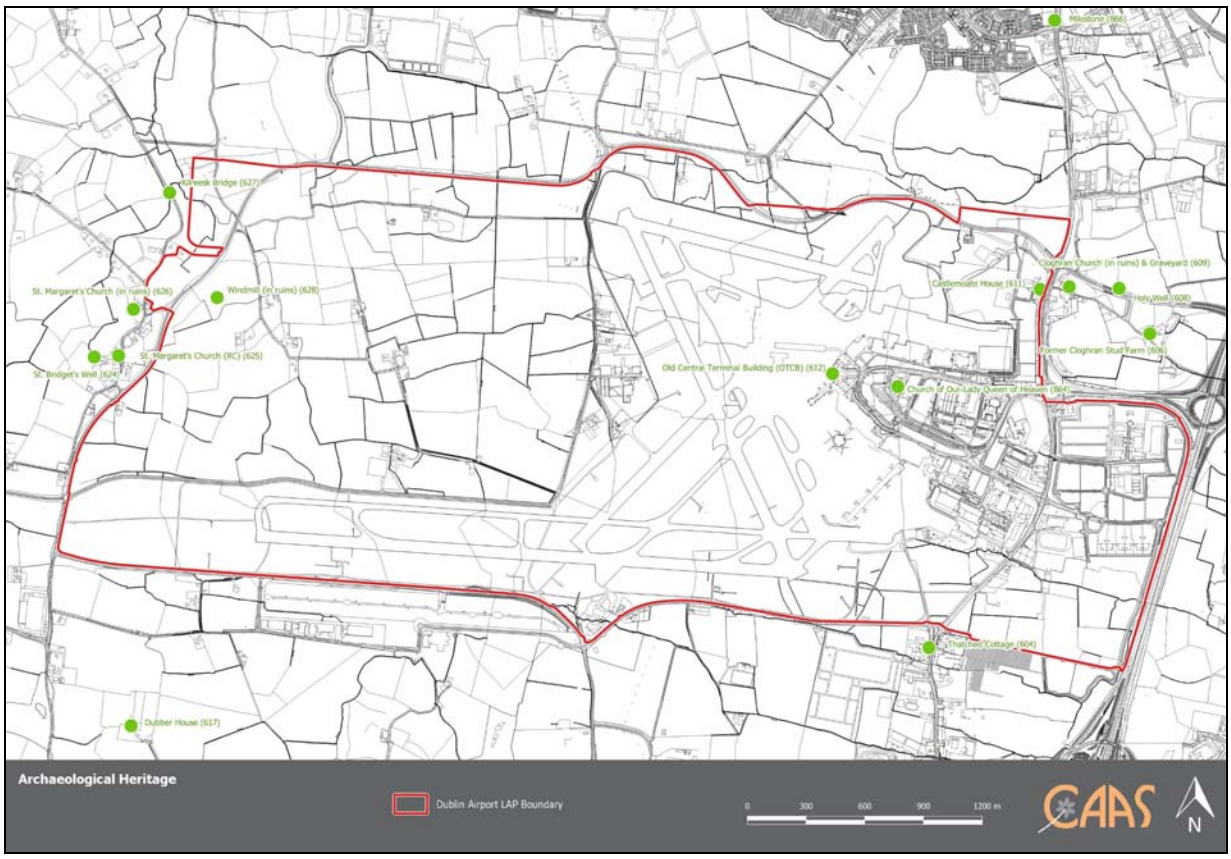

Figure 3.8 Architectural Heritage

3.10 Landscape

Landscape and Visual Impact

There are no landscape designations associated with the Plan area. The Plan area is largely flat and as a result are dominated by structures and development associated with the operational airport. The main airport campus – including Terminals 1 and 2 in the east and the airfield, including runways in the west – and the campus' immediate environs are entirely artificial in character, comprising existing roads, car parks, buildings and landscape planting. The airfield contains a large proportion of airport-managed grassland with limited enclosure. Outside the airfield, the west of the Plan area consists mainly of agricultural grasslands together with arable land. Enclosure is provided by hedgerows and treelines. A limited number of residential dwellings are located in the west of the Plan area including St. Margaret's. The open space in this area is not used for significant levels of amenity. The immediate surrounds of the airport comprise a working agricultural landscape including agricultural grasslands and arable lands. The M1 Motorway is located to the east. The airport is located between the urban fringe of Dublin City and the Dublin town of Swords, c. 5 km inland from the coast.

Taking into account all of the above, the Plan area has significant capacity to accommodate further development without affecting visual amenity. Most views of the land are from passing motorists along the M1 and M50 Motorways, stretches of which are enclosed by treelines making views intermittent, and the N2 National Primary Road and M2 Motorway. The absence of landscape related designations at the Plan area and the distance to closest landscape designations, mean that landscape designations are unlikely to be significantly affected by development at the airport.

Land and Property

Dublin Airport is located at Collinstown in Fingal County Council's administrative area in North County Dublin. Dublin City Centre is located 10 km to the south, while Swords is approximately 2 km to the north. The Plan area for the Airport covers an area of 1,084 hectares, including lands that have been already developed for the airport and associated infrastructure. The main airport campus (including Terminals 1 and 2), a number of commercial buildings, car-parking facilities, the R132, a sports centre and a limited

number of residential dwellings are all located in the east of the Plan area. The airport's principal runway is located on an east-west axis within the south of the Plan area. An additional runway is planned and permitted along an east-west axis within the north of the LAP lands. The implementation of this runway permission has led to changes in the appearance of the landscape at this location with development of new roads, road closures, archaeological excavations and hedgerow removal. Greenfield lands, primarily in agricultural use, are located primarily in the west of the Plan area. A limited number of isolated residential dwellings are located in the west of the Plan area, including at St. Margaret's.

3.11 Appropriate Assessment and Flood Risk Assessment

Screening for Appropriate Assessment (AA) is being undertaken alongside the preparation and adoption of the Draft Plan. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The emerging conclusion of the Screening for AA process is that the Draft Plan will not give rise to any effect on the ecological integrity of any European Sites, alone or in combination with other plans or projects.

A Strategic Flood Risk Assessment (SFRA) is also being undertaken alongside the preparation and adoption of the Draft Plan. The requirement for SFRA is provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (DEHLG, 2009).

The preparation of the Plan, SEA, SFRA and Screening for AA has taken place concurrently and the findings of the SFRA and Screening for AA have informed the SEA. Various policies and objectives have been integrated into the Plan through the SEA and SFRA processes.

3.12 Strategic Environmental Objectives

Strategic Environmental Objectives (SEOs) are methodological measures developed from policies that generally govern environmental protection objectives established at international, Community or Member State level e.g. the environmental protection objectives of various European Directives that have been transposed into Irish law and that are required to be implemented.

The SEOs are set out under a range of topics and are used as standards against which the provisions of the Draft Plan and the alternatives are evaluated in order to help identify which provisions would be likely to result in significant environmental effects and where such effects would be likely to occur, if - in the case of adverse effects - unmitigated.

The SEOs are linked to indicators that can facilitate monitoring the environmental effects of the Plan as well as identifying targets that the Plan can help work towards (see Table 3.1). The measures used are those that were developed through the SEA process for the Fingal Development Plan and finalised in 2017.

Table 3.1 Strategic Environmental Objectives

Environmental Component	SEO No.	SEO
Biodiversity, Flora and Fauna	1	**B1** Preserve, protect, maintain and where appropriate restore the terrestrial, aquatic and soil biodiversity, particularly EU and nationally designated sites and protected species
Population and Human Health	2	**PHH1** Provide high quality residential, working and recreational environments with access to sustainable transport options
	3	**PHH2** Protect human health
Soil	4	**S1** Safeguard the soil resources within Fingal in recognition of the strong agricultural and horticultural base
Water	5	**W1** Protect and where necessary improve and maintain water quality and the management of watercourses and groundwater, in compliance with the requirements of the Water Framework Directive objectives and measures
Air and Climatic Factors	6	**AC1** Minimise emissions of pollutants to air associated with transport
	7	**AC2** Minimise contribution to climate change by adopting adaptation and mitigation measures
Cultural Heritage	8	**CH1** Protect places, features, buildings and landscapes of cultural, archaeological and/ or architectural heritage from impact as a result of development in Fingal
Material Assets	9	**M1** Make best use of existing infrastructure and promote the sustainable development of new infrastructure to meet the needs of Fingal's population
Landscape	10	**L1** Protect and maintain the special qualities of the landscape character, including coastal character within Fingal

Section 4 Alternatives

4.1 Introduction and Limitations in Available Alternatives

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

The alternatives available for the Dublin Airport Local Area Plan (LAP) are significantly limited by the robust policy framework in place at national, regional and local level supporting the continued development, growth and expansion of Dublin Airport, including for the first time its development as a secondary European hub airport[17].

4.2 Available Reasonable Alternatives

4.2.1 Alternative Growth Scenarios for Passenger Numbers

In 2016, Dublin Airport handled 28 million passengers per annum (mppa), 216,000 air traffic movements and 134,000 tonnes of cargo. The growth of Dublin Airport is set out in two principal higher-level documents. These are the National Aviation Policy (Department of Transport, Tourism and Sport, 2015), which establishes the growth of the airport and its development as a secondary hub as national policy, and the Oxford Economic Review of the State Airports (Department of Transport, Tourism and Sport, 2018), which details the levels of annual passenger numbers and aviation transport movements for Irish airports, including Dublin. Both documents were prepared by personnel with aviation expertise, utilising recently available passenger information. Taking into account that these documents inform and underpin the Draft Local Area Plan, it is considered that the 'baseline', 'downside' and 'upside' growth scenarios identified within Section 2.4 "Dublin" of the Oxford Economic Review form a reasonable and informed basis for the development alternatives required under the SEA Directive. The Oxford Economic Review indicates that 38 mppa is expected at 'baseline' growth to 2027, with a higher figure expected under the 'upside' growth scenario and a lower figure expected under the 'downside' growth scenario.

Extrapolated from the Review, and as detailed within Chapter 3 "Forecasts and Capacity Constraints" of the Draft Plan, projected passenger figures for the 'baseline' growth scenario for 2030 would amount to 40 mppa by 2030 and 54 mppa by 2050. Under the 'baseline' scenario, air traffic movements would amount to approximately 265,000 by 2030 and 365,000 by 2050; cargo would amount to approximately 165,000 tonnes by 2030 and 218,000 tonnes by 2050.

The 'downside' scenario forecast in the Review simulates two near term global risks scenarios: a "cliff-edge" Brexit leading to WTO trading arrangements between the UK and EU and a more protectionist attitude towards international trade and investment by the US. These factors are compounded by weaker demographic growth in Ireland and higher oil prices. Under this scenario passenger numbers would reach 36 mppa by 2030 and 49 mppa by 2050. Under the 'downside' scenario, air traffic movements would amount to approximately 250,000 tonnes by 2030 and 329,000 by 2050; cargo would amount to in excess of 150,000 tonnes by 2030 and 202,000 tonnes by 2050.

Under the 'upside' scenario the Review simulates the effects of a positive near-term boost to Ireland's economy as part of the global upturn, together with three longer-term characteristics for on-going improvements in outlook, faster population growth, faster productivity growth, and greater trade openness. Under this 'upside' scenario, Dublin is forecast to reach 42 mppa by 2030 and 61 mppa passengers by 2050. Under the 'upside' scenario, air traffic movements would amount to approximately 280,000 by 2030 and 409,000 by 2050; cargo would amount to approximately 170,000 tonnes by 2030 and 247,000 tonnes by 2050.

[17] This policy framework is described in full in Chapter 2 of the Plan.

Taking into account the above, the alternative growth scenarios available for assessment by the SEA are as follows:

- Growth Scenario A 'Baseline';
- Growth Scenario B 'Downside'; and
- Growth Scenario C 'Upside'.

4.2.2 Alternatives for Managing Airport Service Levels

Two options were considered with respect to where in the planning hierarchy airport service levels are to be managed at:

Alternative A. More flexible approach to managing airport service levels

Alternative A seeks to manage airport service levels at both LAP and planning application levels. Provision of the relevant infrastructure may not be required in the event of improved modal shift or re-organisation of airport landside and/or airside processes. The LAP under this alternative would outline further transport assessment required to identify proposals to be specifically included in planning applications so that the infrastructure required can be provided to facilitate expansion based on available capacity in the surface access network (as identified by the South Fingal Transport Study), including upgrades to the airport roundabout, core bus corridor and provision of a western access. This option provides flexibility regarding the phasing of infrastructure provision over the life of the Plan. The approach provided by Alternative A would be more coordinated than that under Alternative B and less likely to result in surface access infrastructure capacity issues or unnecessary constraints to airport expansion, thus affecting Ireland's international connectivity.

Alternative B. Less flexible approach to managing airport service levels

Alternative B would focus on managing airport service levels by introducing a provision for specific infrastructure requirements to be phased with identified airport passenger numbers throughput in the LAP. The LAP under this alternative would not provide flexibility in relation to the levels and timing of infrastructure to be provided over the life of the plan and include criteria limiting expansion within the timeframe of the LAP to infrastructural provision. The approach provided by Alternative B would provide less flexibility than that under Alternative A and would be more likely to result in surface access infrastructure capacity issues or refusals of planning permissions over the life of the Plan - resulting in constraints to airport expansion, thus affecting Ireland's international connectivity.

4.2.3 Alternatives for a Community Strategy for St. Margaret's

St. Margaret's has experienced low levels of recent development because of its location adjacent to Dublin Airport and restrictions on new residential development. Objective DA28 from the Fingal Development Plan requires that a Strategy is prepared for 'St. Margaret's Special Policy Area' involving consultation between the existing community, Fingal County Council and the daa. It does not however address the content of such a Strategy or require the Strategy to be prepared now as part of the Airport LAP preparation process.

Alternative A. Include a Community Strategy for St. Margaret's

Alternative A would include a Community Strategy for St. Margaret's in the LAP, outlining, among other things, environmental and community enhancements. Such a Strategy would set out a context to widen the rural area within which residents within the inner noise zone might be considered for one off rural housing so that they can move further away from the inner noise zone (to be addressed in Variation to the Fingal Development Plan).

Alternative B. Do not include Community Strategy for St. Margaret's

Alternative B would not include a Community Strategy for St. Margaret's in the LAP.

4.3 Summary Evaluation of Alternatives

4.3.1 Alternative Growth Scenarios for Passenger Numbers

Of all three Growth Scenarios, C 'Upside' would result in the greatest extent and degree of potential significant adverse environmental effects arising sooner from both:

- The need to construct greater amounts of airport and supporting infrastructure and facilities with more capacity sooner. This would lead to effects including those relating to biodiversity and flora and fauna, human health, soil, ground and surface and ground water, climate adaptation, material assets, cultural heritage and landscape.

- The need to operate the airport and supporting infrastructure at higher capacities and frequencies sooner – leading to increased levels of emissions to air and water. These emissions include:

    - Increases in greenhouse gas emissions, including from aviation and surface access, leading to increased potential conflicts with local, national and European environmental objectives aiming to reduce greenhouse gas emissions[18].
    - Increase in the emissions of Nitrogen Dioxide and particulate matter to air, especially adjacent to main roads around the airport and at the bus depot at the airport, Ireland's busiest bus depot[19].
    - Increases in the frequency of noise emissions, including from aircraft[20].
    - Increases in emissions to water – including from run-off and treated waste water[21].

Of all three Growth Scenarios, B 'Downside' would result in the least extent and degree of potential significant adverse environmental effects (described above for Growth Scenario C 'Upside') arising later.

Growth Scenario, A 'Baseline' would result in potential significant adverse environmental effects (described above for Growth Scenario C 'Upside') that would be less in extent and degree and arising later than those for Growth Scenario C 'Upside') and greater in extent and degree and arising sooner than those for Growth Scenario B 'Baseline'.

By facilitating the continued development of lands that have relatively low levels of environmental sensitivities and are served by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond, each of the scenarios would contribute towards the protection and management of various environmental components, including biodiversity and flora and fauna, human health, soil, ground and surface and ground water, climate adaptation, material assets, cultural heritage and landscape.

A Summary Assessment of Alternative Growth Scenarios against Strategic Environmental Objectives (SEOs, detailed under Section 3.12) is provided at Table 4.1.

[18] Objectives and Draft Plan provisions in relation to greenhouse gas emissions are described under Section 3.7 and include those of the Government's Climate Action that identifies, in relation to emissions from air travel, that: *"Since 2012, greenhouse gas emissions associated with flights operating in the European Economic Area (EEA), including domestic flights as well as those to and from third countries, are covered by the EU ETS. Airlines are required to monitor, report and verify their emissions, and to surrender allowances against those emissions. Airlines receive tradable allowances covering a certain level of emissions from their flights per year and must purchase allowances to cover any shortfall between their allocated sum of free emissions allowances and their actual emissions, as reported annually. To support the planned development of a global Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) by the International Civil Aviation Organisation (ICAO), the EU agreed in 2014 to limit the scope of aviation in the EU ETS to flights within the EEA. CORSIA will come into effect in 2021 and aims to stabilise global aviation emissions at 2020 levels by requiring airlines to offset any emissions growth after 2020 by purchasing eligible emission units generated by projects that reduce emissions in other sectors. As Ireland is a member of ICAO, Irish aircraft operators will have to offset any emissions growth after 2020 by purchasing eligible emission units, i.e. pay full carbon price."*

[19] Various Air Quality Objectives have been integrated into the Plan.

[20] The planning framework for the airport and surrounding areas includes various provisions in relation to the management of noise, including those relating to Noise Zones.

[21] These emissions are required to comply with the objectives of the Water Framework Directive and/or the relevant EPA issued license, as relevant.

Table 4.1 Assessment of Alternative Growth Scenarios against SEOs

Alternative Scenario	Likely to **Improve** status of SEOs			**Potential Conflict** with status of SEOs - likely to be mitigated by complying with other measures included within the Plan		
	to the **Greatest** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree
Growth Scenario A 'Baseline'		**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**			**B1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**	
Growth Scenario B 'Downside'		**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**		**B1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**		
Growth Scenario C 'Upside'		**B1 PHH1 PHH2 S1 W1 AC1 AC2 CH1 M1 L1**				**B1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**

4.3.2 Alternatives for Managing Airport Service Levels

The approach provided by Alternative A would be more coordinated than that under Alternative B and less likely to result in surface access infrastructure capacity issues and/or unnecessary constraints to airport expansion, thus supporting Ireland's international connectivity. The approach provided by Alternative B would be less coordinated than that under Alternative A and more likely to result in surface access infrastructure capacity issues and/or unnecessary constraints to airport expansion, thus potentially affecting Ireland's international connectivity.

Alternative A would allow for a flexible approach that would help to avoid the unnecessary development of infrastructure (the provision of relevant infrastructure may not be required in the event of improved modal shift or re-organisation of airport landside and/or airside processes). This would help to avoid unnecessary potential significant adverse effects on environmental components such as biodiversity and flora and fauna, human health, soil, water, air and climatic factors, material assets, cultural heritage and landscape.

Alternative B would focus on managing airport service levels by introducing a provision for specific infrastructure requirements to be phased with identified airport passenger numbers throughput in the LAP – this would not allow for a flexible approach that would help to avoid the unnecessary development of infrastructure (the provision of relevant infrastructure may not be required in the event of improved modal shift or re-organisation of airport landside and/or airside processes). This would have the potential to result in unnecessary potential significant adverse effects on environmental components such as biodiversity and flora and fauna, human health, soil, water, air and climatic factors, material assets, cultural heritage and landscape.

Alternative A would facilitate the sustainable development of Dublin Airport to a greater degree than Alternative B, including with respect to making the best use of existing infrastructure, promoting the sustainable development of new infrastructure and promoting access to sustainable transport options.

By facilitating the continued development of lands that have relatively low levels of environmental sensitivities and are served by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond, each of the alternatives would contribute towards the protection and management of various environmental components, including biodiversity and flora and fauna, human health, soil, ground and surface and ground water, climate adaptation, material assets, cultural heritage and landscape.

By facilitating the continued development of the airport, each alternative would result in the potential significant adverse environmental effects arising from both: construction of airport and supporting infrastructure and facilities; and operation of the airport and supporting infrastructure.

A Summary Assessment of Alternatives for Managing Airport Service Levels against Strategic Environmental Objectives (SEOs, detailed under Section 3.12) is provided at Table 4.2.

Table 4.2 Assessment of Alternatives for Managing Airport Service Levels against SEOs

Alternative	Likely to **Improve** status of SEOs			**Potential Conflict** with status of SEOs - likely to be mitigated by complying with other measures included within the Plan		
	to the **Greatest** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree
Alternative A. More flexible approach to managing airport service levels	**PHH1 M1**	**B1 PHH2 S1 W1 AC1 AC2 CH1 L1**		**B1 PHH1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**		
Alternative B. Less flexible approach to managing airport service levels		**B1 PHH2 S1 W1 AC1 AC2 CH1 L1**	**PHH1 M1**			**B1 PHH1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**

4.3.3 Alternatives for a Community Strategy for St. Margaret's

Alternative A would include a Community Strategy for St. Margaret's in the LAP that would provide for community and environmental enhancements. These enhancements would be likely to contribute towards:

- The protection of biodiversity and flora and fauna, human health, water and soil by contributing towards the protection of natural heritage;
- The protection of the population of St. Margaret's by contributing towards higher quality residential, working and recreational environments with access to sustainable transport options;
- Climate mitigation measures (including those arising from linkages and potential enhancement of public transport);
- The continued use and development of existing public assets and infrastructure, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere; and
- The protection of the area's cultural heritage and character.

The Strategy would set out a context to widen the rural area within which residents within the inner noise zone might be considered for one off rural housing so that they can move further away from the inner noise zone – the Council is seeking to provide for this issue through Proposed Variation No. 1 to the Fingal Development Plan. As identified by the SEA Screening of the Proposed Variation, any potential interactions arising from changes to the rural housing provisions under the Development Plan would be in the context of the various environmental protection and management provisions that have been integrated into that Plan, including those detailed at Section 9 of this report, and adverse effects would be mitigated to the extent that any residual effects would not be significant. This situation would apply under both Alternatives A and B.

Works involved in the development of community and environmental enhancements would be likely to present potential significant adverse environmental effects on various components. By complying with appropriate mitigation measures – these are identified at Section 6 of this report – potential adverse

environmental effects that could arise as a result of implementing these scenarios would be likely to be avoided, reduced or offset.

Alternative B would not include a Community Strategy for St. Margaret's in the LAP and would not result in the aforementioned interactions at this time; however, the Development Plan provides for such a Strategy and it is likely that one would be prepared eventually, eventually resulting in these interactions.

A Summary Assessment of Alternatives for Managing Airport Service Levels against Strategic Environmental Objectives (SEOs, detailed under Section 3.12) is provided at Table 4.3.

Table 4.3 Assessment of St. Margaret's Community Strategy Alternatives against SEOs

Alternative	Likely to **Improve** status of SEOs			**Potential Conflict** with status of SEOs - likely to be mitigated by complying with other measures included within the Plan		
	to the **Greatest** degree	to a **Moderate** degree	to a **Lesser** degree	to a **Lesser** degree	to a **Moderate** degree	to a **Greater** degree
Alternative A. Include a Community Strategy for St. Margaret's	**B1 PHH1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**					**B1 PHH1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**
Alternative B. Do not include Community Strategy for St. Margaret's			**B1 PHH1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**	**B1 PHH1 PHH2 S1 W1 AC1 AC2 M1 CH1 L1**		

4.4 The Selected Alternatives

The Draft Plan was developed by the Planning Team taking into account both:

1. Environmental considerations that were identified by the SEA, including those detailed above; and
2. Planning - including social and economic - effects that were also considered by the Council.

The alternatives that were selected for the Draft Local Area Plan are follows:

- For **Alternative Growth Scenarios for Passenger Numbers**, the Plan utilises forecasts from **all Alternative Scenarios**, the '**Baseline**', '**Upside**' and '**Downside**' **Scenarios**, to provide the framework for development.
- For **Alternatives for Managing Airport Service Levels**, the Plan has selected **Alternative A: 'More flexible approach to managing airport service levels'**.
- For **Alternatives for a Community Strategy for St. Margaret's**, the Plan follows Alternative A and integrates such a strategy.

Table 5.1 in Section 5 details the overall findings of the assessment with respect to the Plan that was developed from the selected alternatives. By complying with appropriate mitigation measures – these are identified at Section 6 of this report – potential adverse environmental effects which could arise as a result of implementing these scenarios would be likely to be avoided, reduced or offset.

Section 5 Summary of Effects arising from Plan

- **The Plan is consistent with the wider planning framework and contributes towards compliance with environmental legislation and policy**

  The Plan is situated alongside a hierarchy of statutory documents setting out public policy for, among other things, the development, growth in traffic and expansion in connections at Dublin Airport. The Plan is consistent with these other existing policies, plans, etc., that have been subject to their own environmental assessment processes, as relevant.

  Fingal County Council have integrated various provisions relating to sustainable development, environmental protection and environmental management (including those arising from the SEA and AA processes) into both the Draft Plan for the Airport and the existing Fingal Development Plan (see Section 6 of this report). This facilitates compliance of the Plan with various European and National legislation and policies relating to the sustainable development, environmental protection and environmental management.

  Implementation of the Plan will contribute towards efforts to achieve a number of the 17 Sustainable Development Goals[22] of the 2030 Agenda for Sustainable Development, which were adopted by world leaders in 2015 at a United Nations Summit and came into force in 2016.

- **The Dublin Airport lands to which the Plan relates have relatively low levels of environmental sensitivities and are served by infrastructure and services**

  The Local Area Plan lands:

  - Include areas that contain relatively low levels of environmental sensitivities and designations, in comparison to other lands within the administrative area of Fingal County Council and beyond, including, for example, coastal fringes and more rural upland areas;
  - Are served by infrastructure and services, including those relating to transport that provide linkages to and from Dublin City, the Greater Dublin Area and beyond; and
  - Will benefit from major planned infrastructural public transport projects (MetroLink and the Swords Road Core Bus Corridor).

  By providing for growth and development within this area, the Plan would help to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond and would contribute towards sustainable development. This would be likely to result in positive environmental effects on the protection and management of environmental components: Biodiversity and flora and fauna; Population and human health; Soil; Water (status of rivers and groundwater); Flood; Sustainable mobility and associated effects (energy usage and emissions to air including noise and greenhouse gases); Material Assets (facilitating development of well-serviced lands, contributes towards use of existing and planned infrastructure); Cultural Heritage (architectural and archaeological heritage); and Landscape and amenities.

- **The Plan is likely to contribute towards, in combination with other governmental policies, plans etc., an increase in greenhouse gas emissions – although such increases will be mitigated**

  In addition to supporting the implementation of international and industry–led initiatives associated with improvements to aircraft and engine design, air traffic and other operational efficiencies to reduce carbon emissions, ***the Draft Dublin Airport LAP*** places a strong emphasis on contributing towards carbon emissions reduction within areas that can be addressed within the planning process. In summary, the LAP seeks to pursue climate mitigation in line with global and national targets and support the transition towards a low carbon economy by seeking to reduce CO_2 emissions at the Airport in particular through:

  - Providing for specific proposals to reduce carbon emissions associated with surface access;
  - Requiring proposals for carbon reduction to be addressed in planning applications including proposals for clean energy; and
  - Support the transition towards a net zero target by 2050.

[22] Including: Goal 3. Ensure healthy lives and promote well-being for all at all ages. Goal 6. Ensure availability and sustainable management of water and sanitation for all. Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation. Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable. Goal 12. Ensure sustainable consumption and production patterns. Goal 13. Take urgent action to combat climate change and its impacts. Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

The LAP includes various provisions that will contribute towards the objectives of the wide policy framework relating to climate mitigation, alternative energy use and energy/fuel efficiency, including the Emissions Trading Scheme Directive, the Alternative Fuels Infrastructure Directive, the Energy Efficiency Directive, the Climate Action and Low Carbon Development Act 2015, the National Mitigation Plan 2017, the Action Plan for Aviation Emissions Reduction 2019 and the Climate Action Plan 2019.

Strong emphasis is placed on reducing climate emissions through increasing use of more sustainable transport modes for surface access to and from Dublin Airport. Chapter 8 of the LAP sets out objectives to provide for significant improvements in mode split in favour of walking, cycling and public transport, as well as proposals for enhanced mobility management plans. A particular emphasis is placed on targeting these modes towards airport employees to achieve a greater impact on reduction of carbon emissions by enhancing accessibility to Swords to the north and Dublin City to the south. MetroLink is considered to be significant in achieving this aim in the longer term. Over the life of the Plan, more immediate action in reducing carbon emissions is to be achieved by supporting the provision of pedestrian and cycle routes and a Core Bus Corridor as part of the NTA BusConnects project. These objectives are complimented by restricting increased employee car parking at the Airport.

Future development at Dublin Airport will be required to demonstrate the integration of renewables-focused energy generation systems to support a reduction in greenhouse gas emissions and a reduction in the Airport's carbon footprint. Development proposals at the Airport will be required to address carbon emissions as part of planning applications for larger scale developments.

Furthermore, as identified in the Climate Action Plan (Government of Ireland, 2019):
"Since 2012, greenhouse gas emissions associated with flights operating in the European Economic Area (EEA), including domestic flights as well as those to and from third countries, are covered by the EU ETS[23]. Airlines are required to monitor, report and verify their emissions, and to surrender allowances against those emissions. Airlines receive tradable allowances covering a certain level of emissions from their flights per year and must purchase allowances to cover any shortfall between their allocated sum of free emissions allowances and their actual emissions, as reported annually. To support the planned development of a global Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) by the International Civil Aviation Organisation (ICAO), the EU agreed in 2014 to limit the scope of aviation in the EU ETS to flights within the EEA. CORSIA will come into effect in 2021 and aims to stabilise global aviation emissions at 2020 levels by requiring airlines to offset any emissions growth after 2020 by purchasing eligible emission units generated by projects that reduce emissions in other sectors. As Ireland is a member of ICAO, Irish aircraft operators will have to offset any emissions growth after 2020 by purchasing eligible emission units, i.e. pay full carbon price."

- **The Plan is likely to contribute towards, in combination with other governmental policies, plans etc., an increase in the frequency of noise from aircrafts – although such increases will be mitigated**

  Unacceptable exposure to aircraft noise can have effects on human health and well-being. Development, growth and expansion at the airport, and associated increases in air traffic movements, as provided for by other governmental policies, plans etc., is likely to result in increases in the frequency of noise from aircrafts, having the potential to adversely affect sensitive uses and human health, particularly in the vicinity of the Airport. Provisions have been integrated into the Plan and a Proposed Variation to the Fingal Development Plan 2017-2023, including those relating to Noise Zones, which will facilitate the mitigation of potential effects taking into account best available scientific knowledge and most up to date policy guidance.

- **Potentially Significant Adverse Effects to be mitigated**

  Table 5.1 describes the various types of environmental effects likely to arise as a direct result of the Plan and in combination with other policies, plans etc., including potentially significant adverse environmental effects. These effects will be avoided, reduced or offset by the various mitigation measures relating to sustainable development, environmental protection and environmental management (including those arising from the SEA and AA processes) that have been integrated into both the Draft Plan for the Airport and the existing Fingal Development Plan (see Section 6 of this report). Environmental impacts which occur, if any, will be determined by the nature and extent of multiple or individual projects and site-specific environmental factors. Avoidance of conflict with SEOs and the environment is dependent upon compliance with mitigation measures (as detailed in Section 6).

[23] Emissions Trading Scheme (ETS)

Table 5.1 Overall Findings – Environmental Effects arising from Draft Plan Provisions

Environmental Component	Environmental Effects, in combination with the wider planning framework[24]		
	Significant Positive Effect, likely to occur	**Potential Significant Adverse Effect, if unmitigated**	**Residual Adverse Significant Effects**
Biodiversity and flora and fauna	• Contribution towards the protection of ecology by facilitating the continued development of lands that have relatively low levels of environmental sensitivities and are served by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contribution towards the maintenance of existing green infrastructure and associated ecosystem services, listed species, ecological connectivity and non-designated habitats. • Contribution towards protection and/or maintenance of biodiversity and flora and fauna[25] by contributing towards the protection of environmental vectors, air, water and soil.	Arising from both construction and operation of airport related development/activities: • Especially in areas downstream of the airport, loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats – including terrestrial and aquatic habitats – and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna; • Habitat loss, fragmentation and deterioration, including patch size and edge effects and effects on aquatic habitats; and • Disturbance (e.g. due to noise and lighting along transport corridors) - and displacement of protected species such as birds and bats.	• Loss of an extent of non-protected habitats and species arising from the replacement of semi-natural land covers with artificial surfaces arising from projects consented through the statutory planning/consent-granting framework. • Losses or damage to ecology (these would be: in compliance with relevant legislation)
Population and human health	• Contribution towards the protection of human health by facilitating the continued development of lands that are surrounded by relatively low levels of sensitive receptors and are served by infrastructure and services, thereby helping to avoid the need to develop lands that are surrounded by higher levels of sensitive receptors and are less well-serviced lands elsewhere in the County and beyond. • Contribution towards protection of human health by contributing towards the protection of environmental vectors, air, water and soil. • Noise and Public Safety Zones delineated for the airport and integrated into the Fingal Development Plan 2017-2023 cover a significant portion of north County Dublin and Fingal County Council's administrative area. These zones contribute towards the protection of human health and the successful operation of the airport and have implications for land uses and developments across an area that is multiple times the size of the Plan area lands. Proposed Variation No. 1 to the Fingal Development Plan 2017-2023 will facilitate the replacement of the older, current noise zones with new noise zones that take into account best available scientific knowledge and most up to date policy guidance. • Contributes towards higher quality residential, working and recreational environments with access to sustainable transport options and towards improvements at St. Margaret's.	• Potential adverse effects on sensitive receptors arising from increased frequency of noise emissions. • Potential adverse effects arising from flood events. • Other potential interactions if effects arising from environmental vectors such as air and water.	• Potential interactions with residual effects on environmental vectors.
Soil	• Contribution towards the protection of sensitive soils such as peatlands and designated sites of geological heritage by facilitating the continued development of lands that have low levels of soil/geological sensitivities, thereby helping to avoid the need to develop lands that have higher levels of soil/geological sensitivities elsewhere in the County and beyond. • Contribution towards the protection of the environment from contamination - as is provided for by the Fingal Development Plan, the highest standards of remediation, and where appropriate to	• Potential adverse effects on the hydrogeological and ecological function of the soil resource, including as a result of development on contaminated lands. • Potential for riverbank erosion.	• Loss of an extent of soil function arising from the replacement of semi-natural land covers with artificial surfaces.

[24] Effects include in-combination effects – those arising from services, infrastructure and other development (to service development, including that related to the Airport) that are planned for through the wider planning framework including the National Planning Framework and associated National Development Plan 2018, the Fingal Development Plan 2017-2023, the Eastern and Midland Regional Spatial and Economic Strategy and the Irish Aviation Policy 2015.

[25] Including biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species (including birds and bats), listed/protected species, ecological connectivity and non-designated habitats (including terrestrial and aquatic habitats), and disturbance to biodiversity and flora and fauna – including terrestrial and aquatic biodiversity and flora and fauna.

Environmental Component	Environmental Effects, in combination with the wider planning framework[24]		
	Significant Positive Effect, likely to occur	**Potential Significant Adverse Effect, if unmitigated**	**Residual Adverse Significant Effects**
	consultations with the EPA and other relevant bodies, will be required to resolve any instances of environmental pollution created by contaminated land.		
Water	• Contribution towards the protection of water by facilitating the continued development of lands that have relatively low levels of environmental sensitivities and are served by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contributions towards the protection of water resources including the status of surface and groundwaters and water based designations. • Contribution towards flood risk management and appropriate drainage.	• Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. • Increase in flood risk and associated effects in flood events.	• Any increased loadings as a result of development to comply with the River Basin Management Plan. • Flood related risks remain due to uncertainty with regard to extreme weather events – however such risks will be mitigated by measures that have been integrated into the Plan.
Air and climatic factors	• Contribution towards climate mitigation and adaptation by facilitating the continued use and development of an existing airport rather than developing a new airport elsewhere, which would result in more emissions and may be located on lands less well suited to climate adaptation, for example lands that have higher vulnerability to flood risk over time. • In combination with other plans, programmes etc., contribution towards the objectives of the wide policy framework relating to climate mitigation and adaptation, alternative energy use and energy/fuel efficiency[26], including through measures relating to: o EU Emissions Trading Scheme and global Carbon Offsetting and Reduction Scheme for International Aviation, offsetting any increases in emissions; o Proposals for carbon reduction to be addressed in planning applications; o Supporting the transition towards a net zero target by 2050; o Improving public transport links/surface access (including MetroLink and the Swords Road Core Bus Corridor); o Phasing out of older aircraft/vehicles, increase in use of biofuels and electric vehicles; and o Drainage, flood risk management and resilience. • Contribution towards maintaining and improving air quality and reducing/limiting increases in emissions through measures relating to: o Traffic management, transport infrastructure and technological developments as guided by other sectoral plans and programmes; o Improving public transport mode split; and o Undertake a review of existing air quality monitoring within and surrounding the airport. • Contribution towards the management of noise, including through provisions relating to Noise Zones that take into account best available scientific knowledge and most up to date policy guidance.	Development, growth and expansion at the airport, as provided for by other governmental policies and plans and further facilitated by the Local Area Plan will result in: • Potential conflict between increasing Air Traffic Movements (which is likely to result in an increase in greenhouse gas emissions and other emissions to air, including from aviation, with associated interactions with climatic factors) whilst also aiming to reduce carbon emissions in line with local, national and European environmental objectives. • Potential conflicts between transport movements, including car movements, and air quality. • Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors. • Potential conflicts with climate adaptation measures including those relating to flood risk management.	• An increase in travel related greenhouse gas and other emissions to air, including from aviation. This has been mitigated by provisions that have been integrated into the Plan, including those relating to sustainable mobility. • An increase in the frequency of noise emissions. This has been mitigated for new development by management techniques including by the application of Noise Zones. • Risks remain due to uncertainty with regard to climate and interactions with issues including flooding and material assets.

[26] Including the Emissions Trading Scheme Directive, the Alternative Fuels Infrastructure Directive, the Energy Efficiency Directive, the Climate Action and Low Carbon Development Act 2015, the National Mitigation Plan 2017, the National Adaptation Framework 2018, the Action Plan for Aviation Emissions Reduction 2019 and the Climate Action Plan 2019.

Environmental Component	Environmental Effects, in combination with the wider planning framework[24]		
	Significant Positive Effect, likely to occur	**Potential Significant Adverse Effect, if unmitigated**	**Residual Adverse Significant Effects**
Material Assets	• Contributes towards protection and allows for continued use and development of existing and planned public assets and infrastructure at/servicing the existing Dublin Airport lands - thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in the County and beyond. • Contribution towards compliance with national and regional water services and waste management policies.	• Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to adequately treat surface water run-off that is discharged to water bodies (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Increases in waste levels, including wastes from construction and galley wastes. • Intensifying existing uses and accommodating new development within the airport is likely to lead to greater pressure on roads and/or public transport, with associated traffic issues – please also refer to effects under Air and Climatic Factors. • Potential future changes in land use, including from agricultural grasslands to artificial surfaces. • Potential impacts upon public assets and infrastructure. • Potential secondary and cumulative effects identified include those relating to the accommodation of new employment development and increased air traffic movements within the airport will contribute towards needs for: o Housing, commercial, social, infrastructural and amenity requirements within the wider Fingal and Greater Dublin Area. o Such needs are considered in the preparation of, and provided for by, other land use plans. Such plans are subject to separate environmental assessment processes.	• Exceedance of capacity in critical infrastructure risks remain, including due to uncertainty with regard to climate – however, such risks will be mitigated by: measures, including those requiring the timely provision of critical infrastructure, and compliance with the Water Framework Directive and associated River Basin Management Plan. • Residual wastes to be disposed of in line with higher level waste management policies. • Any impacts upon public assets and infrastructure to comply with statutory planning/consent-granting framework. • Potential future changes in land use, including from agricultural grasslands to artificial surfaces to comply with relevant plans and legislation. • Residual effects from contributing towards needs for other development within the wider Fingal and Greater Dublin Area.
Cultural Heritage	• Contribution towards the protection of cultural heritage designations elsewhere in the County by facilitating the continued development of lands that have relatively low levels of cultural heritage, thereby helping to avoid the need to develop more sensitive lands elsewhere in the County and beyond. • Contribution towards compliance with archaeological and architectural heritage legislation and requirements.	• Potential effects on designated and unknown archaeological heritage including entries to the Record of Monuments and Places, including underwater archaeology. • Potential effects on architectural heritage as designated or included within the NIAH and RPS.	• Potential effects on known architectural and archaeological heritage and unknown archaeology however, these will occur in compliance with legislation.
Landscape	• Contribution towards the protection of landscape designations elsewhere in the County by facilitating the continued development of lands that have no landscape designations, thereby helping to avoid the need to develop more sensitive lands elsewhere in the County and beyond.	• Changes in the appearance of lands – however there are no landscape designations within or near the Plan lands and most views of the land are had by passing motorists along the M1 and M50 Motorways, stretches of which are enclosed by treelines making views intermittent, and the N2 National Primary Road and M2 Motorway. • Potential future changes in land use and visual appearance, including from agricultural grasslands to artificial surfaces. • Potential development-related environmental pressures along the boundary of the LAP sometimes referred to in planning as an 'Edge Effect' – that causes increased land-use intensification adjacent to an area that is zoned for a specialist use – such as an airport.	• Potential changes in land use and visual appearance, to comply with relevant plans and legislation. • Residual visual effects would comply with landscape designation provisions. • Fingal Development Plan measures to mitigate against development-related environmental pressures along the boundary of the LAP so that effects are residual.

Section 6 Mitigation and Monitoring Measures

6.1 Mitigation

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the Draft Plan. Various environmental sensitivities and issues have been communicated to the Council through the SEA process.

By integrating SEA recommendations into the Draft Plan, the Council has helped to ensure that:

- The potential significant adverse effects of implementing the Plan are avoided, reduced or offset; and
- The beneficial environmental effects of implementing the Plan are maximised.

Mitigation was achieved through the following:

- Early work undertaken by the Council that will contribute towards environmental protection and sustainable development[27];
- Consideration of alternatives (see summary under Section 4); and
- Integration of individual measures into the Draft Local Area Plan and the existing Fingal Development Plan (see Table 6.1).

6.2 Monitoring

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This section details the measures that will be used in order to monitor the likely significant effects of implementing the Plan. Monitoring can enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action.

Monitoring is based around indicators that allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified in Section 3.12 and used in the evaluation. Each indicator to be monitored is accompanied by the target(s) that were identified with regard to the relevant strategic actions.

Table 6.1 shows the indicators to be used for monitoring the likely significant environmental effects of implementing the Plan, if unmitigated. The measures selected are those that were developed through the SEA process for the Fingal Development Plan and finalised in 2017.

The Monitoring Programme may be updated to deal with specific environmental issues - including unforeseen effects - as they arise. Such issues may be identified by the Council or identified to the Council by other agencies. A stand-alone Monitoring Report on the significant environmental effects of implementing the Plan will be prepared during implementation of the Plan, in advance of the beginning of the review of the Plan.

[27] This included:

- Undertaking detailed Pre-Draft Public Consultation on the content of the Plan;
- Beginning the SEA early enough in the process so that it could inform the Draft Plan;
- Integration of sustainability and environment considerations into the Plan's Key Strategic Objectives, with one on Sustainability and one on Environment; and
- Assembling and analysing data from various sources to inform Plan provisions relating to climate mitigation and adaptation, airport infrastructure, airport related development, surface access, environment and community.

The findings of this early and strategic work have been integrated into the Draft Plan and will contribute towards environmental protection and sustainable development within the Airport area and wider County.

Table 6.1 Summary of Individual Mitigation Measures and Indicators for Monitoring

Environmental Component	Selected Indicators	Mitigation already in force – from the Fingal Development Plan	Mitigation from the Draft Local Area Plan
All	• All	Objective DMS02	Key Strategic Objectives Sustainability and Environment
Biodiversity and Flora and Fauna	• Number of programmed actions achieved in Development Plan period (2017-2023).	Also, see measures related to soil, water quality, air and material assets. Objective NH01, Objective NH02, Objective NH03, Objective NH04, Objective NH05, Objective NH06, Objective NH07, Objective NH08, Objective NH09, Objective NH10, Objective NH11, Objective NH12, Objective NH13, Objective NH14, Objective NH15, Objective NH16, Objective NH17, Objective NH18, Objective NH19, Objective NH20, Objective NH21, Objective NH22, Objective NH23, Objective NH24, Objective NH25, Objective NH26, Objective NH27, Objective NH29, Objective GI10, Objective GI11, Objective GI15, Objective GI18, Objective GI19, Objective GI20, Objective GI21, Objective GI22, Objective GI23, Objective GI24, Objective GI25, Objective MT14, Objective LP01, Objective LP02, Objective DMS01, Objective DMS17, Objective DMS71, Objective DMS72, Objective DMS77, Objective DMS78, Objective DMS79, Objective DMS80, Objective DMS81, Objective DMS82, Objective DMS83, Objective DMS150, Objective DMS151	Also, see measures related to soil, water quality, air and material assets. Objective NH1, Objective NH2, Objective NH3
Population and Human Health	• Number of people living and working in Fingal; • The 2nd Fingal Development Plan SEA Monitoring Indictor and Target under this SEO are not directly relevant to the Airport LAP area; no additional measures are required; • Number of breaches of air quality limits; and • Number of measures implemented.	Also, see measures related to soil, water (quality and flooding) and material assets. Objective DA26, Objective DA27, Objective DA28, Objective DA13, Objective DA14, Objective DA15, Objective DA16, Objective DA17, Objective GI13, Objective DMS180, Objective DMS181, Objective DMS183, Objective DMS184, Objective DMS185, Objective DMS186	Also, see measures related to soil, water (quality and flooding), material assets, air and climatic factors. Objective OS1
Soil	• Percentage of development within brownfield and infill compared to greenfield	Also, see measures related to biodiversity, flora and fauna and water and material assets. Objective NH30, Objective NH31, Development Management 12.14	See measures related to biodiversity, flora and fauna and water and material assets.
Water	• Percentage increase in waters achieving and maintaining at least 'good status'; and • Comply with the recommendations of the • Fingal Groundwater Protection Scheme.	Also, see measures related to soil, biodiversity, flora and fauna, human health and material assets. Objective DA19, Objective WQ01, Objective WQ02, Objective WQ04, Objective WQ05, Objective WQ06, Objective NH68, Objective NH69, Objective NH70, Objective GI31, Objective GI33, Objective SW02, Objective SW03, Objective SW04, Objective SW05, Objective SW06, Objective SW07, Objective SW09, Objective SW10, Objective DMS16, Objective DMS73, Objective DMS74	Also, see measures related to soil, biodiversity, flora and fauna, human health and material assets. Objective SWQ01, Objective SWQ02, Objective WQ01, Objective WQ02, Objective WQ03, Objective FRM01, Objective FRM02, Objective FRM03, Objective FRM04, Objective SW01, Objective SW02, Objective SW03, Objective SW04, Objective SW05, Objective SW06, Objective SW07, Objective SW08, Objective SW09, Objective CG2
Material Assets	• Percentage of planning permissions within 500m of a bus stop and 1km of a railway; and • Available capacity for treatment of phased development.	Objective DA22, Objective DA23, Objective DA24, Objective DA25, Objective GI14, Objective MT24, Objective MT25, Objective MT26, Objective MT27, Objective MT34, Objective DW01, Objective DW02, Objective DW03, Objective DW04, Objective DW06, Objective WT02, Objective WT03, Objective WT05, Objective WT08, Objective WT09, Objective WM02, Objective WM03, Objective WM04, Objective WM18, Objective DMS146, Objective DMS147, Objective DMS148, Objective DMS149	Objective IW1, Objective IW2, Objective IW3, Objective UT1
Air and Climatic Factors	• Percentage increase in walking, cycling and public transport modes; • No. of high vulnerable development applications permitted within lands in the 1% AEP and 0.1% AEP; and • Percentage of new residential buildings granted planning with A3 or higher BER.	Objective DA01, Objective DA02, Objective DA03, Objective DA06, Objective DA07, Objective DA08, Objective DA07, Objective DA09, Objective DA10, Objective DA11, Objective DA12, Objective DA18, Objective DA20, Objective MT01, Objective MT02, Objective MT03, Objective MT10, Objective MT11, Objective MT15, Objective MT24, Objective GI30, Objective MT38, Objective MT40, Objective MT41, Objective MT42, Objective CC01, Objective CC02, Objective CC03, Objective EN05, Objective EN06, Objective EN07, Objective EN08, Objective EN09, Objective EN23, Objective AQ01, Objective AQ02, Objective NP01, Objective NP02, Objective NP03, Objective NP04, Objective NP05, Objective DMS116, Objective DMS118, Objective DMS119	Objective AQ1, Objective AQ2, Objective AQ3, Objective AQ4, Objective AQ5, Objective SF01, Objective SF02, Objective MM1, Objective MM2, Objective MM3, Objective MM4, Objective CY1, Objective CY2, Objective PT1, Objective PT2, Objective PT3, Objective PT4, Objective PT5, Objective PT6, Objective PT7, Objective PT8, Objective PT9, Objective PT10, Objective PT11, Objective PT12, Objective PT13, Objective DS5, Objective ET1, Objective IL1, Objective IL2, Objective IL3, Various Plan provisions relating to External Road Network Access
Cultural Heritage	n/a	Objective GI34, Objective GI35, Objective CH01, Objective CH02, Objective CH03, Objective CH04, Objective CH06, Objective CH07, Objective CH08, Objective CH09, Objective CH10, Objective CH11, Objective CH12, Objective CH13, Objective CH14, Objective CH15, Objective CH16, Objective CH17, Objective CH18, Objective CH20, Objective CH21, Objective CH22, Objective CH25, Objective CH26, Objective CH28, Objective CH29	Objective DS1, Objective DS2, Objective DS3, Objective DS4, Objective AR1, Objective AR2, Objective AR3, Objective AH1, Objective AH2, Objective AH3, Objective CH1, Objective CH2, Objective CH3, Objective CH4, Objective CH5, Objective CH6, Objective CH7, Objective EE1, Objective EE2
Landscape	• Number of programmed objectives and policies achieved in Development Plan period.	Objective NH32, Objective NH33, Objective NH34, Objective NH37, Objective NH48, Objective NH49, Objective GI27, Objective GI36	n/a