Comhairle Contae
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Fingal County
Council

Fingal County Council

Draft Climate Action Plan

Strategic Environmental Assessment

2024
2029

LOCAL AUTHORITY CLIMATE ACTION PLAN

SEA Environmental Report

Prepared for:

Fingal County Council

Comhairle Contae Fhine Gall
Fingal County Council

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SEA Environmental Report for the Local Authority Climate Action Plan 2024-2029 for Fingal County Council

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Abstract: Fehily Timoney and Company is pleased to submit this SEA Environmental Report for the LACAP 2024-2029 to Fingal County Council for circulation to the relevant environmental authorities.

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NON-TECHNICAL SUMMARY

Introduction

This is the Non- Technical Summary of the environmental report for the Strategic Environmental Assessment (SEA) of the Draft Local Authority Climate Action Plan (herein referred to as the 'Plan' or 'LACAP') 2024-2029 for the Fingal functional area. The purpose of this SEA is to identify and evaluate the likely significant environmental effects of implementation of the LACAP.

Background

Section 16 of the Climate Action and Low Carbon Development (Amendment) Act 2021 (herein referred to as the 'Climate Act') sets out the provisions governing the establishment and operation of a LACAP. The broad purpose of a LACAP will be to define adaptation and mitigation measures at local level to support the reduction of Greenhouse Gas (GHG) emissions within a local authority as an organisation and throughout the local community. LACAPs shall be implemented over a five-year period. Given the scale and nature of the LACAP, environmental effects are likely, and therefore SEA is required to be undertaken on the Plan.

Approach to SEA

The SEA process can be defined by four stages, all of which include some level of consultation with stakeholders and the public. These stages are defined as:

- Stage 1 – Screening: deciding whether an SEA is required, or not.
- Stage 2 – Scoping: establishing the spatial and temporal scope of the SEA and a decision-making framework that can be used to evaluate impacts.
- Stage 3 – Identification, Prediction, Considerations of Alternatives, Evaluation and Mitigation of Potential Impacts.
- Stage 4 – Consultation, Revision and Post-Adoption. This includes the implementation of statutory SEA monitoring.

The SEA process runs in parallel with the Appropriate Assessment (AA) process, which an assessment process focusing on the potential effects of a plan or project on sites designated for nature protection known as ‘European Sites.’

The Plan

The FCC LACAP is an action plan which defines local level climate adaptation and mitigation measures to support the reduction of GHG emissions within the local authority as an organisation and throughout the local community in the local authority's functional area.

LACAP should have an inward and outward focus. Climate action in the plan should be defined by local authorities for their own organisation which they have full control over (i.e., the inward focus), and for communities in their functional area, which they exert a strong influence over in partnership with relevant stakeholders (i.e., the outward focus).

The plan period for the Draft LACAP will be from 2024 to 2029. The Council must review and update the plan after a period of 5 years.

The LACAP has been developed in accordance with the requirements of Section 16 of the Climate Act. It must be consistent with the Climate Action Plan 2023 (CAP23) and the National Adaptation Framework. Local authority Development Plans must also be aligned with their LACAP.

The overall vision of the Draft LACAP is to deliver effective climate mitigation and adaptation at local level in support of the broader societal goal of achieving climate resilience and climate neutrality.

Through the development and implementation of specific, action-focused, time-bound and measurable actions, the Draft LACAP will achieve the following strategic outcomes (as defined by the Department of the Environment, Climate and Communications Guidelines for Local Authority Climate Action Plans):

Provide a strong emphasis on a place-based approach to climate action, delivering a better understanding of greenhouse gas emissions and climate-related risks at a local level, while addressing context-specific conditions and support for locally tailored policy making.

1. Deliver and promote evidence-based and integrated climate action by way of adaptation and mitigation measures, centred around a strong understanding of the role and remit of the local authority on climate action.
2. Translate and provide strategic direction at local and community levels on the delivery of the national climate objective which is seeking to curb further global warming and to transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy by no later than the end of 2050.

The Environmental Baseline

An evaluation and a characterisation of the current state of the environment likely to be affected by the Draft LACAP has been undertaken to inform the SEA process.

The following Environmental Components were considered during this evaluation:

- Population and Human Health
- Biodiversity, Flora & Fauna
- Landscape, Seascape & Visual Amenity
- Cultural Heritage - Archaeology & Architectural
- Soils
- Land Use
- Air Quality & Noise
- Water
- Material Assets
- Tourism & Recreation
- Climate Change

For clarity and succinctness, and to aid the understanding of non-technical readers, only a brief and non-technical summary of the key issues associated with the environmental baseline relevant to the Draft LACAP has been provided here.

Section 4 of the main body of the SEA Environmental Report contains further detail on baseline environmental characteristics, including a variety of details environmental mapping, for those who wish to develop a more in-depth understanding of the environmental baseline.

Population and Human Health – Key Issues relating to the Draft LACAP

- Recreational and development pressure on habitats and landscapes.
- Population and development growth will potentially influence the energy requirement within the county.
- Population and development growth will potentially influence the decarbonising zone.
- Potential visual effect of green infrastructure development.

Biodiversity, Flora and Fauna – Key Issues relating to the Draft LACAP

- Route selection and classification criteria are a key consideration in the development of blueways and greenways within the Draft LACAP due to the largely linear nature of these developments.
- The potential for effects on non-designated biodiversity features e.g. important habitats and species outside designated sites - particularly with regard to fragmentation, barriers to movement and displacement.
- The potential for effects on protected areas: National and European sites (e.g. SAC, SPAs, RAMSAR), National sites (e.g. NHAs) and other Natural Heritage Sites and Conservation Interest Sites e.g. refuge for fauna or flora, wildfowl reserves.
- The potential to spread invasive species.
- The potential for biodiversity enhancement.

Landscape, Seascape & Visual Amenity – Key Issues relating to the Draft LACAP

- Effects of green infrastructure (i.e. blueways, greenways) and renewable energy farm developments on areas of designated landscape quality and scenic views etc.
- Sensitivity of the landscape to change from green infrastructure development.

Cultural Heritage – Key Issues relating to the Draft LACAP

- The potential impact of the development of green infrastructure on archaeological and architectural heritage.
- No existing conflicts with legislative objectives governing archaeological and architectural heritage have been identified.

Soils – Key Issues relating to the Draft LACAP

- Potential for impacts on soil resources and offshore sediment transport.
- Potential impacts to soils (land) vulnerable to erosion.
- Potential for unearthing contaminated material.

Land Use – Key Issues relating to the Draft LACAP

- Potential constraints on sea fisheries, both during construction and operation of infrastructure projects (i.e. onshore and offshore wind farms) associated with the Draft LACAP.
- Potential constraints on other sectors such as agricultural, forestry and fisheries, primarily related to construction and operation of infrastructure projects (i.e. solar farms, blueways) associated with the Draft LACAP.

Air Quality and Noise – Key Issues relating to the Draft LACAP

- Blueway developments, particularly during the construction phase, may have a temporary negative impact on air quality and create noise pollution.
- Wind farm developments may have impacts on noise pollution, particularly towards sensitive receptors which are in close proximity.

Water – Key Issues relating to the Draft LACAP

- Potential pressures and impacts on water body status, water usage and flood risk from the construction of renewable energy and blueway projects i.e. increased sedimentation, groundwater recharge and accidental spillages.

Material Assets – Key Issues relating to the Draft LACAP

- Disruptions to existing transport infrastructure through the development of alternative options such as active travel routes could occur.
- Demands for increased renewable infrastructure and associated connection networks.
- Visual impact of wind developments on the coastline.
- Effects on sensitive receptors with increased demands for active travel/green/renewable infrastructure, in particular during the construction phase.
- The potential for effects on existing green and blue infrastructure and key ecological corridors from inappropriate development.

Tourism and Recreation – Key Issues relating to the Draft LACAP

- Green infrastructure development may have the potential to restrict or reduce the quality of resources important for recreation and/or tourism including angling facilities, boating activities and/or associated resources.

- The promotion or development of blueways and greenways could add additional loading pressures in terms of visitor interactions at sensitive areas such as trampling, disturbance, erosion, littering.

Climate Change – Key Issues relating to the Draft LACAP

- The Draft LACAP will contribute to the targets, set out in the Climate Action Plan 2023.
- The potential impact of changes in climate including flooding and temperature increases should be factored into the Draft LACAP.

Strategic Environmental Objectives

The SEA Directive states that an SEA should also look at *'the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.'* The identification of environmental protection objectives relevant to a plan provide the basis for evaluating the significance of impacts during the SEA process. All environmental protection objectives relevant to the Draft LACAP have been identified.

Strategic Environmental Objectives (SEOs) are methodological measures which facilitate the development of targets against which the environmental effects of the Draft LACAP can be tested. SEOs are based on wider environmental protection objectives on local, regional, national, European and international level that are relevant to FCC's Draft LACAP. They are high-level in nature and set strategic goals for improvement.

All SEOs applicable to the Draft LACAP are presented in the table below.

Strategic Environmental Objectives

Environmental Component	SEO Code	Strategic Environmental Objective
Overall	O1	Ensure, where appropriate, that lower-level plans and projects contribute to overall environmental monitoring processes within the County.
Population & Human Health	PHH1	Avoid or, minimise impacts to population and human health.
	PHH2	Ensure the Decarbonising Zone avoids and minimises impacts to the existing economic activities within the area and does not compromise/conflict with existing land use objectives.
Biodiversity, Flora & Fauna	B1	Ensure Climate Action does not conflict with biodiversity protection, restoration and rehabilitation.
	B2	Ensure compliance with Habitats and Birds Directives with regard to protection of European Sites and Annexed habitats and species.1
	B3	Support Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function as stepping stones (designated or not) - are of major importance for wild fauna and flora and essential for the migration, dispersal and genetic exchange of wild species.

[1] 'Annexed habitats and species' refer to those listed under Annex I, II & IV of the EU Habitats Directive and Annex I of the EU Birds Directive.

Environmental Component	SEO Code	Strategic Environmental Objective
	B4	To avoid or minimise significant impacts on semi-natural habitats, species, environmental features or other sustaining resources in designated national sites and to comply with the Wildlife Acts 1976-2012 with regard to listed species.
	B5	Go beyond biodiversity protection to deliver biodiversity enhancement, wherever possible, in response to the biodiversity emergency.
Landscape, Seascape & Visual Amenity	L1	Avoid or minimise impacts on statutory landscape designations defined in the CDP.
	L2	Avoid or minimise adverse visual effects on residential receptors or other sensitive visual receptors.
Cultural Heritage - Archaeology & Architectural	CH1	Avoid impacts upon archaeological heritage (including entries to the Record of Monuments and Places (RMP)) and architectural heritage (including entries to the Record of Protected Structures (RPS) and National Inventory of Architectural Heritage (NIAHs)).
Soils	S1	Avoid or minimise effects on mineral resources or soils.
Land Use	LU1	Avoid or minimise effects on existing land use.
Air Quality and Noise	AQN1	Increase the number of people travelling to work or school via public transport or by non-mechanical means.
	AQN2	Avoid or minimise effects on local air quality.
	AQN3	Avoid or minimise adverse noise impacts.
Water	W1	Maintain and/or improve, the quality and status of surface waters.
	W2	Maintain and/or improve, the chemical and quantitative status of groundwaters.
	W3	Prevent impact upon the WFD status of surface waters and groundwater in line with the requirements of the WFD.
	W4	Comply as appropriate with the provisions of the Flood Risk Management Guidelines.
	W5	Prevent impact upon drinking water quality.
Material Assets	MAI1	Avoid or minimise effects on built/amenity assets and infrastructure.
	MAI2	Avoid or minimise effects on effects upon existing and (where known) planned infrastructure.
	MAI3	Promote sustainable transportation.
	MAI4	Promote sustainable waste management.
	MAI5	Promote sustainable water use and drainage management.
Tourism & Recreation	TR1	Avoid or minimise effects upon tourism and recreation amenities.
Climate Change	CF1	Delivery of the necessary action to support the national target of 80% electricity from renewable sources by 2030.
	CF2	Actively support the delivery of all national climate policy as appropriate to the county with the prioritisation and acceleration of evidence-based measures.
	CF3	CF3: Assist in the delivery of the climate neutrality objective at local and community levels.
	CF4	Deliver a Decarbonising Zone (DZ) by 2050 within the local authority area to act as a test bed for a range of climate mitigation and adaptation measures in a specifically defined area through the identification of projects and outcomes that will assist in the delivery of the National Climate Objective.

Environmental Component	SEO Code	Strategic Environmental Objective
Inter-relationships	IR1	Maintain and improve the health of people, ecosystems and natural processes Actively seek to integrate opportunities for environmental enhancement during adaptation to climate change

Description and Evaluation of Plan Alternatives

The SEA Directive requires that reasonable alternative means of achieving the strategic goals of the Draft LACAP (taking into account the objectives and the geographical scope of a plan or programme) are identified, described and evaluated for their likely significant effects on the environment. Such reasonable alternative must be realistic and capable of implementation. Reasonable alternatives will be assessed against the Strategic Environmental Objectives (SEOs) established for the aspects of the baseline environment which are likely to be significantly affected by the Draft LACAP.

The underpinning goal of the reasonable alternative evaluation process is to ensure that the selection of preferred alternatives by the Local Authority is informed by environmental considerations.

The following reasonable alternatives to the Draft LACAP were identified:

- Alternative 1 - The Pareto Approach: Prioritise reducing GHG emissions from largest GHG emitting sectors to mitigate against climate change impacts.
- Alternative 2 - The Holistic Approach: Adopt a multi-pronged approach and focus on a range of priority areas to mitigate against and adapt to climate change impacts.
- Alternative 3 - The Holistic and Participatory Approach (Current Draft LACAP): Adopt a multi-pronged approach - that has a strong community engagement emphasis - and focus on a range of priority areas to mitigate against and adapt to climate change impacts.

An evaluation of the potential effects of the reasonable alternatives on the baseline environment has been carried out in accordance with the SEA Directive and best practice guidelines. A summary of this evaluation is presented below:

- Alternative 1 - The Pareto Approach - will lead to some positive environmental effects and will result in the reduction of GHG emissions in the sectors that contribute most in terms of GHG emission in the County - the Residential and Transport sectors. It is less likely that this alternative will deliver the wide-ranging climate mitigation and offsetting related action required to fully realise GHG emission reduction potential in the County. It is also less likely this alternative would define a wide range of climate adaptation measures that would fully protect biodiversity, heritage resources, environmental receptors and people from climate change risks. This alternative approach may generate several negative environmental effects, which would not be counterbalanced by the positive environmental effects associated with Alternatives 2 and 3.
- Alternative 2 - The Holistic Approach - and Alternative 3 - The Holistic and Participatory Approach - will both broadly deliver suitably wide ranging and effective climate action. These alternatives have the potential to generate multiple positive environmental effects, including a reduction in GHG emissions at organisational, community and sectoral levels, in addition to a variety of other environmental benefits. These alternatives will place a balanced emphasis on both climate mitigation and adaptation action, ensuring climate change related environmental risks are adequately understood and managed at community level.

- Alternative 3 has the best potential to deliver effective climate action given its holistic, wide encompassing nature; and given its strong community engagement emphasis, which supports better participation in climate action at community level. Alternative 3 has better potential there to fully realise potential environmental effects than Alternative 2.

Reasonable Alternative 3 - The Holistic and Participatory Approach - therefore constitutes the preferred alternative or preferred plan.

Evaluation of the Environmental Effects of Plan Implementation

A detailed evaluation of the potential effects of the Preferred LACAP on the baseline environment has been carried out in accordance with the SEA Directive and best practice guidelines. A concise and non-technical summary of the key environmental effects associated with plan implementation is presented below:

- The variety of climate actions defined in the plan, including organisational and community-based actions are likely to positive effect the climate environment
- The plan is broadly supportive of different forms of community and local area based renewable energy development, which will have a positive effect on the climate environment.
- In the absence of appropriate mitigation, community and local area renewable energy development that might be supported by plan actions, including any associated ancillary and linear infrastructure, has the potential to have a variety of unintended negative environmental effects, including effects on local human receptors, biodiversity, landscape character and visual amenity, and the receiving noise environment.
- The plan supports the increased use of light-emitting diode (LED) lighting potentially across a wide geographic area. In absence of appropriate mitigation, the wide use of such lighting may lead to adverse effects on sensitive nocturnal species.
- Several plan actions are supportive of the upgrading/retrofitting of buildings to improve energy performance. In the absence of appropriate mitigation, such actions may negatively affect the status of protected structures.
- The plan supports the carrying out of a range of flood alleviation and resilience action that will have a positive environmental effect on water quality, hydrology and biodiversity. The delivery of this action has the potential to reduce flood risk and prevent flood events.
- The carrying out of the range flood alleviation and resilience action contained in the plan has the potential to create unintended and potentially significant negative environmental effects in the absence of appropriate mitigation, including effects on water and biodiversity environments.
- The plan supports the carrying out of a variety of coastal protection related action, including action intended on mitigating coastal flood or erosion risk. These range of actions have the potential to have positive effects on biodiversity, water quality and the soils environment.
- The carrying out of coastal protection related action contained in the plan has the potential to create unintended and potentially significant negative environmental effects in the absence of appropriate mitigation, including effects on the water or biodiversity environment.
- Plan actions support better resource management and the circular economy at organisational, community and local area level, which can potentially lead to improvement resource efficiency and reduced lifecycle GHG emissions associated with material production.
- The inappropriate or improper implementation of waste management related action could have unintended, negative environmental and nuisance related effects

- The plan supports the development of community and local area level nature based solutions - in response to climate related risk - which are supportive of biodiversity protection and enhancement.
- The plan supports green infrastructure development broadly. In absence of appropriate design and mitigation, the development of green infrastructure that is of a significant scale or extent could potentially result in negative environmental effects, including negative construction related effects, negative effects on biodiversity or negative effects on cultural heritage assets.
- The plan defines a variety of climate adaptation related actions designed to protect human receptors, biodiversity and heritage assets from the impacts of climate change influenced events such as flooding or wildfires. The implementation of this action has the potential to generated positive effects for these environmental receptors - by reducing the risk of such events impinging on or damaging these receptors.
- Plan actions support the development, expansion and management of safe active travel networks. The delivery of an expanded safe active travel network has the potential to promote the use of sustainable and active travel modes in the community, encourage modal shift, reduce traffic related risks and support the reduction of vehicle related emissions.
- Plan actions support the development, expansion and management of safe active travel networks. In the absence of appropriate design and mitigation, the development of active travel networks can negatively impact on the receiving human, noise, air, water, soils, biodiversity, cultural heritage or existing traffic and transport environments.
- Plan actions support the expansion of the Electric Vehicle (EV) charging network and active travel parking in the local authority functional area. The successful delivery of this action has the potential to underpin the use of EV vehicles and active travel modes at community and local area level and support the reduction of vehicle related emissions.
- Plan actions support the expansion of EV charging network and active travel parking across the breadth of the local authority functional area. In the absence of appropriate mitigation, the construction of additional charging point infrastructure can negatively impact on the receiving human, noise, air, water, soils, biodiversity, cultural heritage or existing traffic and transport environments.

Mitigation Measures

Overview of Mitigation Measures

Potential negative environmental effects that may occur as a result of the implementation of the Draft LACAP (without considering any mitigation) have been identified.

The SEA Directive requires that mitigation measures to prevent, reduce and as fully as possible offset any potential significant negative environmental effects due to the implementation of a plan are defined.

Following the evaluation of environmental effects of plan implementation, the following forms of mitigation have been adopted to ameliorate the negative environments of the Draft LACAP:

- Mitigation through consideration of alternatives.
- Mitigation through integration of environmental considerations into the LACAP.
- Mitigation through consideration of development management standards/environmental protection objectives contained in the CDP.

Environmental considerations were appropriately taken into account during the plan making process and when considering plan alternatives. The preferred plan has been chosen on the basis that it will generate the maximum level of positive climate and environmental co-benefit related effects, and the minimum level of negative environmental effects.

The plan making process was carried out in parallel with the SEA and AA processes. Regular communication and interaction took place between the environmental assessment team and the plan making team. Environmental considerations that came to light during the SEA and AA processes, including consultation processes, were regularly communicated to the plan making team during the plan making process. As necessary, environmental mitigation measures to ameliorate the potential negative environmental effects of implementing the Draft LACAP were developed and then integrated into the Draft LACAP. Much of the environmental mitigation was embedded in the plan early on in the process as a result of this. This process was carried out in an iterative manner to ensure optimal plan making and environmental outcomes. Environmental considerations were also integrated into the plan so as to facilitate maximising identified positive environmental effects of the Draft LACAP.

Mitigation measures have been proposed that maximise the co-benefits of climate action for other environmental components such local air quality, human health, biodiversity, water quality and other interrelated areas (i.e., win-win solutions).

Additional text clarifying environmental protection related obligations and environmental enhancement opportunities has been attached to a variety of defined actions in the plan. This text has been shaped to ensure that environmental considerations are appropriately taken into account during plan implementation. Again, This text has also been shaped to ensure plan implementation generates the minimum level of negative environmental effects and the maximum level of positive environmental effects.

A set of integrated environmental protection and enhancement considerations have been defined that Decarbonising zone opportunities must accord with.

Several environmental governance principles were established to ensure plan implementation generates the minimum level of negative environmental effects and the maximum level of positive environmental effects. These environmental governance principles shall underpin and guide plan implementation and shall apply to and be integrated into all actions/activities which result due to the implementation of the plan.

In addition to the environmental mitigation measures integrated into the Draft LACAP, the development management standards and environmental protection measures defined in the CDP will serve to mitigate the environmental effects of any development proposals supported by the Draft LACAP. These development management standards/environmental protection measures have been defined for the express purpose of ensuring proper planning and sustainable development in the County. The CDP has been subject to its own SEA and AA. The Draft LACAP has been prepared having appropriate regard to the policies and objectives contained in the County Development Plan.

Conclusions

The reasonable alternative evaluation has resulted in the development of a Draft LACAP that achieves the best environmental outcomes in comparison to other reasonable alternative considered.

The adoption of the mitigation measures to be integrated into the Draft LACAP, in combination with the continued adoption of the development planning and control related environmental protection measures defined in the CDP will prevent, reduce and as fully as possible offset any potential negative environmental effects due to the implementation of the Draft LACAP. No further mitigation measures are required for the Draft LACAP.

Monitoring Measures

The SEA Directive requires that the environmental effects of the implementation of a plan are monitored in order 'to identify at an early stage unforeseen effects, and to be able to undertake appropriate remedial action.'

A series of indicators and targets have been established for identified SEOs to enable ongoing monitoring and measurement of LACAP implementation performance, the environmental effects of the implementation of the LACAP and the efficacy of environmental mitigation measures. Such monitoring will be carried out regularly to support plan implementation.

SEO indicators are simple and effective quantifiable indicators used to measure the environmental effects of implementing the Draft LACAP and the progress of SEO objectives and targets. SEO targets set focussed, measurable aims and thresholds that the Draft LACAP can support the achievement of.

A robust monitoring programme has been established for the implementation of the LACAP.

Where monitoring identifies that the implementation of the LACAP is having a significant negative environmental effect, an in-depth review of the LACAP should take place and the LACAP should be updated in a manner that satisfactorily mitigates these environmental effects (i.e., through the adoption of additional environmental mitigation measures.). Similarly, where monitoring indicates that potential positive environmental effects associated with LACAP implementation are not being adequately realised, the LACAP should be reviewed and updated in a manner that supports the realisation of all potential positive environmental effects, having regard to the overall vision and high-level objectives of the plan.

1. INTRODUCTION

1.1 Background

Fingal County Council (FCC) has prepared the Draft Local Authority Climate Action Plan (herein referred to as the 'Plan' or 'LACAP') 2024-2029 for the Fingal functional area.

FCC's prospective LACAP will be a continuance of FCC's previous Climate Change Action Plan (CCAP) (which was subjected to SEA) published in 2019.

Section 16 of the Climate Action and Low Carbon Development (Amendment) Act 2021 (herein referred to as the 'Climate Act') sets out the provisions governing the establishment and operation of a LACAP. The broad purpose of a LACAP will be to define adaptation and mitigation measures at local level to support the reduction of Greenhouse Gas (GHG) emissions within a local authority as an organisation and throughout the local community. LACAPs shall be implemented over a five-year period. The Minister for the Environment, Climate and Communications has instructed each Local Authority to make a LACAP within 18 months of enactment and local authorities have 12 months to finalise these plans.

Given the scale and nature of the LACAP, environmental effects are likely, and therefore Strategic Environmental Assessment (SEA)[2] is required to be undertaken on the Plan. Fehily Timoney and Company (FT) have been commissioned by FCC to complete an SEA for the LACAP.

1.2 SEA Environmental Report

This document has been produced by FT and is the SEA Environmental Report for the Draft LACAP. It forms the main written output of the SEA process and as such presents information on the environmental assessment and likely environmental issues related to the implementation of the Draft LACAP.

The broad purpose of this SEA Environmental Report is as follows:

1. Identify, evaluate and describe the likely significant effects on the environment of the draft LACAP and reasonable alternatives.
2. Inform the preparation of the LACAP.
3. Provide environmental authorities and the public with an early opportunity to make submissions on the draft LACAP and its potential environmental effects - and incorporate changes where necessary to the LACAP and SEA processes.

[2] 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.

1.3 Background to SEA and Legislative Context

SEA is required under the EU Council Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment (the SEA Directive)[3]. The SEA Directive requires that an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment.

The overarching objective of the SEA Directive is '*to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans….with a view to promoting sustainable development*'[4]

SEA is a process for evaluating, at the earliest appropriate stage, the environmental consequences of implementing Plan or Programme (P/P) initiatives prepared by authorities at a national, regional or local level or which have been prepared for adoption through legislative means.

SEA is described within the Department of the Environment, Community and Local Government's (2004) Guidelines for Regional Authorities and Planning Authorities on the Implementation of SEA Directive (2001/42/EC) as the *'formal systematic evaluation of the likely significant environmental effects of implementing a plan or programme before a decision is made to adopt the plan or programme'.*

SEA is intended to provide the framework for influencing decision-making at an earlier stage when P/Ps – which give rise to individual projects – are being developed. It is noted that SEA should result in more sustainable development through the systematic appraisal of policy options.

[3] Transposing Irish Regulations: S.I. No. 435 of 2004 (European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, as amended by S.I. No. 200 of 2011 (European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011). S.I. No. 436 of 2004 (Planning and Development (Strategic Environmental Assessment) Regulations 2004, as amended by S.I. No. 201 of 2011 (Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011).

[4] Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment – Guidelines for Regional Authorities and Planning Authorities (Department of the Environment, Community and Local Government, 2004)

1.4 Purpose of this SEA

The purpose of SEA in this particular case is to enable local authorities incorporate environmental considerations into decision-making at an early stage and in an integrated way throughout the Draft LACAP-making process and to:

3. Identify, evaluate and describe the likely significant effects on the environment of implementing the draft LACAP.
4. Ensure that identified adverse effects are communicated, mitigated and that the effectiveness of mitigation is monitored.
5. Identify beneficial (and neutral) effects, and to ensure these are communicated.
6. Provide opportunity for stakeholder and public involvement.

1.5 Appropriate Assessment

Appropriate Assessment (AA) is an assessment process focusing on potential effects related to European Sites - which form the Natura 2000 network - these sites have been designated or proposed for designation by virtue of their ecological importance. European Sites include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

The Habitats Directive[5] requires, inter alia, that plans (such as the LACAPs) undergo Screening for AA (Stage 1) and if necessary the preparation of a Natura Impact Report (Stage 2), to establish the likely or potential effects on European Sites arising from plan implementation.

This first stage of the AA process is referred to as 'Screening for AA' and the purpose is to determine, on the basis of a preliminary assessment and objective criteria, whether a plan or project, alone and in combination with other plans or projects, could have significant effects on a European Site in view of the site's conservation objectives.

AA Screening has concluded that there are likely significant effects to European sites - if unmitigated - from the implementation of the LACAP. Therefore, the Draft LACAP has been subject to stage 2 of the AA process, and a Natura Impact Report (NIR) has been prepared alongside the SEA - the details of which have been integrated into the SEA process.

[5] Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

2. THE DRAFT PLAN

2.1 Overview

The FCC LACAP is an action plan which defines local level climate adaptation and mitigation measures to support the reduction of GHG emissions within the local authority as an organisation and throughout the local community in the local authority's functional area.

LACAP should have an inward and outward focus. Climate action in the plan should be defined by local authorities for their own organisation which they have full control over (i.e., the inward focus), and for communities in their functional area, which they exert a strong influence over in partnership with relevant stakeholders (i.e., the outward focus).

The plan period for the Draft LACAP will be from 2024 to 2029. The Council must review and update the plan after a period of 5 years.

The LACAP has been developed in accordance with the requirements of Section 16 of the Climate Act. It must be consistent with the Climate Action Plan 2023 (CAP23) and the National Adaptation Framework. Local authority Development Plans must also be aligned with their LACAP.

FCC's prospective LACAP will be a continuance of FCC's previous Climate Change Action Plan (CCAP) (which was subject to SEA) published in 2019.

2.2 Context

Climate change refers to the long-term changes in the earth's weather patterns or average temperatures. In Ireland this is demonstrated by rising sea levels, extreme weather events and changes in the eco-system. Extensive research and a significant body of evidence has shown a correlation between the increasing global average temperature and the increasing quantity of GHG released into the atmosphere, particularly from anthropogenic sources.

Changes in weather patterns and climate can have significant adverse impacts on the environment and human beings. The Intergovernmental Panel on Climate Change (IPCC) published the Climate Change 2022: *Impacts, Adaptation and Vulnerability in 2022*. Included in this report is an outline of observed impacts of climate change on the environment and human beings. These include impacts from inland flooding, damages to infrastructure, impacts from infectious disease, displacement, animal and livestock health and productivity, mental health and water scarcity derived from climate change.

The seriousness of the potential impacts and risks associated with climate change is reflected in the vast quantity of international, European and national legislation that has been introduced to mitigate those impacts and risks.

The Irish Climate Act provides a statutory underpinning to climate action in Ireland. It specifies the requirement to develop a national Climate Action Plan (and update it every year), a National Adaptation Framework (NAF), a National Long Term Climate Action Strategy and Sectoral Adaptation Plans (SAPs). It also specifies a series of carbon budgets and the associated sectoral emission ceilings.

It sets out actions that must be taken to ensure delivery of commitments and a target to reduce GHG by 51% by 2030 and to achieve net zero GHG emissions by 2050. The successful delivery of climate action and the achievement of these targets will require significant, unanimous effort across all sectors of society.

A key element of the Climate Act is the requirement under Section 16 for local authorities to prepare individual LACAPs for their functional area. The purpose of LACAPs will be to deliver effective climate action and mitigation at local authority and community levels. The Act acknowledges that local authorities are key drivers in advancing and delivering on climate policy.

2.3 Plan Content

The Draft LACAP focusses on several theme areas which are considered to be key for achieving a climate resilient and climate neutral future at organisational and community level. A number of main objectives have been developed for each theme area. Multiple specific actions have been defined to support the achievement of these main objectives. An overview of the theme areas and main objectives under the Draft LACAP is presented in Table 2-1.

Table 2-1: Draft LACAP Theme Area and Main Objectives

Theme Area	Main Objective
Energy and Buildings	Energy Management
	Energy Efficiency Improvements & Upgrades
	Social Housing Upgrades
	Accreditation & Compliance
	Energy Planning & Renewables
	Energy Awareness
Flood Resilience	Flood Risk Management
	Flood Defence
	Surface Water Management
	Sustainable Urban Drainage Systems
	Improve resilience of Infrastructure
	Resilience of Archaeological and Heritage Assets
Circular Economy and Resource Management	Green Public Procurement
	Reduce Waste & Increase Recycling in FCC
	Waste Reduction / Circular Economy
	Waste Prevention
	Promote & Facilitate Circular Economy
	Recycling/ Circular Economy
	Land Use and Acquisition
Nature Based Solutions	Green Infrastructure Mitigate the effects of climate change to our County's Biodiversity.
	Importance of trees
	Preservation & Conservation
	Food & Agriculture

Theme Area	Main Objective
Community Engagement	Community Awareness & Engagement
	Climate Awareness in Schools
	Community awareness & engagement through engagement with partner organisations
	Promote the development of green skills across all economic sectors
	Staff Awareness
Transport	Active Travel - Protected Cycleways/Walkways, Connectivity, Mobility, Modal Shift, Modal Shift - Safe Routes To School
	Public Transport
	Shared Mobility
	EVCP Provision
	Roads Construction & Maintenance
	Staff Travel

2.4 Overall Vision and Strategic Outcomes

The overall vision of the Draft LACAP is to deliver effective climate mitigation and adaptation at local level in support of the broader societal goal of achieving climate resilience and climate neutrality.

Through the development and implementation of specific, action-focused, time-bound and measurable actions, the Draft LACAP will achieve the following strategic outcomes (as defined by the Department of the Environment, Climate and Communications Guidelines for Local Authority Climate Action Plans):

1. Provide a strong emphasis on a place-based approach to climate action, delivering a better understanding of greenhouse gas emissions and climate-related risks at a local level, while addressing context-specific conditions and support for locally tailored policy making.
2. Deliver and promote evidence-based and integrated climate action by way of adaptation and mitigation measures, centred around a strong understanding of the role and remit of the local authority on climate action.
3. Translate and provide strategic direction at local and community levels on the delivery of the national climate objective which is seeking to curb further global warming and to transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy by no later than the end of 2050.

2.5 Relationship of the Plan with other Relevant Plans and Programmes

An examination of how the Draft LACAP interrelates with other national, regional and local plans and programmes has taken place and is documented in Appendix 1.

3. SEA METHODOLOGY

3.1 The SEA Process

The SEA process can be defined by four stages, all of which include some level of consultation with stakeholders and the public (Figure 3-1). These stages are defined as:

- Stage 1 – Screening: deciding whether an SEA is required, or not,
- Stage 2 – Scoping: establishing the spatial and temporal scope of the SEA and a decision-making framework that can be used to evaluate impacts,
- Stage 3 – Identification, Prediction, Considerations of Alternatives, Evaluation and Mitigation of Potential Impacts, and
- Stage 4 – Consultation, Revision and Post-Adoption. This includes the implementation of statutory SEA monitoring.

The SEA process runs in parallel with the Appropriate Assessment (AA) process, which is briefly discussed in Section 1.4.

This SEA Environmental Report documents the outcomes of Stage 3.

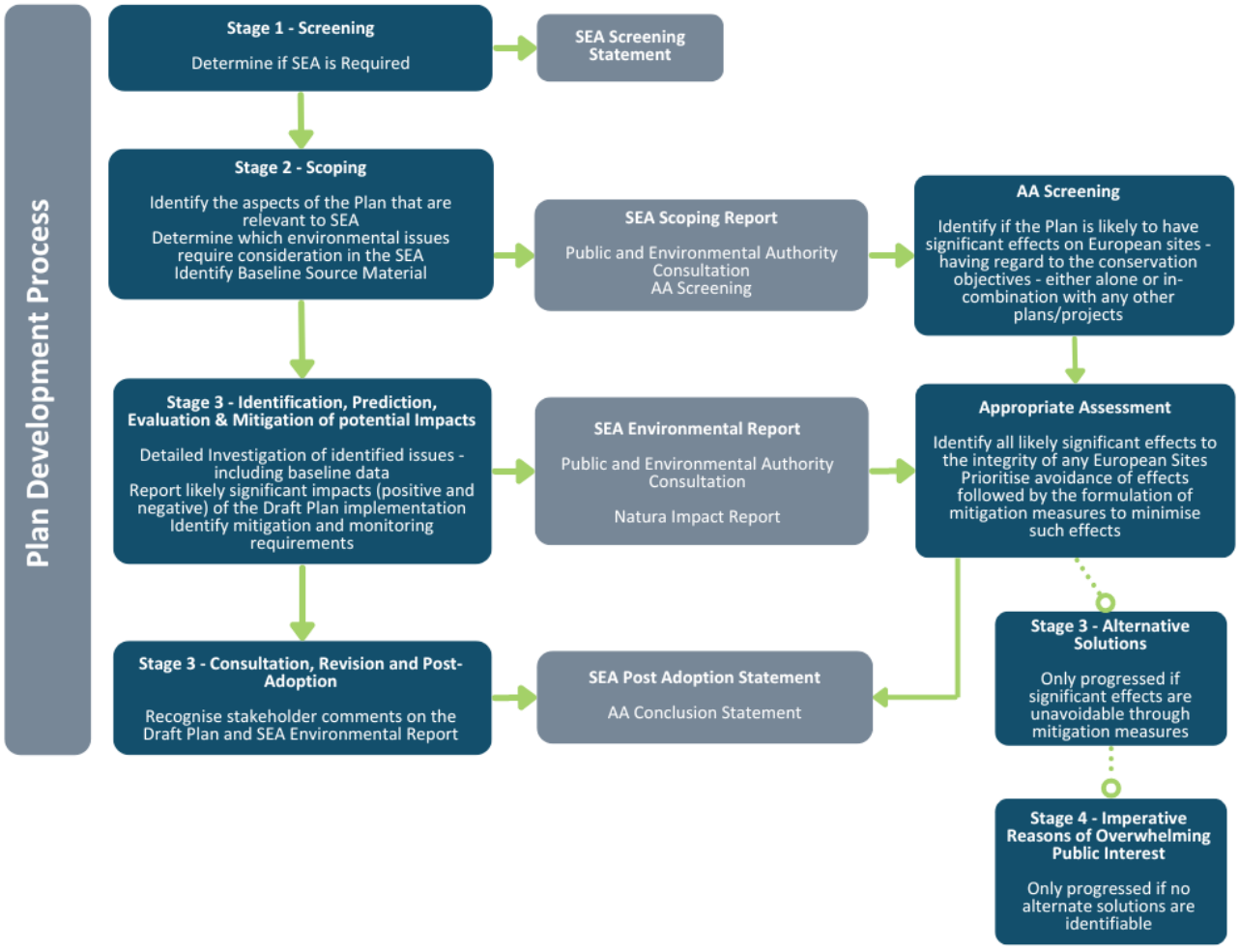

Figure 3-1: SEA and AA Stages and Key Deliverables

3.2 Overview of the LACAP SEA and AA Processes

Given the scale and nature of the LACAP, environmental effects are likely, and therefore SEA has been 'screened in' in this instance.

An SEA Scoping Report was produced for the Draft LACAP. This SEA Scoping Report, along with SEA scoping submissions and consideration of these submissions by the SEA process, has helped communicate and define the scope of the environmental issues which are to be dealt with by the SEA together with the level of detail to which it is intended to address these issues, as per the SEA Guidelines[6].

Figure 3-2 provides an overview of the integrated LACAP-preparation and SEA, Appropriate Assessment (AA)[7] processes. The preparation of the Draft LACAP, SEA and AA are taking place concurrently and the findings of the SEA and AA will inform the Draft LACAP.

Taking into account the scope detailed in the SEA Scoping Report which was produced for the Draft LACAP, the environmental effects associated with the implementation of the Draft LACAP have been identified, evaluated and described in this SEA Environmental Report. This report has also defined mitigation measures to prevent adverse environmental effects due to the implementation of the Draft LACAP. This report will accompany the Draft LACAP on public display as part of the required statutory public consultation. The findings of the AA have also been integrated into the SEA Environmental Report. AA documents will also accompany the Draft LACAP and SEA Environmental Report on public display. The SEA will follow elements of Integrated Biodiversity Impact Assessment[8].

Submissions will be responded to in the Chief Executive's report on public consultation, with updates made to the SEA and AA documentation where relevant.

Any proposed modifications to the LACAP would 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.

When the LACAP is adopted, the SEA and AA documents will be finalised and an SEA Statement, which will include information on how environmental considerations were integrated into the LACAP, will be prepared. The LACAP will then be implemented and environmental monitoring will be undertaken to measure the environmental effects of the plan.

[6] Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment Guidelines for Regional Authorities and Planning Authorities (DEHLG, 2004), Page 18 "It is recommended that at the end of the scoping procedure, the plan-making authority should prepare a brief scoping report of its conclusions as to what information is to be included in the environmental report, taking account of any recommendations from the environmental authorities."

[7] AA is a focused and detailed impact assessment of the implications of a strategic action 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.

[8] As detailed in the EPA's 2013 Integrated Biodiversity Impact Assessment - Streamlining AA, SEA and EIA Processes: Practitioner's Manual.

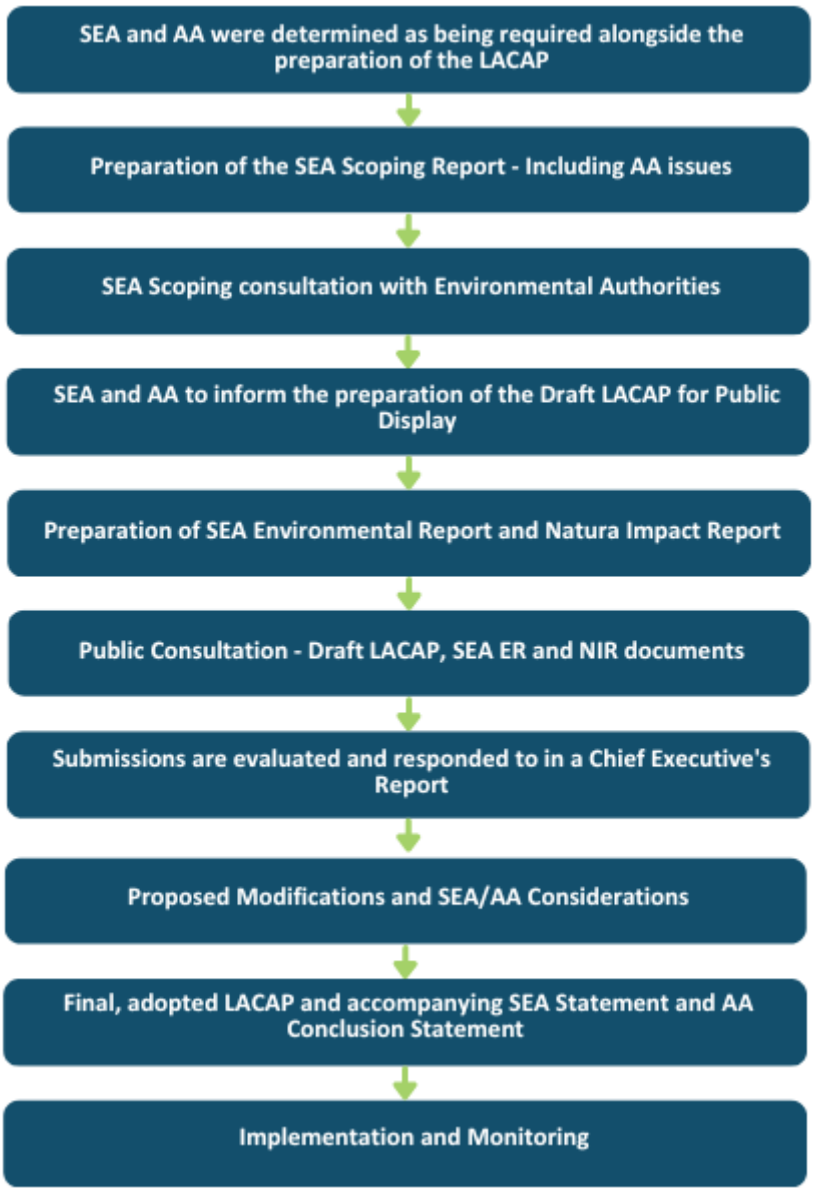

Figure 3-2: Overview of the SEA Process in the Review and Preparation of the Local Authority Climate Action Plan (including AA processes)

3.3 SEA Processes Undertaken To Date

3.3.1 SEA Screening

The first stage of the SEA process is to carry out SEA Screening to determine the requirement for SEA of a P/P.

The first stage in determining whether a P/P requires SEA is the carrying out of a 'Pre-screening Check' (also known as a 'Stage 1 Applicability'). This allows rapid screening-out of P/P that are clearly not going to have any environmental impact and screening-in of those that do require SEA. The second stage in determining whether a P/P requires SEA is known as 'Stage 2 Screening.' The purpose of this stage is to determine whether a P/P is likely to have significant effects on the environment and whether SEA must be carried out in conjunction with a P/P. The application of environmental significance criteria is important in determining whether an SEA is required. Annex II of Directive 2001/42/EC sets out the 'statutory' criteria that should be addressed when undertaking this stage.

Given the scale and nature of the LACAP, environmental effects are likely, and therefore SEA has been 'screened in' in this instance. An SEA Screening Statement to this effect was produced by the FCC LACAP.

The main reasons for 'screening in' in the LACAP are listed below:

1. The LACAP will define a framework sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources.
2. The LACAP has the potential to give rise to environmental problems.
3. The LACAP will support the achievement of the principles and policies of European climate change related legislation (e.g., 'European Climate Law'[9]).
4. The LACAP has the potential to likely significant environmental effects based its impact on likely impact on land use and development, its county-wide geographic scope and the breadth of receiving environmental sensitivities within the county.

3.3.2 SEA Scoping

The second stage of the SEA process is carrying out SEA Scoping. The purpose of SEA Scoping is to establish the spatial and temporal scope of the SEA and a decision-making framework that can be used to evaluate impacts. An SEA Scoping Report is produced to document the scoping process.

FT produced a final SEA Scoping Report for the Draft LACAP which was informed by consultation response from the environmental authorities. The SEA Scoping Report outlined information on the Draft LACAP, including the need for the Draft LACAP, its temporal and geographical area and overall objectives. It facilitated scoping the Environmental Components and understanding the environmental issues to be considered under the SEA process. The Scoping Report was also required to facilitate statutory consultation to ensure that the approach proposed for the SEA is appropriate. A copy of this report was made available to the statutory Environmental Authorities.

The SEA Scoping Report, along with SEA scoping submissions and consideration of these submissions by the SEA process, has helped communicate and define the scope of the environmental issues which are to be dealt with by the SEA, the methods which will be used to address these issues, and the level of detail required to address these issues, as per the SEA Guidelines[10].

[9] Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999

[10] Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment Guidelines for Regional Authorities and Planning Authorities (DEHLG, 2004), Page 18: "It is recommended that at the end of the scoping procedure, the plan-making authority should prepare a brief scoping report of its conclusions as to what information is to be included in the environmental report, taking account of any recommendations from the environmental authorities."

The Environmental Components in the SEA Directive that were 'scoped in' are as follows:

- Population and Human Health
- Biodiversity, Flora & Fauna
- Landscape, Seascape & Visual Amenity
- Cultural Heritage - Archaeology & Architectural
- Soils
- Land Use
- Air Quality & Noise
- Water
- Material Assets
- Tourism & Recreation
- Climate Change

3.3.3 SEA Consultation

Consultation with statutory Environmental Authorities was undertaken to inform the SEA Scoping process. A Draft SEA Scoping Report and appropriate SEA Scoping Questions were issued to statutory Environmental Authorities. The consultation period lasted for 4 weeks.

The following statutory Environmental Authorities and interested stakeholders were consulted on the scope and level of detail of the information to be included in the SEA Environmental Report:

- Department of Agriculture, Food and the Marine (DAFM)
- Department of the Environment, Climate and Communications (DECC)
- Department of Housing, Local Government and Heritage (DHLGH)
- Environmental Protection Agency (EPA)

Consultation feedback is presented in Appendix 2.

In addition to the above statutory Environmental Authorities, the following interested stakeholders will be consulted on the scope and level of detail of the information to be included in the SEA Environmental Report:

- An Taisce
- Birdwatch Ireland
- Climate Change Advisory Council
- Coastwatch
- Department of Enterprise, Trade and Employment (DETE)
- Department of Transport (DoT)
- Electricity Supply Board (ESB)
- Fáilte Ireland
- Gas Networks Ireland

- Industrial Development Authority (IDA)
- Inland Fisheries Ireland (IFI)
- Inland Waterways Association of Ireland (IWAI)
- Landscape Alliance Ireland
- Neighbouring Local Authorities
- Marine Institute
- Office of Public Works (OPW)
- Regional Authorities[11]
- Sustainable Energy Authority of Ireland (SEAI)
- Teagasc
- Tourism Ireland.

3.4 SEA Environmental Report

3.4.1 Environmental Assessment Approach and Methodology

The third stage involves the strategic level identification, prediction, evaluation and mitigation of potential environmental impacts associated with the Draft LACAP. An SEA Environmental Report is produced to document this process. The SEA Environmental Report is integral to the SEA process and is compiled during the plan-making process to allow for adequate consideration of the likely, significant environmental effects of the plan and the incorporation of appropriate environmental mitigation measures into the plan. It should serve to guide the plan-making process and ensure optimal environmental outcomes.

The SEA Environmental Report forms the main written output of SEA process. It serves to document the evaluation of the likely, significant environmental effects of implementing the plan on the relevant Environmental Components defined in the SEA Directive. It defines Strategic Environmental Objectives (SEOs) and associated targets and indicators relating to each Environmental Component area. It defines environmental mitigation measures to prevent, reduce and offset the likely, significant environmental effects of implementing the plan and monitoring measures to measure the environmental effects of the plan. It provides the plan-maker, statutory Environmental Authorities, interested stakeholders and the general public with a clear understanding of likely, significant environmental effects associated with implementing a P/P.

A summary of the information contained in an SEA Environmental Report is presented below:

- A non-technical summary of the environmental assessment carried out to inform the SEA Environmental Report.
- A description of the P/P under consideration, including detail on the main objectives of the P/P, the contents of the P/P, anticipated P/P outcomes, and how the P/P relates to other P/Ps.
- A description and characterisation of the baseline environment that has the potential to be affected by the implementation of the P/P, including the evolution of the baseline environment without the implementation of the P/P (I.e., under a 'do-nothing' or 'do-minimum' scenario).
- A description of any existing environmental problems relevant to the P/P.

[11] Eastern and Midland Region.

- Environmental protection objectives (including indicators and targets) relevant to the P/P and the way these objectives and environmental considerations have been taken into during the plan-making process.
- A description of reasonable alternatives identified, the reasons for considering these alternatives within the scope of the environmental assessment, and an evaluation of their likely significant effect on the environment.
- An evaluation of the likely significant effects of the implementation of the P/P (including reasonable alternatives) on the environment, and in particular on the following environmental components: biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.
- A description of environmental mitigation measures proposed to prevent, reduce and offset likely significant environmental effects that may occur dur the implementation of the P/P.
- A description of the monitoring measures to be implemented to monitor the likely, significant effects of implementing a P/P.

This SEA Environmental Report has been produced for FCC's Draft LACAP and must be issued to the statutory Environmental Authorities and identified interested stakeholders to allow them to make submissions on the Draft LACAP, the environmental assessment undertaken, and the environmental mitigation and monitoring measures proposed. It must also be published for public display with the Draft LACAP, to allow for members of the public to make submissions on the environmental assessment.

The Draft LACAP and the SEA Environmental Report are due to be published in early Q4 2023 for a four-week consultation period.

3.4.2 SEA Environmental Report Authors

FT is a consultancy based in Cork, Carlow and Dublin, specialising in civil and environmental engineering, planning and environmental assessment. The company has established an experienced, professional team specialising in all forms of statutory environmental assessment, including EIA, AA and SEA. This team has the support of many in-house engineers, scientists, planners and subject specialists.

FT was retained by FCC to undertake SEA of the Draft LACAP and are responsible for the completion of this SEA Environmental Report. The competent experts involved in the preparation of this SEA Environmental Report are outlined in Table 3-1.

Table 3-1: SEA Environmental Report Authors

Name and Qualifications	Project Role	Relevant Experience
Bernie Guinan MSc, BSc. (Envi. Sci & Tech), Dip. Pollution Assessment Control Dip. Business Development	Project Director	Bernie is Director with FT responsible for Waste & Resource Management and Environmental Science. She has 20 years' experience in delivering and managing projects in the environmental sector. Bernie has extensive experience coordinating EIA, SEA and AA projects, including large-scale and complex projects. She has in-depth knowledge of all environmental and planning policy, legislation and guidance.

Name and Qualifications	Project Role	Relevant Experience
Andrew Torsney PhD, Ecotourism and visitor Behaviour Analysis, Trinity College Dublin, 2018 – Present (Part time) MRes Biodiversity and Conservation (Hons.), University of Leeds, UK, 2011 - 2012 BSc Zoology, University College Dublin, 2007 - 2011	Project Manager	Andrew has over 10 years' experience as a professional ecologist. He is responsible for all ecological work from project design and implementation to the preparation of reports. Interaction with key stake holder and statutory bodies such as the NPWS and the EPA is a vital part of this role. His role is diverse and complex working at both plan and project level. He has been the principal ecologist responsible for the preparation and co-ordination of SEA and AA for many statutory land use plans; as well as EcIAs, EIARs and AAs of Projects. Andrew has comprehensive technical knowledge in ecological assessments and legalities of the planning processes to facilitate streamlined delivery of assessments. Andrew is an experienced ecologist who holds four national species derogation licenses for bats (photography & roost disturbance), otters and badgers. Andrew has authored the NBDC Identification Guide to Irelands Bats and the Identification Guide to Regulated Invasive Plants. Andrew is an experienced botanical specialist with a focus on Annex I grassland habitats, having worked on the translocation of lowland hay meadow [6510] containing the floral protection order species meadow barley (Hordeum secalinum).
Richard Deeney Advanced Diploma in Planning and Environmental Law, Kings Inns, Ireland 2017 B.Sc. First Class Honours Degree, Environmental Management, Dublin Institute of Technology, 2012 Chartered Environmentalist, The Society for the Environment	SEA Team Lead	Richard is Senior Environmental Scientist at Fehily Timoney. Richard holds a B.Sc. First-Class Honours degree in Environmental Management from Dublin Institute of Technology. Richard works in the Waste and Environment team at Fehily Timoney and is experienced in project managing and coordination of Planning Applications, Strategic Environmental Assessments, Environmental Impact Assessment Reports and Environmental Assessment, EIAR Screening and Scoping Reports, the development of Environmental Management Plans and Systems, Environmental Auditing, and Air Emission Assessment. Richard has excellent experience in planning and environmental assessment for various types of development including waste facilities, quarries, renewable energy development and tourism development. He has experience completing baseline air emissions assessments for a range of organizations.
Eunice Wong B.Sc. First Class Honours, Environmental Science and Sustainable Technology, Munster Technological University, 2022	Project Support	Eunice is an Environmental Scientist on the Waste and Environmental Team at Fehily Timoney and Company. Eunice holds a First-Class Honours BSc in Environmental Science and Sustainable Technology from Munster Technological University. Eunice has been involved in a variety of diverse and challenging projects since joining FT covering key aspects of remediation, baseline emission inventories, amenity development, environmental assessment, and monitoring. She has been responsible for the research, data collation, validation, and analysis for a multitude of projects, including desk-based studies, research, as well as the development of associated reports.
Bruna Felipe BE (Hons) Environmental Engineering UNESP, Sao Paulo State University, Brazil	Project Support	Bruna is a Project Environmental Engineer of Fehily Timoney and Company. Bruna holds a BE of Environmental Engineering from UNESP, Sao Paulo State University, Brazil. Bruna has been involved in a range of contaminated land projects and Tier II Environmental Risk Assessments (ERA). Bruna has been responsible for the data collation, validation and analysis for the preparation of ERA reports for a range of landfill related projects, including works related to meeting environmental monitoring and license compliance for a variety of landfills. She has been involved in the preparation of Appropriate Assessment reports and a European Sites library for the Department of Agriculture, Food and Marine. She also has experience developing baseline emission

Name and Qualifications	Project Role	Relevant Experience
		inventories and conducting baseline environmental assessments for multiple projects.
Eibhlin Vaughan First Class Honors BA in Environmental Science, Trinity College Dublin ,2020	Project Support	Eibhlín is an Environmental Scientist on the Waste and Environmental Team at Fehily Timoney and Company. Eibhlín holds a BA in Environmental Science from Trinity College Dublin where she achieved First Class Honours. As a Graduate Environmental Scientist, she has undertaken a dynamic role, spanning EIAR handling, environmental monitoring, proficient report writing, research, data analysis, and the formulation of effective waste management strategies. Alongside her role within the company, Eibhlín is also completing a Research MEngSc in University College Dublin, for which data collection, analysis, and report writing and presentation play a key role.

3.4.3 Difficulties Encountered

No significant difficulties have been encountered during the undertaking of the assessment.

3.4.4 SEA Environmental Report Checklist

A checklist of information that must be included in this SEA Environmental Report under the SEA Directive and transposing national legislation[12] is provided in Table 3-2. This checklist cross-references the sections in the report where information can be found.

Table 3-2: SEA Environmental Report Checklist

Information Required	Relevant Section of the SEA Environmental Report
An outline of the contents and main objectives of the plan and relationship with other relevant plans.	Section 2.
The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan.	Section 4.
The environmental characteristics of areas likely to be significantly affected.	Section 4.
Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to the Birds Directive or Habitats Directive.	Section 4.
The environmental protection objectives, established at international, European Union or national level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation.	Section 5.

[12] The Environmental Report is required to contain the information specified in Annex 1 of the SEA Directive and Schedule 2 and 2B of S.I. 435 and 436 of 2004.

Information Required	Relevant Section of the SEA Environmental Report
The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.	Section 7 and Appendix 3.
The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan.	Section 8.
An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.	Section 6.
A description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan.	Section 9.
A non-technical summary of the information provided under the above headings.	Front section.
Interrelationships between each Environmental Component.	Section 7 and Appendix 3.

3.5 SEA Statement

The final LACAP will be published by February 2024 at the latest. FCC will publish a post adoption SEA Statement alongside the final Plan. The post adoption SEA Statement is another integral component of the SEA process.

The SEA Statement will provide detail on how the environmental assessment and considerations detailed in the SEA Environmental Report and SEA related consultation responses throughout the process have influenced the plan-making process. It will summarise the reasoning for choosing the adopted, final LACAP in light of other reasonable alternative. The SEA will contain detail of environmental mitigation and monitoring measures to be implemented over the lifetime of the LACAP.

The main purpose of the SEA Statement is to provide interested parties with a good and clear understanding of how the SEA process was carried out during the plan-making process and how SEA informed and supported the process.

3.6 Integrated Biodiversity Impact Assessment

The environmental assessment undertaken has been carried out in accordance with an Integrated Biodiversity Impact Assessment based methodology in accordance with EPA's guidance document entitled *'Final Report: Integrated Biodiversity Impact Assessment, Streamlining AA, SEA and EIA Processes. Best Practice Guidance.'* (2012).

The methodology employed facilities the integration of SEA and AA processes relating to biodiversity impact assessment to ensure the effective and streamlined assessment of biodiversity impacts. The plan-making, SEA and AA processes - including scoping, baseline evaluation, impact assessment and mitigation/monitoring measure development processes - have been carried out concurrently to facilitate holistic and complete assessment of biodiversity impacts. The effective communication and integration of scientific knowledge and analysis between assessments has taken place. The SEA is suitably informed by the analysis and conclusions in AA.

3.7 Outcomes of the LACAP SEA and AA Processes

The SEA and AA processes will facilitate the integration of environmental considerations into the Draft LACAP, including policies and objectives contributing towards environmental protection and management and sustainable development; and the integration of environmental considerations into the policies and objectives included as part of the LACAP.

4. THE ENVIRONMENTAL BASELINE

4.1 Introduction

An evaluation and a characterisation of the current state of the environment likely to be affected by the Draft LACAP has been undertaken to inform the SEA process. This section of the SEA Environmental Report documents this evaluation. The following Environmental Components were considered during this evaluation:

- Population and Human Health
- Biodiversity, Flora & Fauna
- Landscape, Seascape & Visual Amenity
- Cultural Heritage - Archaeology & Architectural
- Soils
- Land Use
- Air Quality & Noise
- Water
- Material Assets
- Tourism & Recreation
- Climate Change

Baseline environmental information for the local authority functional area (herein referred to as the 'study area') has been gathered using available environmental datasets. The evaluation of the baseline environment has been informed by the SEA Scoping Report produced and the consultation responses received during the SEA Scoping process. It has also been guided and informed by the in-depth experience and expert judgement of the SEA Environmental Report Authors.

This section of the SEA Environmental Report includes information on the state of the environment within the defined study area (Figure 4-1), including maps of individual environmental components, environmental sensitivity mapping and a description of the baseline environment under the Environmental Components identified by the SEA Directive and transposing Regulations (i.e. population and human health, biodiversity and flora and fauna, soil, water, air and climatic factors, material assets, cultural heritage, landscape and the interrelationship between these factors). Existing environmental problems which are relevant to the Draft LACAP have been identified and examined under each Environmental Component heading.

The SEA Environmental Report has also considered the zone of influence for the Draft LACAP and includes baseline information beyond the Draft LACAP boundary for certain environmental components (E.g., European Sites and the status of shared water bodies).

Information provided in this section is based on readily available baseline data from web-based searches and Geographic Information Systems (GIS) information. A key resource which was used throughout the SEA process is the EPA's SEA Spatial Information Sources Inventory[13]. The data presented in this section of the SEA Environmental Report is as up-to-date and as accurate as possible and is presented in a readily accessible format, where possible.

The interrelationships between Environmental Components are addressed throughout this section, as appropriate, under each Environmental Component heading. A summary of Environmental Component interrelationships is also provided.

This section of the SEA Environmental Report examines the likely evolution of the baseline environmental in the absence of the LACAP being implemented (i.e., in the 'do nothing' or 'do minimum' scenario).

[13] Environmental Protection Agency. 2022. SEA Spatial Information Sources: Available at Strategic Environmental Assessment | Environmental Protection Agency (epa.ie)

SEA_ER_Fig_4_1_Local_Authority_Boundary_FINGAL COUNTY COUNCIL.pdf

Figure 4-1: Study Area Boundary

4.2 Population and Human Health

4.2.1 Characterisation of the Environmental Baseline

In the 2022 Census, the total population of Fingal was 330,506 persons, showing the trend of an increase in total population in the County by ca. 11.6% (34,486 persons)[14] since the previous Census.

Fingal is identified by the Eastern and Midland Regional Assembly Regional Spatial and Economic Strategy (RSES) 2019-2031 as being part of the Dublin Metropolitan Area. The transitional population projection for the Dublin Metropolitan Area until 2031 is 1.59 million persons[15].

There are no population projections in the Draft LACAP as the provisions relate only to climate action – however, there are features within the Draft LACAP which could influence population projections for the county and interact with various environmental components. Potential interactions include:

- Recreational and development pressure on habitats and landscapes.
- Renewable energy development could influence population dynamics within the county.
- Increased constraints on land use zoning objectives in the decarbonising zone.
- Potential effects on water quality.

With regard to human health, impacts relevant to the SEA are those which arise as a result of interactions with environmental vectors (i.e. environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, 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.

4.2.2 Key Issues Relating to the Draft LACAP

- Recreational and development pressure on habitats and landscapes.
- Population and development growth will potentially influence the energy requirement within the county.
- Population and development growth will potentially influence the decarbonising zone.
- Potential visual effect of green infrastructure development.

[14] Central Statistics Office. 2022. FY003B - Population and Actual and Percentage Change 2006 to 2022 (cso.ie) https://data.cso.ie/table/FY003B
[15] *Regional Spatial and Economic Strategy for the Eastern & Midland Region 2019-2031*

SEA_ER_Fig_4_2_Major_Settlement_Patterns_within_Ireland_FINGAL COUNTY COUNCIL.pdf

Figure 4-2: Major Settlement Patterns within Ireland (Source: OSI)

4.3 Biodiversity, Flora & Fauna

4.3.1 Characterisation of the Environmental Baseline

The SEA considers available information on designated sites of conservation interest as well as protected species, ecological connectivity and non-designated habitats which have high ecological value. The SEA also identifies data sources which may be appropriate to local, project level development and assessments.

There are several considerations for nature conservation designations in Fingal including:

Table 4-1: Designated Ecological Sites and Protected Species

Environmental Features	Description
UNESCO[16] (United Nations Educational, Scientific and Cultural Organisation) World Heritage and Biosphere sites	The Dublin Bay United Nations Educational, Scientific and Cultural Organisation (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.
Special Areas of Conservation[17] (SACs)[18]	Designated under the Habitats Directive (Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora). **There are 9 designated SACs within, partially within or adjacent to the County, including: Rogerstown Estuary SAC (000208), Malahide Estuary SAC (000205), Lambay Island SAC (000204), Ireland's Eye SAC (002193), Baldoyle Bay SAC (000199), Howth Head SAC (000202) and North Dublin Bay SAC (000206), also including 2 offshore SACs, namely Rockabill to Dalkey SAC (003000) and Codling Fault Zone SAC (003015).** These and other sites beyond the County border that could be affected by the Draft LACAP are considered by the assessments.
Special Protection Areas[19] (SPAs)[20]	Designated under the Birds Directive (EC Directive 200/147/EC on the conservation of wild birds). **There are 9 designated SPAs within, partially within or adjacent to the County, including: Skerries Islands SPA (004122), Rockabill SPA (004014), Rogerstown Estuary SPA (004015), Lambay Island SPA (004069), Malahide Estuary SPA (004025), Baldoyle Bay SPA (004016), Ireland's Eye SPA (004117), Howth Head Coast SPA (004113) and North Bull Island SPA (004006). This and other sites beyond the County border that could be affected by the Draft LACAP are considered by the assessments.**
RAMSAR sites[21]	The Convention of Wetlands of International Importance, especially as Waterfowl Habitat, was established at Ramsar in 1971 and ratified by Ireland in 1984. The main aim of the Convention is to secure the designation by each contracting state of wetlands in its territory for inclusion in a list of wetlands of international importance for waterfowl. This entails the commitment of each contracting state to a policy of

[16] UNESCO Sites in Ireland - HeritageMaps.ie - data.gov.ie

[17] Designated site data | National Parks & Wildlife Service (npws.ie)

[18] Habitats Directive (1992/43/EEC) - habitats and species listed in Annex I and II

[19] Designated site data | National Parks & Wildlife Service (npws.ie)

[20] Birds Directive (2009/147/EEC)

[21] Ramsar Sites - Datasets - data.gov.ie

Environmental Features	Description
	protection and management of the designated wetlands, and of formulating and implementing planning so as to promote the conservation of designated wetlands and, as far as possible, the wise use of wetlands in its territory. Ireland presently has 45 sites designated as Wetlands of International Importance, with surface areas of 66,994 hectares. **There are 4 designated Ramsar sites within, partially within or adjacent to the County, including North Bull Island, Rogerstown Estuary, Broadmeadow Estuary and Baldoyle Bay.**
Natural Heritage Areas[22] (NHAs)	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. **There is 1 designated NHA within, partially within or adjacent to the County; Skerries Island NHA (001218).**
Proposed Natural Heritage Areas (pNHAs)[23]	pNHAs were published on a non-statutory basis in 1995 but have not since been statutorily proposed or designated. These sites are of significance for wildlife and habitats. **There are 16 pNHAs within or partially within the County, including: Rockabill Island (000207), Knock Lake (001203), Bog Of The Ring (001204), Rogerstown Estuary (000208), Portraine Shore (001215), Malahide Estuary (000205), Lambay Island (000204), Feltrim Hill (001208), Sluice River Marsh (001763), Santry Demesne (000178), Baldoyle Bay (000199), Ireland's Eye (000203), Howth Head (000202), North Dublin Bay (000206), Royal Canal (002103), Loughshinny Coast (2060), and Liffey Valley (000128).**
Tree Preservation Order (TPO)	Tree Preservation Orders may be made under Section 45 of the Local Government (Planning and Development) Act, 1963 and subsequent acts. Part XIII of the Planning and Development Act, 2000 sets out the provisions for TPOs. TPOs can be made in the interest of amenity or the environment and allow for the protection of individual or groups of trees. **There are 3 existing TPOs within the County, including The Vicarage, Church Road, Swords; Santry Demesne, Swords; and Brackenstown / Brazil, Swords.**
Flora Protection Order Sites[24]	The Flora (Protection) Order, 2015 (S.I. No. 356 of 2015) gives legal protection to 65 species of bryophytes in the Republic of Ireland (25 liverworts and 40 mosses). The current list of plant species protected by Section 21 of the Wildlife Acts is set out in the Flora (Protection) Order, 1999. **There are 3 designated Flora Protection Order Sites in the County; Howth, Portmarnock and Malahide.**
Wildfowl Sanctuaries[25] (See S.I. 192 of 1979)	Wildfowl Sanctuaries are areas that have been excluded from the 'Open Season Order' so that game birds can rest and feed undisturbed. There are 68 sanctuaries in the State. Shooting of game birds is not allowed in these sanctuaries. **There are 2 designated Wildfowl Sanctuaries within or adjacent to the County (Rogerstown Estuary (WFS-20) and North Bull Island (WFS-19)).**
Salmonid Waters[26]	Salmonid waters are designated and protected as under the European Communities (Quality of Salmonid Waters) Regulations 1988 (SI No. 293 of 1988). Designated

[22] Natural Heritage Areas (NHA) | National Parks & Wildlife Service (npws.ie)

[23] EPA Maps

[24] Flora Protection Order Map Viewer (npws.ie)

[25] Wildfowl Sanctuaries | National Parks & Wildlife Service (npws.ie)

[26] Register of Protected Areas - Salmonid Water Regs Table - Datasets - data.gov.ie

Environmental Features	Description
	Salmonid Waters are capable of supporting salmon (Salmo salar), trout (Salmo trutta), char (Salvelinus) and whitefish (Coregonus). **There are no designated salmonid rivers in the Plan area.**
OSPAR Marine Protected Areas[27] (MPA)	Under the OSPAR Convention to Protect the Marine Environment of the North East Atlantic, Ireland committed to establishing marine protected areas to protect biodiversity (i.e., OSPAR MPAs). There are currently 19 OSPAR sites proposed in the State. **2 proposed MPAs within, partially within or adjacent to the County (North Dublin Bay MPA and Malahide Estuary MPA) are among the list of sites.**
CORINE Landcover[28]	Land cover is the observed physical cover, as seen from the ground or through remote sensing, including for example natural or planted vegetation, water and human constructions which cover the earth's surface. **The most dominant land cover type is arable land and improved grassland making up most of the countryside. Artificial surfaces/urban fabric can be found mainly in the south-west of the County and the eastern coast with some level of green urban vegetated areas. The Southern part includes the highest concentration of industrial, commercial and transport units. Coastal wetlands dominate the eastern coast, and forest and semi natural areas are found mostly in Howth.**
National Parks	National Parks are specially designated protected areas of unspoilt beauty and there are six located in Ireland. The primary purpose of the National Parks is the conservation of biodiversity and landscape; however, they also provide recreational space for locals and visitors. **There are no National Parks located within or partially within the County, however, Wicklow Mountains National Park is the closest towards the south of the County.**
Nature Reserves[29]	A Nature Reserve is an area of importance to wildlife, which is protected under Ministerial order. There are currently 78 Statutory Nature Reserves. Most are owned by the State, but some are owned by organisations or private landowners. **There are 2 Nature Reserves located within or partially within the County, including Baldoyle Estuary and Rogerstown Estuary.**

Additionally, the SEA considers non designated sites for impacts with regard to aspects such as:

	Description
Ecological connectivity and networks (including steppingstones and corridors)	Coastal systems, riparian habitats, hedgerows and other blue and green infrastructure networks. Ecological connectivity and networks are a key consideration along with invasive species - particularly those listed on the Third Schedule to the European Communities (Birds and Natural Habitats) Regulations 2011 [S.I.477/2011].
Other sites of high biodiversity value or ecological importance	Semi-natural habitats in National Parks and Wildlife Service (NPWS) national surveys (native woodlands, reef systems, tidal habitats, grasslands, peatlands etc.). Trees and woodlands of national importance have been identified.

[27] OSPAR Convention to Protect the Marine Environment of the North East Atlantic, Ireland committed to establishing marine protected areas to protect biodiversity.

[28] EPA Maps

[29] Nature Reserves in Ireland | National Parks & Wildlife Service (npws.ie)

The SEA makes use of available data sources including those from the NPWS, the EPA's Framework National Ecological Network for Ireland and CORINE land cover mapping.

The SEA is informed by the findings of the AA and follows elements of Integrated Biodiversity Assessment with reference made to the EPA's 2013 Integrated Biodiversity Impact Assessment - Streamlining AA, SEA and EIA Processes: Practitioner's Manual.

As well as considerations related to European sites - a focus was placed on protected species outside of these designations such as bats[30], breeding birds[31], badgers[32] etc. as well as all related species listed within the Flora (Protection) Order, 2022 (S.I. No. 235 of 2022)[33].

4.3.2 Key Issues Related to the Draft LACAP

The key considerations in relation to Biodiversity, Flora and Fauna are as follows:

- Route selection and classification criteria are a key consideration in the development of blueways and greenways within the Draft LACAP due to the largely linear nature of these developments.
- The potential for effects on non-designated biodiversity features e.g. important habitats and species outside designated sites - particularly with regard to fragmentation, barriers to movement and displacement.
- The potential for effects on protected areas: National and European sites (e.g. SAC, SPAs, RAMSAR), National sites (e.g. NHAs) and other Natural Heritage Sites and Conservation Interest Sites e.g. refuge for fauna or flora, wildfowl reserves.
- The potential to spread invasive species.
- The potential for biodiversity enhancement.

[30] The Habitats Directive (1992/43/EEC) and Birds Directive (2009/147/EEC) provides legal protection for habitats and species of European importance. The overall aim of the Habitat and Birds Directives are to maintain or restore the "favourable conservation status" of habitats and species of European Community Interest. These habitats and species are listed in the Habitats and Birds Directives (Habitats Directive as above and Directive 2009/147/EC on the conservation of wild birds) with Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated to afford protection to the most vulnerable among them. These two designations are collectively known and referred to as European sites. Articles 6(3) and 6(4) of the Habitats Directives set out the decision-making tests for plans and projects likely to affect such sites. Article 6(3) establishes the requirement for AA. These requirements are implemented in the Republic of Ireland by the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) and the Planning and Development Act 2000 (as amended). Further to the requirements of considerations related to European sites protected Annex IV of the Habitats Directive identifies priority species which are afforded protection in their own right - these include all Irish species of bats. Bats are also protected under the Irish Wildlife Acts, 1976 and 2000.

[31] Irish Wildlife Acts, 1976 (as amended)

[32] Irish Wildlife Act 1976 (as amended) and Bern Convention Appendix III

[33] Which gives legal protection to 68 species of vascular plants 65 species of bryophytes in the Republic of Ireland (25 liverworts and 40 mosses). The current list of plant species protected by Section 21 of the Wildlife Acts is set out in the Flora (Protection) Order, 1999 (as amended).

SEA_ER_Fig_4_3_Special_Areas_of_Conservation_and_Special_Protected_Areas_FINGAL COUNTY COUNCIL.pdf

Figure 4-3: Special Areas of Conservation and Special Protection Areas in Ireland (Source: NPWS)

SEA_ER_Fig_4_4 Natural Heritage Areas and proposed Natural Heritage Areas in Ireland_FINGAL COUNTY COUNCIL.pdf

Figure 4-4: Natural Heritage Areas and proposed Natural Heritage Areas in Ireland (Source: NWPS)

SEA_ER_Fig_4_5_Potential_Habitat_Sensitivities - Areas likely to contain Annex I habitats_FINGAL COUNTY COUNCIL.pdf

Figure 4-5: Potential Habitat Sensitivities - Areas likely to contain Annex I habitats (Source: EPA-CORINE)

4.4 Landscape, Seascape & Visual Amenity

4.4.1 Characterisation of the Environmental Baseline

The landscape of Fingal is rich and varied, ranging from tranquil villages in rolling country landscape, picturesque seaside villages and rugged coastline to vibrant urban developments and historic towns. Significant features of the Plan area include the Royal Canal Corridor to the south of the County and a few islands in proximity to the eastern coastline.

The current Landscape Character Assessment[34] for Fingal divides the County into 6 Landscape Character Types. In addition to this, a number of high amenity landscapes and protected views and prospects have been identified. These comprise of:

Table 4-2: Landscape Character Types, High Amenity Landscapes, and Protected Views and Prospects

Environmental Features	Description
Landscape Character Types	• Coastal • Estuary • River Valleys / Canal • High Lying Agricultural • Low Lying Agricultural • Rolling Hills with Tree Belts
High Amenity Landscapes	• Coastal zone • River valley areas (Liffey, Delvin, Ward and Tolka) • Naul Hills area • Islands (Lambay, Ireland's Eye, Shenick's, Colt, St Patrick's and Rockabill)
Protected Views and Prospects	• Howth Hill from Golf Road, Portmarnock, Strand Road, Baldoyle, and Greenfield Road and Carrickbrack Road, Sutton. • Howth Peninsula from Clontarf Road, James Larkin Road and Dublin Road. • Ireland's Eye from Howth Harbour area. • Cush Point from Strand Road, Baldoyle. • Portmarnock Peninsula from Baldoyle and Strand Roads. • Island Golf Course from Malahide. • High amenity zoned land north of the Broadmeadow Estuary from the Malahide-Swords coast road. • Rogerstown Estuary to the north from Beaverstown. • Drumanagh from Harbour Road, Rush and from Loughshinney village. • Skerries Islands from the South Strand and Red Island, Skerries. • Skerries Harbour at Red Island from the North Beach and Balbriggan Road, Skerries. • Hampton Demesne and Ardgillan Demesne from Hampton View Estate. • High amenity zoned coastal land at Bremore from the Martello Tower in Balbriggan.

[34] Fingal Development Plan 2023-2029, *Chapter 9 Green Infrastructure and Natural Heritage.*

The above and any other or emerging landscape designations are considered by the assessment.

The SEA assessment of landscape utilises information from the following sources:

- Fingal environmental sensitivity mapping
- The National Landscape Strategy for Ireland
- Tree Preservation Orders
- Forest cover/Indicative Forest Strategies[35]
- County Development Plan
- County Landscape Character Assessment

4.4.2 Key Issues Relating to the Draft LACAP

The key issues in relation to Landscape, Seascape and Visual Amenity are as follows:

- Effects of green infrastructure (i.e. blueways, greenways) and renewable energy farm developments on areas of designated landscape quality and scenic views etc.
- Sensitivity of the landscape to change from green infrastructure development.

[35] Department of Agriculture, Food and the Marine

4.5 Cultural Heritage - Archaeology & Architectural

4.5.1 Characterisation of the Environmental Baseline

There are 1,311 known archaeological sites in the county. Archaeological sites are legally protected[36]. This section includes information on the archaeological heritage of Fingal. One of the primary sources of information for known archaeological features is the Record of Monuments and Places (RMP)[37]. The RMP is an inventory of sites and areas of archaeological significance.

There are 1,311 known archaeological sites in the county. The wealth of archaeological sites ranges from cairns and passage graves to medieval churches and castles. The towns of Swords, Balrothery and Lusk are of archaeological significance with very important medieval structures surviving intact above ground and the potential of archaeological finds below ground. Other areas of archaeological potential include prehistoric monuments and sites, church sites, burial ground, holy wells and medieval structures. There are 6 recorded monuments on the RMP in State Care in the County. The locations of the known archaeological sites are detailed in Figure 4-6.

This section also includes information on the architectural heritage of Fingal including that relating to designations such as the Record of Protected Structures (RPS). Local authorities compile and maintain the RPSs[38]; these RPSs are listed in the County Development Plan and are available in digital format in Appendix 5. There are 790 entries to the Record of Protected Structures within the County[39], which include many notable buildings in the County such as the large estates of Luttrellstown, Newbridge, Ardgillan and Malahide as well as the Martello Towers.

It is acknowledged that the register of protected structures documented in CDPs may not represent all Ministerial recommended sites/structures which are included in the National Inventory of Architectural Heritage (NIAH)[40]. The purpose of the NIAH is to identify, record, and evaluate the post-1700 heritage of Ireland and there are over 50,000 listings on the NIAH in Ireland (DAHRRG, 2022). These provisions include historic gardens, designed landscapes and underwater archaeological heritage[41].

The Department of Housing, Local Government and Heritage has developed the Heritage Ireland 2030[42] plan, published in February 2022, serving the purpose of informing the decision-making process. An Architectural Conservation Area (ACA) is a place, area, group of structures or townscape designated for its special characteristics and distinctive features. An ACA may or may not include Protected Structures. In an ACA, protection is placed on the external appearance of such areas or structures. There are various ACAs designated within the County.

[36] National Monuments Acts 1930 (as amended), the National Cultural Institutions Act 1997 (as amended) and the Planning and Development Act 2000 (as amended).

[37] Data available at National Monuments Service - Archaeological Survey of Ireland - Datasets - data.gov.ie

[38] Under Section 51 of the Planning & Development Act 2000 (as amended).

[39] *Fingal Development Plan 2023-2029.*

[40] Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999 (as amended). Data available at National Inventory of Architectural Heritage (NIAH) National Dataset - Datasets - data.gov.ie

[41] Department of Housing, Local Government and Heritage. 2015. Advice to the Public on Ireland's Underwater Archaeological Heritage.

[42] Available at Heritage Ireland 2030 | gov.ie/housing (www.gov.ie)

The SEA assessment of Cultural Heritage - Archaeological and Architectural utilises information from the following sources:

- The Department of Arts, Heritage Regional, Rural and Gaeltacht Affairs[43] (including underwater archaeology such as wreck data[44])
- National Monuments Service (including the Underwater Unit)
- Built Heritage and Architectural Policy Section (the NIAH)[45]
- County Development Plan
- Heritage Council
- United Nations Educational, Scientific and Cultural Organisation (UNESCO)

4.5.2 Key Issues Relating to the Draft LACAP

The key issues in relation to Cultural Heritage are as follows:

- The potential impact of the development of green infrastructure on archaeological and architectural heritage.
- No existing conflicts with legislative objectives governing archaeological and architectural heritage have been identified.

[43] Department of Arts, Heritage and the Gaeltacht
[44] Available at Wreck Viewer | National Monuments Service (archaeology.ie)
[45] Data available at National Inventory of Architectural Heritage (NIAH) National Dataset - Datasets - data.gov.ie

SEA_ER_Fig_4_6_Archaeological Heritage_FINGAL COUNTY COUNCIL.pdf

Figure 4-6: Archaeological Heritage (Source: EPA)

4.6 Soils

4.6.1 Characterisation of the Environmental Baseline

The types of soils found covering the County[46] include the following:

Table 4-3: Soil Types Covering the County

Soil Type	Description
Dominant Soils	
Grey-Brown Podzolics	Grey-Brown podzolic soils are characterised by a comparatively thin organic covering and an organic-mineral layer above a greyish brown leached layer. **These can be found in the central to south-eastern areas.**
Gleys	Gleys are soils showing the effects of poor drainage and have developed as a result of permanent or intermittent water logging. This may be due to a high-water table, to a 'perched' water table caused by the impervious nature of the soil itself, or to seepage of runoff from slopes. Most gleys have poor physical conditions, resulting in restricted growth in spring and autumn. **These soils are mainly in the central to north-western areas.**
Other Soils	
Acid Brown Earths	Brown earths are well-drained mineral soils with a rather uniform profile, associated with high levels of natural fertility. Most Brown Earths occur on lime-deficient parent materials, and are, therefore, acid in nature; these are called Acid Brown Earths. **These are found mainly in the northern and north-western parts of the County.**
Urban soils	Urban soils are soils which 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 that has been produced by mixing, filling or by contamination of land surfaces in urban and suburban areas. **These soils are found mainly in the southern areas in close proximity to built-up parts of Dublin City and scattered across the eastern coast in some areas.**

Peatlands are unique systems comprising of peat soil providing as significant carbon stores and supporting a range of unique species. Active blanket bogs and active raised bogs are considered to be priority habitats, listed on Annex I of the EU Habitats Directive. Peat soils are often indicative of areas that are the most sensitive to development due to ecological sensitivities and impeded drainage issues. An area of basin peat has been identified in the northern part of the County.

The SEA examines issues including the loss of soils/soil sealing, as a result of greenfield development, and interactions with biodiversity and carbon storage, such as those that can occur as a result of development in peatland areas.

The audit of County Geological Sites in Fingal was completed in 2007 and identified 22 County Geological Sites[47]. Previous Landslide Events and Landslide Susceptibility Mapping sources were considered by the SEA.

[46] Teagasc.ie. General Soil Map.

[47] Geological Survey of Ireland (2007) *The Geological Heritage of Fingal.*

The SEA of Soils utilises information from the following sources:

- Geological Survey Ireland (GSI)
- Teagasc
- Infomar[48]
- EPA

There is no legislation solely directed to soil protection in Ireland. In 2006, the European Commission (EC) developed a Soil Thematic Strategy that aims to protect soils and ensure the sustainable use of soils across Europe. Although a proposal for a Soil Framework Directive was withdrawn in 2014, the importance of sustainable soil management was recognised in the Seventh Environment Action Programme, where sustainable land management is to be achieved by 2020.

4.6.2 Key Issues Relating to the Draft LACAP

The key issues in relation to Soils are as follows:

- Potential for impacts on soil resources and offshore sediment transport.
- Potential impacts to soils (land) vulnerable to erosion.
- Potential for unearthing contaminated material.

[48] Seabed and Sediment Data | Infomar

SEA_ER_Fig_4-7 Geology of Ireland_FINGAL COUNTY COUNCIL.pdf

Figure 4-7: Geology of Ireland (Source: GSI)

SEA_ER_Fig_4-8 Geology Heritage Sites of Ireland_FINGAL COUNTY COUNCIL.pdf

Figure 4-8: Geological Heritage Sites of Ireland (Source: GSI)

4.7 Land Use

4.7.1 Characterisation of the Environmental Baseline

Information on land use in Fingal can be obtained from the CORINE Land Cover (CLC) inventory and Ireland's Marine Atlas[49]. These data sources have archives which document land use change as well as existing land use.

The CORINE database is the dominant land use database; however, some sectors have additional spatial data resources such as forestry. The Forestry Service have produced a GIS based Forest Inventory Planning System (FIPS) to act as an aid in the long-term spatial planning of national forest, and to provide guidance to forestry grants. Additional sources of further land use data include the NPWS[50].

The SEA process considers land use impacts - utilising data from sources such as:

- CORINE Land Cover Database
- Teagasc
- EPA
- NPWS
- Forest Service
- Marine Institute
- Sea Fisheries Protection Authority (SFPA)
- GSI data

4.7.2 Key Issues Relating to the Draft LACAP

The key issues in relation to land use are as follows:

- Potential constraints on sea fisheries, both during construction and operation of infrastructure projects (i.e. onshore and offshore wind farms) associated with the Draft LACAP.
- Potential constraints on other sectors such as agricultural, forestry and fisheries, primarily related to construction and operation of infrastructure projects (i.e. solar farms, blueways) associated with the Draft LACAP.

[49] Available at Ireland's Marine Atlas

[50] Sources such as the Lesser Horseshoe Bat Species Action Plan 2022-2026, Draft National Peatland Strategy, Draft Raised Bog SAC Management Plan, and Draft Raised Bog NHAs Review.

SEA_ER_Fig_4-9 Land Use of Ireland_FINGAL COUNTY COUNCIL.pdf

Figure 4-9: Land Use of Ireland (Source: EPA-CORINE)

4.8 Air Quality & Noise

4.8.1 Characterisation of the Environmental Baseline

The Air Quality in Ireland 2021 report prepared by the EPA identifies that:

- Air quality in Ireland is generally good, however, there are concerning localised issues that are negatively impacting the air we breathe.
- Air quality monitoring results in 2021 show that fine particulate matter (PM2.5) mainly from burning solid fuels in our homes, and nitrogen dioxide (NO2) mainly from road transport, remain the main threats to good air quality.
- EPA monitoring shows that fine particulate matter (PM2.5) and nitrogen dioxide (NO2) levels are within the current EU legal limits, however these pollutants exceed the World Health Organisation (WHO) (2021) guidelines[51].

The National Clean Air Strategy (DECC, 2023) referred to the most recent projections by the EPA in 2022 and states that Ireland is on track to meet the majority of EU commitments for national emissions levels by 2030, and there was only one exceedance of EU ambient air quality limit values since 2010.

Under the Clean Air for Europe Directive [Directive 2008/50/EC], EU member states must designate "Zones" for the purpose of managing air quality. For Ireland, four zones were defined in the Air Quality Standards Regulations (2011). The Dublin conurbation is defined as 'Zone A' out of the four zones in Ireland. The current air quality in Fingal is identified by the EPA as being of Good[52] status.

The EEA[53] states that "environmental noise can be defined as unwanted or harmful outdoor sound". The EU Noise Directive (2002/49/EC) relates to the assessment and management of environmental noise[54]. This Directive called for the development of strategic noise maps and action plans for major roads, railways, airports and cities. Existing noise related impacts can be seen in Figure 4-10; these are considered throughout the SEA and AA processes in the development of the Draft LACAP.

The SEA considers Air Quality and Noise using data from the following sources:

- EPA
- WHO

[51] World Health Organisation. 2021.WHO global air quality guidelines: particulate matter (PM2.5 and PM10), ozone, nitrogen dioxide, sulphur dioxide and carbon monoxide. World Health Organisation. https://apps.who.int/iris/handle/10665/345329. License: CC BY-NC-SA 3.0 IGO

[52] EPA AirQuality.ie - 21/06/2023

[53] EEA. 2022. Noise Data Briefing. Available at: Noise — European Environment Agency (europa.eu).

[54] This was transposed into Irish national legislation via the Environmental Noise Regulations (S. I. No. 140 of 2006).

4.8.2 Key Issues Relating to the Draft LACAP

Overall, the LACAP is likely to have positive effects on air quality due to the nature of the plan; however, there are potential issues which may arise due to the implementation. The key issues in relation to Air Quality and Noise are as follows:

- Blueway developments, particularly during the construction phase, may have a temporary negative impact on air quality and create noise pollution.
- Wind farm developments may have impacts on noise pollution, particularly towards sensitive receptors which are in close proximity.

SEA_ER_Fig_4-10 Noise Mapping Lden_FINGAL COUNTY COUNCIL.pdf

Figure 4-10: Noise Mapping Lden (Day, Evening, Night; a measurement over 24 hours)

4.9 Water

4.9.1 Characterisation of the Environmental Baseline

The EU Water Framework Directive (WFD) (2000/60/EC) establishes a framework for the protection of both surface and groundwater. Transposing legislation outlines the water protection and water management measures required in Ireland to maintain high status of waters where it exists and to prevent any deterioration in existing water status. The second cycle of the River Basin Management Plan (RBMP) ran from 2018-2021, where separate plans were devised for all eight River Basin Districts (RBDs) with the objective of achieving at least 'good' status for all waters by 2027. The next RBMP 2022-2027 is currently in draft and is likely to be published before the completion of the SEA process for the Draft LACAP.

Water quality data is collected by the EPA[55]. The Plan area is located within the Nanny-Delvin and Liffey and Dublin Bay catchments. The Northwestern Irish Sea, Malahide Bay, Irish Sea Dublin and Dublin Bay lie along the eastern coastlines of the County. The WFD status of coastal water bodies (2016-2021) adjacent to the east coastline of the County for the Northwestern Irish Sea, Irish Sea Dublin and Dublin Bay are currently identified as being of Good status, while Malahide Bay is of Moderate status.

The EU Groundwater Directive (2006/118/EC) uses a holistic approach to groundwater by addressing the relationships between groundwater, surface water and ecological receptors. Groundwater is considered by its ecological status, which is based on two assessments: chemical and quantitative status. Both of these need to be in good condition for the overall water body to be classified as good.

The WFD groundwater status (2016-2021) underlying Fingal is generally identified as being of Good status, with a small area in proximity to Dublin airport identified as being of Poor status.

The WFD status of rivers and streams (2016-2021) draining Fingal ranges from good (sections of rivers and streams, including the Royal Canal Main Line), to moderate (sections of rivers and streams including: Ward, Broadmeadow, Ballough Stream, Hurley, Howth and parts of Delvin) and to poor (sections of rivers and streams including: Liffey, Tolka, Santry, Mayne, Sluice, Gaybrook, Turvey, Ballyboghil, Palmerstown, Balcunnin, Mill Stream (Skerries), Matt and parts of Delvin).

In addition to Naul Reservoir, there are several unassigned lakes across the County.

Pressures on waterbodies that are failing to meet the WFD's overall objective of 'good' status were identified by the SEA and policy responses were recommended as necessary. The SEA also provides information on aquifer vulnerability, aquifer productivity and entries to the WFD's Registers of Protected Areas.

Certain areas across the County are at risk of flooding from various sources including groundwater, pluvial, fluvial, estuarial and coastal. Fingal is located on the east coast of Ireland, and much of the Plan boundary is subject to flood risk from the Irish Sea. There are various historic and predictive indicators of flood risk in the County, including along the Rivers Ballyboghil, Broadmeadow, Ward, Palmerstown, Matt, Delvin, Ballough Stream and their tributaries, Rathmooney River, Balrothery River and at various locations along the coastline. Flood risk for waterbodies along and in proximity to the southeastern coastline are currently under review.

[55] EPA Maps. Water.

The OPW is the lead agency tasked with the management of flood risk in the Republic of Ireland. In 2022, the OPW reviewed their 2016 Flood Risk Management Plans (FRMP). The purpose of each FRMP is to outline the long-term strategy to manage flood risk in Ireland. A number of settlements were identified by the OPW in 2012 as requiring detailed assessment of flood risk (Areas for Further Assessment)[56]. These settlements are - Balbriggan, Balgriffin, Donabate, Kinsaley, Lusk, Malahide, Oldtown, Portraine, Raheny, Rush, Santry, Santry Demesne and Staffordstown Turvey Sutton and Baldoyle, Sutton and Howth North, Skerries, Swords and Swords (South).

A Strategic Flood Risk Assessment (SFRA), as required by 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of the Environment, Heritage and Local Government and Office of Public Works, 2009) and Circular PL 2/2014 (Department of Environment, Community and Local Government), is being undertaken alongside the preparation of the SEA and the preparation of the Draft LACAP. The SFRA focuses on land use zoning provided for by the County Development Plan as well as County-wide flood risk management policy. The SFRA considers available and emerging information on flood risk indicators, including the OPW's Flood Hazard and Risk Mapping and any flood defences and inter-County interactions.

The GSI rates groundwaters according to both their productivity and vulnerability to pollution. Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter into groundwater. The vulnerability of aquifers underlying the County are mapped on Figure 4-15. The GSI also rates aquifers based on the hydrogeological characteristics and on the value of the groundwater resource. This is referred to as aquifer productivity and is mapped on Figure 4-16.

The Water assessment utilises information from the following sources:

- EPA and Marine Institute - WFD Data,
- GSI data on groundwaters, aquifers and bedrock information,
- Catchment Flood Risk Assessment and Management (CFRAM) Study and associated FRMPs (OPW, as reviewed 2022), and
- Flood Risk Assessment (FRA) Mapping[57] (OPW).

4.9.2 Key Issues Relating to the Draft LACAP

- Potential pressures and impacts on water body status, water usage and flood risk from the construction of renewable energy and blueway projects i.e. increased sedimentation, groundwater recharge and accidental spillages.

[56] Available online at Microsoft Word - PFRA Main Report - Rev D.doc.

[57] OPW (2022) Flood risk maps and data platform - Available at https://www.floodinfo.ie/map/floodmaps/

SEA_ER_Fig_4-11 Hydrology_FINGAL COUNTY COUNCIL.pdf

Figure 4-11: Hydrology

SEA_ER_Fig_4-12 WFD Surface Water Status_FINGAL COUNTY COUNCIL.pdf

Figure 4-12: WFD Surface Water Status

SEA_ER_Fig_4-13 Aquifer Classification_FINGAL COUNTY COUNCIL.pdf

Figure 4-13: Aquifer Classification

SEA_ER_Fig_4-14 Wells and Springs_FINGAL COUNTY COUNCIL.pdf

Figure 4-14: Wells and Springs

SEA_ER_Fig_4-15 Groundwater Vulnerability_FINGAL COUNTY COUNCIL.pdf

Figure 4-15: Groundwater Vulnerability

SEA_ER_Fig_4-16 Groundwater Productivity_FINGAL COUNTY COUNCIL.pdf

Figure 4-16: Groundwater Productivity

SEA_ER_Fig4-17 Drinking-water Source Protection Areas_FINGAL COUNTY COUNCIL.pdf

Figure 4-17: Drinking-water Source Protection Areas

Figure 4-18: WFD Register of Protected Areas

SEA_ER_Fig_4-18a WFD Register of Protected Areas_FINGAL COUNTY COUNCIL.pdf

SEA_ER_Fig_4-18b WFD Register of Protected Areas_FINGAL COUNTY COUNCIL.pdf

SEA_ER_Fig_4-18c WFD Register of Protected Areas_FINGAL COUNTY COUNCIL.pdf

SEA_ER_Fig_4-18d WFD Register of Protected Areas_FINGAL COUNTY COUNCIL.pdf

SEA_ER_Fig_4-18e WFD Register of Protected Areas_FINGAL COUNTY COUNCIL.pdf

4.10 Material Assets

4.10.1 Characterisation of the Environmental Baseline

Other level material assets include transport infrastructure, power generation plants and supply networks, water supply, wastewater treatment infrastructure and waste disposal sites among others. Potential opportunities and conflicts associated with these assets are considered in the SEA. Other material assets covered by the SEA include archaeological and architectural heritage (see Section 4.5) and natural resources of economic value, such as soil[58], air and water (see Sections 4.6, 4.8 and 4.9).

4.10.1.1 Water Services

4.10.1.1.1 Wastewater

Wastewater demand and capacity information at settlements that are considered by the SEA, where available, includes[59]:

- Population served.
- Loading.
- Capacity.
- Level of treatment.
- Spare capacity or shortfall.
- Compliance with the Urban Waste Water Treatment Directive.
- Wastewater infrastructure investment needs.

The EPA produces annual reports on the treatment of urban wastewater from cities, towns and urban communities. The latest EPA 2022 report[60] 'Urban Waste Water Treatment in 2021' identifies the priority areas where resources must be targeted, in order to protect the environment from the harmful effects of waste water and deliver environmental improvements where they are most needed. Based on the EPA's assessment of monitoring information provided by Uisce Éireann and the enforcement activities carried out by the EPA, this report identifies urban areas with the most important environmental issues that must be addressed. Balbriggan and Malahide are listed as priority areas in Fingal.

4.10.1.1.2 Surface Water Drainage

Sustainable Drainage systems (SuDS) can minimise the quantity and increase the quality of surface water runoff as well as mitigating adverse impacts of climate change. SuDS can also provide amenity and biodiversity benefits.

[58] Soil and geological resources are considered under this topic including with respect to mineral locations and aggregate potential.

[59] Detailed water services information has informed the preparation of the SEA Environmental Report.

[60] Available at Monitoring & Assessment: Wastewater | Environmental Protection Agency (epa.ie)

4.10.1.2 Waste Management

The Waste Management Act 1996 requires Local Authorities to make a waste management plan either individually or collectively for their functional areas. In 2015, Fingal was guided by the Eastern-Midlands Waste Management Plan 2015-2021 which provided the framework for solid waste management in the region. Post 2021, waste management in Ireland is guided by the first National Waste Management Plan for a Circular Economy, which replaces the existing regional plans. This Plan sets out a framework for the prevention and management of waste in Ireland for the period 2023 to 2029.

4.10.1.3 Transport

Fingal is traversed by four major roads networks – the M1, the M50, the N2/M2 and the N3. The County is served by the DART Train and the Northern Commuter Train service. Further to this, Dublin Bus, TFI and a number of other private operators provide bus services to the County as well as to Dublin Airport that is located within the County. Upcoming transport and active travel projects that will serve the County and the Greater Dublin area has been considered by the SEA, where available.

4.10.1.4 Green Infrastructure

Green infrastructure (GI) is a crucial component in building resilient communities capable of adapting to the consequences of climate change with trees, woodlands and wetlands providing carbon capture and slowing water flows while improving air quality. The Green Infrastructure strategy for Fingal provides a vision for protecting 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 Heritage landscapes, Landscape.

The existing Green Infrastructure in County boasts many key features and activities along the coast and across the urban, rural and upland areas. Many of these are iconic in nature, including the varied and dramatic coastline itself, Ward River Valley Regional Park and the numerous rivers, streams, parks and open spaces of County and regional significance.

4.10.1.5 Public Assets and Infrastructure

Public assets and infrastructure that have the potential to be impacted upon by the Plan, if unmitigated, include settlements; resources such as public open spaces, parks and recreational areas; public buildings and services; transport and utility infrastructure (electricity, gas, telecommunications, water supply, waste water infrastructure etc.); forestry; and natural resources that are covered under other topics such as water and soil.

4.10.1.6 Land

The LACAP has the potential to assist with the reuse and regeneration of brownfield sites thereby contributing towards sustainable mobility and reducing the need to develop greenfield lands and associated adverse environmental effects. Brownfield lands are generally located within urban/suburban areas.

4.10.1.7 Coastline

Significant portions of Fingal's coastline are visually sensitive as evidenced by the many protected views and prospects, high amenity zonings and areas of exceptional landscape value which are highly sensitive to development. There still remain stretches of the coastline which are undeveloped, remote and peaceful.

4.10.1.8 Renewable Energy Potential

Under EU Directive 2001/77/EC Renewable Energy, renewable energy sources are defined as renewable non-fossil energy sources such as, but not limited to wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas, biogases and biochar (i.e., the thermal treatment of natural organic materials in an oxygen-limited environment). Available information on renewable energy potential within and adjacent to the County – and any associated Plan provisions – has been considered by the SEA.

4.10.1.8.1 Energy Related Material Assets and Infrastructure

SEAI (2020[61]) published the kilotonnes of oil equivalent (ktoe) data which showed that 86% of Ireland's energy came from fossil fuels at that time. Transportation and residential represented the highest resource demand. The generation of renewable energy has been increasing over the past ten years, with a growth in the number of wind farms (from 5.8% of gross final energy consumption in 2010 to 13.5 of GFC in 2020[62]). This is an important feature of Fingal's function for onshore.

All traditional power plants are in a process of transition to renewable/sustainable sources to align with the targets in the Climate Action Plan 2023.

The SEA of Material Assets utilises information from the following sources:

- Climate Change Advisory Council
- Department of Defence
- Department of Housing, Local Government, and Heritage (DHLGH)[63]
- EPA - marine disposal sites
- Electricity Supply Board (ESB)
- Iarnród Éireann
- Irish Bioenergy Association (IrBEA)
- Irish Solar Energy Association (ISEA)
- Irish Wind Energy Association (IWEA)
- Marine Atlas (for shipping port and route data)
- Ports Authority
- SEAI
- SFPA
- Transport Infrastructure Ireland (TII)
- Uisce Éireann
- Waterways Ireland

[61] SEAI. 2020. SEI01 - Energy Balance data resource; Available at SEI01 - Energy Balance (ktoe) - Datasets - data.gov.ie

[62] SEAI. 2020. Overall renewable energy share - available at Renewables | Energy Statistics In Ireland | SEAI

[63] Energy Offshore Renewable - Datasets - data.gov.ie

4.10.2 Key Issues Relating to the Draft LACAP

It is not likely that the LACAP will result in significant effects to wastewater treatment or water services in general, given the nature of the plan. The key issues in relation to Material Assets are as follows:

- Disruptions to existing transport infrastructure through the development of alternative options such as active travel routes could occur.
- Demands for increased renewable infrastructure and associated connection networks.
- Visual impact of wind developments on the coastline.
- Effects on sensitive receptors with increased demands for active travel/green/renewable infrastructure, in particular during the construction phase.
- The potential for effects on existing green and blue infrastructure and key ecological corridors from inappropriate development.

4.11 Tourism & Recreation

Tourism and recreation are influenced by a range of factors in Ireland. International tourism has increased in recent years; the 'Dublin – A breath of Fresh Air' brand was launched, and the global brand success resulted in infrastructure demands to previously less trafficked areas. Failte Ireland has recently published their four regional brand strategies[64] which defines the spatial scope and spread of future tourism developments within Ireland. At a county level, FCC has developed the Fingal Tourism Statement 2017-2022. Cultural Heritage sites also support heritage-related tourism and recreation. Landscape is also an important aspect in terms of Tourism.

The assessment of Tourism and Recreation utilises the follow information sources:

- Climate Change Advisory Council's Annual Review 2023
- Department of Transport, Tourism and Sport
- Central Statistics Office (CSO)
- Recreational sailing groups and ferry operators
- Fáilte Ireland
- National Trails Office

4.11.1 Key Issues Relating to the Draft LACAP

The key issues in relation to Tourism and Recreation are as follows:

- Green infrastructure development may have the potential to restrict or reduce the quality of resources important for recreation and/or tourism including angling facilities, boating activities and/or associated resources.
- The promotion or development of blueways and greenways could add additional loading pressures in terms of visitor interactions at sensitive areas such as trampling, disturbance, erosion, littering.

[64] Wild Atlantic Way, Dublin's a Breath of Fresh Air, Ireland's Ancient East and Ireland's Hidden Heartlands

4.12 Climate Change

The recent Climate Action and Low Carbon Development (Amendment) Act 2021 was established to provide for the approval of plans by the Government in relation to climate change. This aims at pursuing the transition to a climate resilient, biodiversity rich and climate neutral economy by no later than the end of the year 2050. Ireland's Climate Action Plan 2023 sets out Ireland's national and sectoral targets in this regard.

Future changes in climate and associated impacts on sea level, rainfall patterns/intensity and river flow will influence flooding frequency and extent in the future. Local Authorities in compliance with the Regional Planning Guidelines are attempting to adopt sustainable flood risk strategies in areas likely to be at risk of flooding in the future in the context of climate change and changing weather patterns. Changes to climate could lead to an increase in flooding events in Ireland. The OPW has undertaken a number of Flood Risk Management Studies for different River Basin Districts (RBDs) in Ireland. These studies have identified the areas which are most at risk and future management plans have been advised; these are adopted by the OPW. In some cases, mitigation measures will involve the construction of physical flood defences. The SEA considers data related to climate from the following sources:

- Department of the Environment, Climate and Communications
- EPA
- CFRAM Studies[65]

4.12.1 Key Issues Relating to the Draft LACAP

The key issues in relation to Climate Change are as follows:

- The Draft LACAP will contribute to the targets, set out in the Climate Action Plan 2023.
- The potential impact of changes in climate including flooding and temperature increases should be factored into the Draft LACAP.

[65] Office of Public Works (2021) Catchment-based Flood Risk Assessment and Management (CFRAM) Programme gov.ie - CFRAM Programme (www.gov.ie)

4.13 Constraints and Opportunities

The environmental baseline data was overlaid in raster form and ranked accordingly to produce an overall constraints and opportunities map for the Council's administrative boundary (https://uss.ftco.ie/DMS/view_document.aspx?ID=962498&Latest=true

Figure 4-19). The map was prepared using Geographical Information System (GIS) software that allowed for a weighting system to be applied with differentiation in certain layers as follows:

Vector Layer	Weighting	Rationale
SAC	1	Protected
SPA	1	Protected
NHA	1	Protected
pNHA	0.5	Not fully protected
Archaeological Heritage	1	Protected
WFD High	0.5	High quality most sensitive to perturbation
Wells and Springs	1	Protected
Groundwater High	1	High vulnerability most sensitive to perturbation
Salmonid Water	1	Protected

Where the mapping shows a concentration of environmental sensitivities there is an increased likelihood that development will conflict with these sensitivities and cause environmental deterioration. However, the occurrence of environmental sensitivities does not preclude development; rather it flags at a strategic level that the mitigation measures - which have been integrated into the Plan - will need to be complied with in order to ensure that the implementation of the plan contributes towards environmental protection.

https://uss.ftco.ie/DMS/view_document.aspx?ID=962498&Latest=true

Figure 4-19: Constraints and opportunities map

4.14 Evolution of the Baseline Environment without the implementation of the Plan

The SEA Directive requires that consideration is given to the likely evolution of the baseline environment in the event the Draft LACAP is not progressed and implemented. In the event the Draft LACAP was not implemented; the baseline environment would primarily evolve in line with the development management standards and environmental protection criteria defined in Fingal Development Plan (CDP) 2023-2029 which is the primary development control framework relevant to the study area. The baseline environment would also be strongly influenced by the Fingal County Biodiversity Action Plan 2022 -2030 and Local Area Plans (LAPs) for the County.

Whilst some level of climate related policy has been defined in the CDP, not progressing the specific set of climate mitigation and adaptation related actions defined in the Draft LACAP would present several significant lost opportunities. A variety of likely positive environmental effects associated with Draft LACAP implementation would not come to fruition. A number of potential adverse effects associated with the existing baseline scenario are more likely to occur.

It is less likely that the local authority as an organisation would adequately reduce its organisational GHG emissions in line with national GHG emission reduction targets. The variety of actions for reducing operational GHG emissions and promoting energy efficiency would not be implemented. There will be less, direct policy support for the local authority transitioning its vehicle fleet to being electric or being powered by renewable fuels, which will decrease the likelihood of this being done successfully.

None of the specific climate related adaptation or flood resilience actions defined in the Draft LACAP would be implemented. Climate change related risks relating to severe weather events (including storms and heatwaves) are less likely to be fully understood and controlled at local level as a consequence. For example, the risk of unforeseen and unmanaged climate change influenced flooding would be higher without the adoption of the defined adaptation actions. Such climate change related events have the potential to have significant adverse environmental effects on a variety of environmental receptors including local communities and ecological receptors.

The variety of nature based solutions proposed in the Draft LACAP would not be implemented. The GHG emission sequestration potential associated with actions promoting the enhancement of ecological sites and greenspace would not be realised.

The biodiversity related protection measures defined in the Draft LACAP would not be implemented, making it less likely that the risk to biodiversity and protected sites, habitats and species due to climate change factors will be adequately managed and controlled at local level.

The variety of community engagement measures defined in the plan will not be implemented. The result of this would be that GHG emission reduction opportunities relating to the local residential and commercial sectors associated with plan actions are less likely to be fully realised. The local residential and commercial sectors would be less supported in reducing their GHG emissions generally.

The active travel/sustainable transport related actions in the Draft LACAP would not be implemented. The expansion of the EV network in the County will have less express policy support. Promoting a modal shift from private car use to the use of sustainable modes of transport will have less express, community level policy support. The potential for achieving this modal shift will be reduced. There will also be less potential to prevent and reduce local air quality impacts associated with the use of internal combustion engine vehicles in the County. The likelihood of exceedances of ambient air quality standards in the County due to vehicle emissions in congested areas would be greater as a result.

Overall, in the event the Draft LACAP was not implemented, the net result would be that the likelihood of the local authority and local community realising GHG emission reductions commensurate to national GHG emission reductions targets would be reduced. At the same, the risk of negative environmental effects occurring as a result of climate change related risks would be greater.

5. STRATEGIC ENVIRONMENTAL OBJECTIVES

The SEA Directive states that an SEA should also look at *'the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.'* The identification of environmental protection objectives relevant to a plan provide the basis for evaluating the significance of impacts during the SEA process. All environmental protection objectives relevant to the Draft LACAP have been identified. Further information on other P/P's that define environmental protection objectives relevant to the Draft LACAP is provided in Appendix 1 to this document.

Strategic Environmental Objectives (SEOs) are methodological measures which facilitate the development of targets against which the environmental effects of the Draft LACAP can be tested. SEOs are based on wider environmental protection objectives on local, regional, national, European and international level that are relevant to FCC's Draft LACAP. They are high-level in nature and set strategic goals for improvement.

In this section, SEOs have been defined for range of Environmental Components and can be used as standards against which the provisions of the Draft LACAP can be evaluated in order to help identify areas in which potential significant adverse impacts may occur. The use of these objectives ensures that the SEA focuses only on those environmental issues that are most relevant and significant to the Draft LACAP and the Study Area.

The development of SEOs has been appropriately informed by the SEA Scoping stage of the SEA process, including consultation with statutory Environmental Authorities, interested stakeholders and the general public.

All SEOs applicable to the Draft LACAP are presented in Table 5-1.

Table 5-1: Strategic Environmental Objectives

Environmental Component	SEO Code	Strategic Environmental Objective
Overall	O1	Ensure, where appropriate, that lower-level plans and projects contribute to overall environmental monitoring processes within the County.
Population & Human Health	PHH1	Avoid or, minimise impacts to population and human health.
	PHH2	Ensure the Decarbonising Zone avoids and minimises impacts to the existing economic activities within the area and does not compromise/conflict with existing land use objectives.
Biodiversity, Flora & Fauna	B1	Ensure Climate Action does not conflict with biodiversity protection, restoration and rehabilitation.
	B2	Ensure compliance with Habitats and Birds Directives with regard to protection of European Sites and Annexed habitats and species.[66]
	B3	Support Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function as stepping stones (designated or not) - are of major importance for wild fauna and flora and essential for the migration, dispersal and genetic exchange of wild species.
	B4	To avoid or minimise significant impacts on semi-natural habitats, species, environmental features or other sustaining resources in designated national sites and to comply with the Wildlife Acts 1976-2012 with regard to listed species.
	B5	Go beyond biodiversity protection to deliver biodiversity enhancement, wherever possible, in response to the biodiversity emergency.
Landscape, Seascape & Visual Amenity	L1	Avoid or minimise impacts on statutory landscape designations defined in the CDP.
	L2	Avoid or minimise adverse visual effects on residential receptors or other sensitive visual receptors.
Cultural Heritage - Archaeology & Architectural	CH1	Avoid impacts upon archaeological heritage (including entries to the Record of Monuments and Places (RMP)) and architectural heritage (including entries to the Record of Protected Structures (RPS) and National Inventory of Architectural Heritage (NIAHs)).
Soils	S1	Avoid or minimise effects on mineral resources or soils.
Land Use	LU1	Avoid or minimise effects on existing land use.
Air Quality and Noise	AQN1	Increase the number of people travelling to work or school via public transport or by non-mechanical means.
	AQN2	Avoid or minimise effects on local air quality.
	AQN3	Avoid or minimise adverse noise impacts.

[66] 'Annexed habitats and species' refer to those listed under Annex I, II & IV of the EU Habitats Directive and Annex I of the EU Birds Directive.

Environmental Component	SEO Code	Strategic Environmental Objective
Water	W1	Maintain and/or improve, the quality and status of surface waters.
	W2	Maintain and/or improve, the chemical and quantitative status of groundwaters.
	W3	Prevent impact upon the WFD status of surface waters and groundwater in line with the requirements of the WFD.
	W4	Comply as appropriate with the provisions of the Flood Risk Management Guidelines.
	W5	Prevent impact upon drinking water quality.
Material Assets	MAI1	Avoid or minimise effects on built/amenity assets and infrastructure.
	MAI2	Avoid or minimise effects on effects upon existing and (where known) planned infrastructure.
	MAI3	Promote sustainable transportation.
	MAI4	Promote sustainable waste management.
	MAI5	Promote sustainable water use and drainage management.
Tourism & Recreation	TR1	Avoid or minimise effects upon tourism and recreation amenities.
Climate Change	CF1	Delivery of the necessary action to support the national target of 80% electricity from renewable sources by 2030.
	CF2	Actively support the delivery of all national climate policy as appropriate to the county with the prioritisation and acceleration of evidence-based measures.
	CF3	CF3: Assist in the delivery of the climate neutrality objective at local and community levels.
	CF4	Deliver a Decarbonising Zone (DZ) by 2050 within the local authority area to act as a test bed for a range of climate mitigation and adaptation measures in a specifically defined area through the identification of projects and outcomes that will assist in the delivery of the National Climate Objective.
Inter-relationships	IR1	Maintain and improve the health of people, ecosystems and natural processes Actively seek to integrate opportunities for environmental enhancement during adaptation to climate change

6. DESCRIPTION AND EVALUATION OF PLAN ALTERNATIVES

6.1 Introduction

Article 5(1) of the SEA Directive states that: *'Where an environmental assessment is required under Article 3(1), an environmental report shall be prepared in which the likely significant effects on the environment of implementing the plan or programme, and* reasonable alternatives *taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated.'*

The SEA Directive requires that reasonable alternative means of achieving the strategic goals of the Draft LACAP (taking into account the objectives and the geographical scope of a plan or programme) are identified, described and evaluated for their likely significant effects on the environment. Such reasonable alternative must be realistic and capable of implementation.

This section of the SEA Environmental Report examines reasonable alternatives to FCC's Draft LACAP and systematically evaluates the likely significant effects of these alternatives.

Reasonable alternatives to the Draft LACAP were initially explored and examined during the SEA Scoping stage of the SEA process, having regard to the scope, function and strategic aims and main objectives of the Draft LACAP, as defined in the Local Authority Climate Action Plan. This process facilitated the accurate identification of reasonable alternatives to the Draft LACAP and also suitably informed the plan-making process, ensuring optimal environmental outcomes.

The reason for considering identified reasonable alternatives within the scope of the environmental assessment must be clearly described and documented. A description of how the assessment of alternatives was carried out must be provided.

Reasonable alternatives will be assessed against the Strategic Environmental Objectives (SEOs) established for the aspects of the baseline environment which are likely to be significantly affected by the Draft LACAP. The purpose of this is to determine if the reasonable alternative result in positive, negative, neutral or uncertain environmental outcomes. This assessment process can result in mixed-effects outcomes.

The description and evaluation of reasonable alternatives in this report was undertaken in accordance with guidelines defined in the following two guidance document primarily:

1. Implementation of SEA Directive (2001/42/EC): Assessment of the Effects of Certain Plans and Programmes on the Environment, DEHLG 2004.
2. Developing and Assessing Alternatives in Strategic Environmental Assessment, EPA 2015.

6.2 Goal of the Reasonable Alternative Evaluation Process in SEA

The underpinning goal of the reasonable alternative evaluation process is to ensure that the selection of preferred alternatives by the Local Authority is informed by environmental considerations including:

- The LA's role in influencing sectors and communities with respect to climate action,
- The LA's role in co-ordinating and facilitating climate action – particularly with reference to the DZ, and
- The LA's role in creating the local vision for climate action and building capacity to achieve this through advocacy.

6.3 Approach to Developing Reasonable Alternatives

A range of alternatives to the Draft LACAP were considered during the plan-making process. The approach for identifying reasonable alternative to the Draft LACAP is defined below:

1. Iterative communication was held between the plan-making and environmental assessment teams to identify the various alternative approaches and options being considered to achieve the vision of the plan - the reduction of GHG emissions at Local Authority organisational level and within the Community in support of Climate Action policy. This communication commenced early on during the plan-making process.
2. Reasonable alternatives considered were identified. For an alternative to be considered reasonable, it must be practical/functional, realistic and implementable. An evaluation of whether each alternative was practical/functional, reasonable and implementable took place. This evaluation considered the following factors:
    2.1. The vision of high-level objectives of the Draft LACAP.
    2.2. The geographic scope of the Draft LACAP.
    2.3. The actual powers and functions of the Local Authority.
    2.4. The climate action merits of the alternative.
    2.5. The genuine ability of the alternative to achieve the plan vision and high-level objectives.
    2.6. The technical feasibility of the alternative.
    2.7. The availability of resources, including financial resources to deliver the plan within the required timeframe.
    2.8. The policy hierarchy and the parameters placed around the Draft LACAP by higher-level policy.
    2.9. The legislative context and the parameters placed around the Draft LACAP by climate action and environmental related legislation.

The toolkit contained in the EPA's guidelines entitled '*Developing and Assessing Alternatives in Strategic Environmental Assessment Good Practice Guidance*' (2015) was utilised when identifying reasonable alternatives. The 'Why? What? Where? When?' Model defined in the guidelines were used when framing reasonable alternatives, as shown in Figure 6-1.

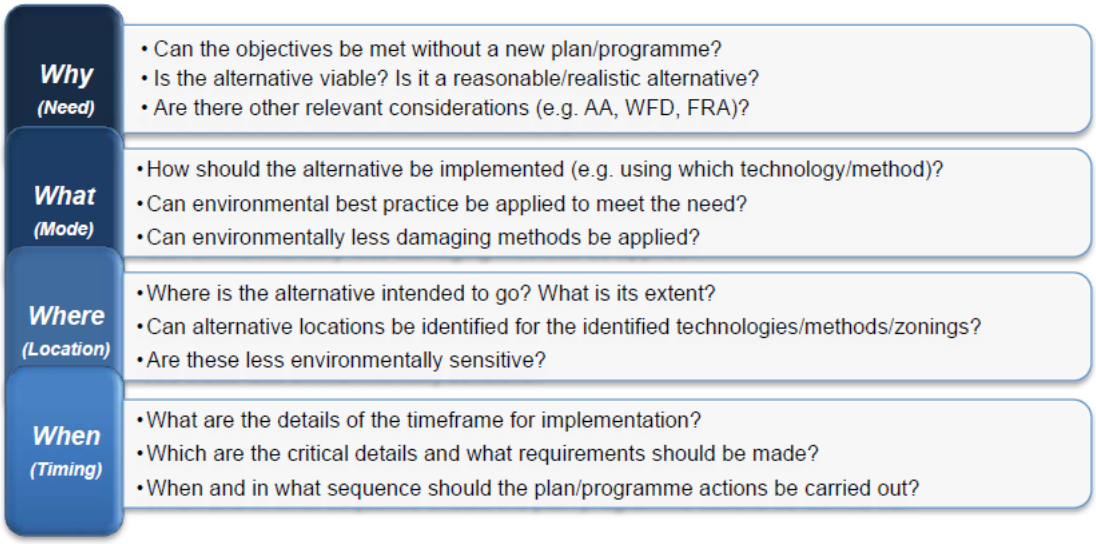

Figure 6-1: 'Why? What? Where? When?' Model for framing alternatives - Adapted from Figure 4.3 Developing and Assessing Alternatives in the Strategic Environmental Assessment Process (EPA, 2015).

6.4 Identification and Description of Reasonable Alternatives

Reasonable alternatives to the Draft LACAP have been identified. A description of these reasonable alternatives and the reasons for selecting these reasonable alternatives are presented in Table 6-1.

A 'Do Nothing' or 'Do Minimum' alternative is not a reasonable alternative in this instance as the preparation of an effective LACAP is a statutory requirement under Section 16 of the Climate Act.

Table 6-1: Reasonable Alternatives to the Draft LACAP

Reasonable Alternative	Description of Reasonable Altenative	Reasoning for selecting this Reasonable Alternative (having regard to the 'Why? What? Where? When' Model defined in Figure 6-1).
Alternative 1 - The Pareto Approach: Prioritise reducing GHG emissions from largest GHG emitting sectors to mitigate against climate change impacts.	This alternative involves developing a LACAP that primarily focusses on climate mitigation and reducing GHG emissions associated with the largest GHG emitting sectors in the County that a local authority can reasonable influence having regard to the functions of a local authority - the Residential and Transport sectors.	This is a viable alternative that could achieve a significant reduction in GHG emissions by prioritising and supporting climate mitigation related action for the Residential and Transport sectors. This alternative would be relevant to the county of Fingal County. The alternative would cover the period from 2024 to 2029 (the duration of the prospective LACAP).
Alternative 2 - The Holistic Approach: Adopt a multi-pronged approach and focus on a range of priority areas to mitigate against and adapt to climate change impacts.	This alternative involves developing a LACAP that has a balanced focus on both climate mitigation and adaptation across several theme areas and all socio-economic sectors.	This is a viable alternative that would have enhanced potential to reduce GHG emissions across multiple sectors, potential to offset GHG emissions, and greater potential to protect the local community and the environment from climate change related risks. Climate mitigation and adaptation actions across a wide breath of theme areas would be supported by the LACAP. This alternative would be relevant to the county of Fingal County. The alternative would cover the period from 2024 to 2029 (the duration of the prospective LACAP).
Alternative 3 - The Holistic and Participatory Approach (Current Draft LACAP): Adopt a multi-pronged approach - that has a strong community engagement emphasis - and focus on a range of priority areas to mitigate against and adapt to climate change impacts.	This alternative involves developing a LACAP that has a balanced focus on both climate mitigation and adaptation across several theme areas and all socio-economic sectors, and which has a strong community engagement emphasis, which underpins, supports and drives the climate action contained in the plan.	This is a viable alternative that would have enhanced potential to reduce GHG emissions across multiple sectors, potential to offset GHG emissions, and greater potential to protect the local community and the environment from climate change related risks. Climate mitigation and adaptation actions across a wide breath of theme areas would be supported by the LACAP. The range of climate mitigation and adaptation actions defined in the LACAP is likely to have better community level and organisational support given its strong community engagement emphasis. This alternative would be relevant to the county of Fingal County. The alternative would cover the period from 2024 to 2029 (the duration of the prospective LACAP).

6.5 Evaluating the Environmental Effects of Reasonable Alternatives

An evaluation of the potential effects of the reasonable alternatives on the baseline environment has been carried out in accordance with the SEA Directive and best practice guidelines. An evaluation matrix has been developed to facilitate the evaluation of the environmental effects of reasonable alternatives on SEOs relating to each Environmental Component. This evaluation matrix is presented in Table 6-2.

Potential effects of the reasonable alternatives have been categorised as follows in the matrix:

- Potential Positive Environmental Impact (indicated in the matrix by a '+').[67]
- Potential Negative Environmental Impact (indicated in the matrix by a '-').[68]
- Potential Positive and Negative Environmental Impacts (indicated in the matrix by a '+/-').
- Uncertain Environmental Impact ((indicated in the matrix by a '?').
- Neutral, No or Insignificant Environmental Impact (indicated in the matrix by a '0').

[67] Potential Positive Environmental Impacts are defined as having the potential to support the achievement of an SEO.
[68] Potential Negative Environmental Impacts are defined as having the potential to hinder the achievement of an SEO.

Table 6-2: Evaluation of the Environmental Effects of Reasonable Alternatives

Environmental Component	SEO Code	Alternative 1 - The Pareto Approach (A1)	Alternative 2 - The Holistic Approach (A2)	Alternative 3 - The Holistic and Participatory Approach (Current Draft LACAP) (A3)	Commentary
Population & Human Health	PHH1	+/-	+/-	+/-	All alternatives considered will support the achievement of this SEO to some degree by promoting sustainable transportation and a modal shift that will have the benefit of reducing vehicle emissions. A3 will deliver these benefits more effectively however given the community engagement emphasis associated with this alternative. All alternatives will likely support active travel related development that may have some degree of adverse effect on population and/or human health through the generation of construction phase dust, noise or congestion in the absence of appropriate mitigation.
	PHH2	0	+	+	A2 and A3 are more holistic in nature and are likely to define specific nuanced and carefully balanced action that aligns with economic development objectives defined in the CDP and supports the achievement of this SEO.
Biodiversity, Flora & Fauna	B1	0	+	+	A2 and A3 will define specific action supporting the enhancement of biodiversity and the protection of biodiversity from climate change risks, including nature based solutions. A1 will strongly emphasize reducing GHG emissions associated with the Residential and Transport sectors. It is less likely this alternative would define a wide range of climate adaptation measures that would fully protect biodiversity from climate change risks.
	B2	0	+	+	
	B3	0	+	+	
	B4	0	+	+	
	B5	0	+	+	
Landscape, Seascape & Visual Amenity	L1	-	+/-	+/-	All alternatives have the potential to support development that may have a negative impact on landscape character or visual amenity in absence of any mitigation. A2 and A3 are more balanced in nature and are likely to support nature based solutions, greenspace development and sustainable urban drainage systems which may contribute positively to landscape character or visual amenity.
	L2	-	+/-	+/-	
Cultural Heritage - Archaeology & Architectural	CH1	0	+	+	A1 is less likely to define wide ranging climate adaptation related action that would protect cultural heritage, archaeology and architectural features from climate change risks.

Environmental Component	SEO Code	Alternative 1 - The Pareto Approach (A1)	Alternative 2 - The Holistic Approach (A2)	Alternative 3 - The Holistic and Participatory Approach (Current Draft LACAP) (A3)	Commentary
					A2 and A3 are more balanced in nature and will likely define heritage climate adaptation action which will protect heritage resources from climate change risks.
Soils	S1	-	-	-	Each of the alternatives are likely to support some degree of development that may be impact the receiving soils environment in the absence of mitigation.
Land Use	LU1	-	+/-	+/-	All alternatives have the potential to support development that may have a negative impact on land use characteristics in the absence of mitigation. A2 and A3 are more balanced in nature and are likely to support wide ranging positive actions that could lead to improving land use value and characteristics, including actions underpinned by nature based solutions.
Air Quality and Noise	AQN1	+	+	+	Each alternative will deliver to a certain degree in relation to this by promoting sustainable transportation and a modal shift. A3 will deliver most effectively in this regard given the strong community engagement component associated with this alternative.
	AQN2	+/-	+/-	+/-	A1, A2 and A3 are all likely to support the development that may give rise to local air quality impacts - as a result of the generation of airborne dust during construction activities - in absence of any mitigation. At the same, each of these alternatives will spur modal shift that may result in positive local air quality impacts by reducing the level of vehicle related emissions.
	AQN3	-	-	-	A1, A2 and A3 are all likely to support the development that may give rise to noise impacts during the construction phase of the development in absence of any mitigation.
Water	W1	-	+/-	+/-	Each alternative is likely to lead to development that could potentially have an adverse impact upon surface water, groundwater or bathing water quality in absence of any mitigation. A2 and A3 are more likely to promote the development of nature based solutions and sustainable urban drainage systems that could result in positive effects on water quality. These options will also support the implementation of climate adaptation measures that would reduce the risk to water quality associated with climate change risks.
	W2	-	+/-	+/-	
	W3	-	+/-	+/-	
	W4	0	+	+	
	W5	-	+/-	+/-	

Environmental Component	SEO Code	Alternative 1 - The Pareto Approach (A1)	Alternative 2 - The Holistic Approach (A2)	Alternative 3 - The Holistic and Participatory Approach (Current Draft LACAP) (A3)	Commentary
					A2 and A3 are more are more likely to define climate adaptation action, and specifically flood resilience related action, which would better support the achievement of W4 and conformance with Flood Risk Management Guidelines.
Material Assets	MAI1	-	-	-	A1, A2 and A3 are all likely to support development that may have a potential negative impact on infrastructure, including existing road infrastructure, in the absence of appropriate mitigation measures.
	MAI2	-	-	-	
	MAI3	+	+	+	All alternatives are likely to contain a suite of climate actions that are supportive of sustainable transportation.
	MAI4	0	+	+	A1 will place a strong emphasis on reducing GHG emissions associated with the Residential and Transport sectors and is likely to place less emphasis on reducing lifecycle GHG emissions associated with promoting better waste/resource management and circularity in the economy. A2 and 3 are likely to contain a wide range of climate action, including circular economy related actions that will better support efficient waste management and a reduction in resource related lifecycle GHG emissions.
	MAI5	0	+	+	A1 will place a strong emphasis on reducing GHG emissions associated with the Residential and Transport sectors and is likely to place emphasis on reducing lifecycle GHG emissions associated with promoting water use efficiency. A2 and 3 are likely to contain a wide range of climate action, including actions that will better support efficient water use and management that would have the benefit of reducing lifecycle GHG emission associated with water use to some degree.
Tourism & Recreation	TR1	-	+/-	+/-	Each alternative is likely to lead to some degree of development involving construction activity that may impact tourism and recreation amenity in the absence of appropriate mitigation. Such construction may need to take place at locations that are sensitive based on their amenity and recreational value, including high amenity parkland and coastal locations. A2 and A3 are both likely to support climate action that positive impacts on tourism and recreation amenity, including climate action that focusses on nature based solutions and biodiversity/protected site protection and enhancement.

Environmental Component	SEO Code	Alternative 1 - The Pareto Approach (A1)	Alternative 2 - The Holistic Approach (A2)	Alternative 3 - The Holistic and Participatory Approach (Current Draft LACAP) (A3)	Commentary
Climate Change	CF1	+	+	+	A1, A2 and A3 all support the achievement of climate change related SEOs to some extent. A3 has the best potential to deliver effective climate action given its holistic, wide encompassing nature; and given its strong community engagement emphasis, which supports better participation in climate action at community level.
	CF2	+	+	+	
	CF3	+	+	+	
	CF4	+	+	+	
Inter-relationships	IR1	0	+	+	A3 is likely to support maintaining and enhancing human health and eco-system processes the most given its holistic and well balanced nature and community engagement emphasis.

6.6 Reasons for Choosing the Preferred Plan

Alternative 1 - The Pareto Approach - will lead to some positive environmental effects and will result in the reduction of GHG emissions in the sectors that contribute most in terms of GHG emission in the County - the Residential and Transport sectors. It is less likely that this alternative will deliver the wide-ranging climate mitigation and offsetting related action required to fully realise GHG emission reduction potential in the County. It is also less likely this alternative would define a wide range of climate adaptation measures that would fully protect biodiversity, heritage resources, environmental receptors and people from climate change risks. This alternative approach may generate several negative environmental effects, which would not be counterbalanced by the positive environmental effects associated with Alternatives 2 and 3.

Alternative 2 - The Holistic Approach - and Alternative 3 - The Holistic and Participatory Approach - will both broadly deliver suitably wide ranging and effective climate action. These alternatives have the potential to generate multiple positive environmental effects, including a reduction in GHG emissions at organisational, community and sectoral levels, in addition to a variety of other environmental benefits. These alternatives will place a balanced emphasis on both climate mitigation and adaptation action, ensuring climate change related environmental risks are adequately understood and managed at community level.

Alternative 3 has the best potential to deliver effective climate action given its holistic, wide encompassing nature; and given its strong community engagement emphasis, which supports better participation in climate action at community level. Alternative 3 has better potential there to fully realise potential environmental effects than Alternative 2.

Reasonable Alternative 3 - The Holistic and Participatory Approach - therefore constitutes the preferred alternative or preferred plan.

6.7 Data Gaps and Technical Limitations relating to the Identification and Evaluating Reasonable Alternatives

There were no data gaps or technical limitations that inhibited the ability of the project to identify and evaluated reasonable alternative being considered at high level during the plan making process.

7. EVALUATION OF THE ENVIRONMENTAL EFFECTS OF PLAN IMPLEMENTATION

7.1 Introduction

An evaluation of the potential effects of the Preferred LACAP on the baseline environment as characterised and described in Section 4 of this report has been carried out and is documented in this section of the report. This evaluation has been carried out against the Strategic Environmental Objectives (SEOs) established for the aspects of the baseline environment which are likely to be significantly affected by the Draft LACAP. These SEOs are documented in Section 5 of this report.

7.2 Evaluation of the Environmental Effects of Plan Implementation

A detailed evaluation of the potential effects of the Preferred LACAP on the baseline environment has been carried out in accordance with the SEA Directive and best practice guidelines. An evaluation matrix has been developed to facilitate the evaluation of the Preferred LACAP on SEOs relevant to each Environmental Component. An explanation of the approach and methodology for this detailed evaluation and completed evaluation matrices for each Draft LACAP Theme Area are contained in Appendix 3 of this report.

An overview of the key environmental effects the Draft LACAP may have on Environmental Components has been presented in Table 7-1.

The following should be noted in relation to the evaluation undertaken:

- The evaluation is strategic and high-level in nature given the strategic nature of the Draft LACAP. A precise evaluation of potential environmental effects cannot be carried out due to a lack of exact detail on actions and development that will be supported by the Draft LACAP.
- Environmental effects of the Draft LACAP have been described in accordance with descriptive terminology defined in the Environmental Protection Agency's guidance document entitled 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' (2022).
- The evaluation considers all potential direct, indirect/secondary, cumulative[69], synergistic[70], short, medium and long-term, permanent and temporary, positive and negative environmental effects.
- The evaluation considers inter-relationships and interactions between one Environmental Component and another which can result in an environmental impact.
- The evaluation considers all potential environmental effects arising from unforeseen abnormal events.
- The evaluation considers potential transboundary effects.
- The potential environmental effects described are the potential effects that could occur with the adoption of any environmental mitigation measures.

[69] The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.
[70] The addition of effects to create a total effect greater than the sum of the individual effects so that the nature of the final impact is different to the nature of the individual impact.

Table 7-1: Overview of the Key Environmental Effects of Plan Implementation

Key Environmental Effect	Main Relevant Environmental Component/s
The variety of climate actions defined in the plan, including organisational and community based actions are likely to generate multiple, slight positive effects on climate - having regard to the share of GHG emission reductions that can be supported via each individual action relative to national GHG emission reduction targets and requirements.	CC, AQN.
The plan is broadly supportive of different forms of community and local area based renewable energy development, which will have a positive effect on the climate environment.	CC, AQN.
In the absence of appropriate mitigation, community and local area renewable energy development that might be supported by plan actions, including any associated ancillary and linear infrastructure, has the potential to have a variety of unintended and potentially significant negative environmental effects however, including effects on local human receptors, biodiversity, landscape character and visual amenity, and the receiving noise environment.	PHH, BFF, L, AQN.
The plan supports the increased use of light-emitting diode (LED) lighting potentially across a wide geographic area. In absence of appropriate mitigation, the wide use of such lighting may lead to adverse effects on sensitive nocturnal species.	BFF.
Several plan actions are supportive of the upgrading/retrofitting of buildings to improve energy performance. In the absence of appropriate mitigation, such actions may have unintended and potentially significant negative effects on buildings that constitute protected structures, or on the context in which such protected structures of architectural or cultural heritage merit sit.	CH.
The plan supports the carrying out of a range of flood alleviation and resilience actions, including development and maintenance related actions. These range of actions will generate positive environmental effects on water quality, hydrology and biodiversity. The delivery of this action has the potential to reduce flood risk and prevent flood events. Reducing flood risk can generate significant, positive effects for a variety of environmental receptors that could be negatively impacted by flood events; including human receptors, ecological receptors and cultural heritage assets.	W, BFF, PHH, CH.
The carrying out of the range flood alleviation and resilience action contained in the plan has the potential to create unintended and potentially significant negative environmental effects in the absence of appropriate mitigation, including effects on water quality and the hydrology of water bodies; biodiversity, including flora and fauna reliant on aquatic eco-systems and the receiving air, noise and human environments (due to construction related impacts).	W, BFF, AQN, PHH.
The plan supports the carrying out of a variety of coastal protection related action, including action intended on mitigating coastal flood or erosion risk. These range of actions have the potential to have positive effects on biodiversity and water quality. The delivery of this action has the potential to reduce flood risk and prevent flood events, generating positive effects on a range of	BFF, W, S.

Key Environmental Effect	Main Relevant Environmental Component/s
environmental receptors. Such action will also reduce the risk of coastal erosion processes, which will positively affect the soils environment present at coastal locations generally.	
The carrying out of coastal protection related action contained in the plan has the potential to create unintended and potentially significant negative environmental effects in the absence of appropriate mitigation, including effects on water quality and the hydrology of marine and estuarine water bodies; biodiversity, including flora and fauna reliant on aquatic eco-systems and the receiving air, noise and human environments (due to construction related impacts).	W, BFF, AQN, PHH.
The plan contains a set of actions designed to promote better resource management and the circular economy at organisational, community and local area level. This action, if implemented effectively, is likely to have some degree of environmental effect, as it will support proper waste management, reduce the risk of waste related environmental pollution or nuisance, and promote material circularity and resource efficiency, and consequently a reduction inf material production related lifecycle GHG emissions.	MA, W, S, PHH, CC.
The inappropriate or improper implementation of waste management related action could have unintended, negative environmental and nuisance related effects, including effects on the receiving human, air, noise, water, soils and traffic environment.	PHH, AQN, N, S, MA.
The plan supports the development of community and local area level nature based solutions - in response to climate related risk - which are supportive of biodiversity protection and enhancement. This action has the potential to have wide ranging slight to significant positive effects on biodiversity, flora and fauna.	BFF.
The plan supports green infrastructure development broadly. In absence of appropriate design and mitigation, the development of green infrastructure that is of a significant scale or extent could potentially result in negative environmental effects, including negative construction related effects, negative effects on biodiversity or negative effects on cultural heritage assets.	PHH, W, S, AQN, BFF, CH.
The plan defines a variety of climate adaptation related actions designed to protect human receptors, biodiversity and heritage assets from the impacts of climate change influenced events such as flooding or wildfires. The implementation of this action has the potential to generated positive effects for these environmental receptors - by reducing the risk of such events impinging on or damaging these receptors.	PHH, BFF, CH.
Plan actions support the development, expansion and management of safe active travel networks. The delivery of an expanded safe active travel network has the potential to promote the use of sustainable and active travel modes in the community, encourage modal shift, reduce traffic related risks and support the reduction of vehicle related emissions - thereby positively impacting population and human health, local air quality and the climate environment.	PHH, AQN, CC, LU, MA.

Key Environmental Effect	Main Relevant Environmental Component/s
Plan actions support the development, expansion and management of safe active travel networks. In the absence of appropriate design and mitigation, the development of active travel networks, depending on the particular nature, scale and extent of such development, could potentially have slight to significant negative effects on the receiving human, noise, air, water, soils, biodiversity, cultural heritage or existing traffic and transport environments.	PHH, AQN, W, S, BFF, CHH, MA, LU.
Plan actions support the expansion of the Electric Vehicle (EV) charging network and active travel parking in the local authority functional area. The successful delivery of this action has the potential to underpin the use of EV vehicles and active travel modes at community and local area level and support the reduction of vehicle related emissions, thereby positively impacting on local air quality, the climate and population and human health.	AQN, CC, PHH.
Plan actions support the expansion of EV charging network and active travel parking across the breadth of the local authority functional area. In the absence of appropriate mitigation, the construction of additional charging point infrastructure could have a range of slight to significant negative environmental effects on the receiving human, noise, air, water and biodiversity and cultural heritage components present in a particular local context.	PHH, AQN, W, BFF.

7.3 Potential Cumulative Effect of the Draft LACAP in combination with other Plans and Projects

The cumulative effects of a plan are an important consideration in SEA given that a plan may envisage the occurrence of many different actions and developments taking place in parallel with each other in a particular location/geographic area over a particular time period. One benefit of SEA is being able to evaluate the in-combination environmental effects of multiple envisaged projects.

The following types of cumulative effects can occur due to the implementation of a plan:

- Intra-plan Cumulative Effects - Individual environmental effects associated with a single plan interacting and combining to create a larger environmental effect.
- Inter-plan Cumulative Effects - The environment effects of a plan and the environmental effects of another plan interacting and combining to create a larger environmental effect.

7.3.1 Intra-plan Cumulative Effects

The evaluation of Draft LACAP intra-plan cumulative effects has been embedded into the detailed evaluation of environmental effects presented in Appendix 3. Potential intra-plan cumulative effects are presented below:

- The LACAP provides for actions which support the delivery of development and infrastructure projects (in the form of flood resilience, coastal protection, active travel, renewables, nature based solutions projects) which could contribute - if incorrectly managed - to cumulative impacts through construction related environmental effects (site run-off, dust, noise pollution etc.).
- Increased access to sites - such as nature reserves, beaches, greenspaces - could be facilitated by the combination of actions within the LACAP. Therefore, there could be cumulative effects related to this, particularly along waterways.
- The LACAP supports a variety of actions relating to flood resilience and alleviation projects, which could introduce catchment level cumulative impacts on water quality, flow and hydrological regime/characteristics.
- The effects of multiple LACAP actions have the potential to combine to robustly support a shift to sustainable and active travel modes of transport. This has the potential to generate a variety of cumulative positive environmental effects, including positive effects on local air quality, human health, biodiversity and climate.
- The variety of positive effects of associated with the implementation of plan actions have the potential to combine and interact and have long-term and wide encompassing positive environmental effects on a variety of environmental components, including population and human health, climate biodiversity, water quality and hydrology, traffic and transport, material assets, cultural heritage and landscape and visual amenity.
- The variety of positive climate related effects associated with plan actions have the potential to combine to create a larger and very significant positive effect on climate - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.

The potential cumulative environmental effects listed above have the potential to extend beyond the boundary of the local authority functional area.

Plan actions that generate positive or negative environmental effects for one environmental component have the potential to indirectly generate positive or negative environmental effects for interrelated environmental components. For example, actions supporting the delivery of SuDS will improve water quality, which in turn can have a positive effect on aquatic ecology. An assessment of impact inter-relationships and interactions is already embedded in the evaluation of environmental effects that has been carried out in this report. This ensures that there is adequate coverage of all potential environmental effects associated with the implementation of plan actions. A matrix showing the existence of potential inter-relationships between environmental components has been developed and is presented in Table 7-2 - to aid in the understanding of these relationships.

Table 7-2: Inter-relationship between Environmental Components

	Population and Human Health	Biodiversity, Flor and Faun	Landscape, Seascape and Visual Amenity	Cultural Heritage - Archaeology & Architectural	Soils	Land Use	Air Quality and Noise	Water	Material Assets	Tourism and Recreation	Climate Change
Population and Human Health											
Biodiversity, Flora and Fauna	■										
Landscape, Seascape and Visual Amenity	■	■									
Cultural Heritage - Archaeology & Architectural		■	■								
Soils	■	■									
Land Use	■	■	■	■	■						
Air Quality and Noise	■	■				■					
Water	■	■			■	■					
Material Assets	■			■		■		■			
Tourism & Recreation	■	■	■	■		■	■		■		
Climate Change	■	■		■	■	■	■	■	■		

Note: Green highlighting indicates a potential interrelationship/interaction

7.3.2 Inter-plan Cumulative Effects

Other plans and programmes that the Draft LACAP has a relationship with are identified in Section 2.5 of this report. It should be noted that all other plans programmes have been or will be subject to environmental, including SEA and AA, for the purpose of preventing and mitigating potential negative environmental effects. Potential inter-plan cumulative effects are presented below:

- Conflicts between climate targets between various organisations - however, all higher order plans such as the CDP, RSES and the National Climate Action plan are aligned with the content of the LACAP. Adaptive language could provide the flexibility to allow localised augmentations to targets to increase or align with stakeholders within the lifetime of the LACAP.
- The LACAP provides for actions which support the delivery of development and infrastructure projects (in the form of flood resilience, coastal protection, active travel, renewables, nature based solutions projects) which could contribute - if incorrectly managed - to cumulative impacts through construction related environmental effects (site run-off, dust, noise pollution etc.) in combination with development supported by other plans, including higher order plans (E.g., the CDP, LAPs, the Greater Dublin Cycle Network Plan, Framework for Alternative Fuel Infrastructure in Transport).
- Increased access to sites - such as nature reserves, beaches, greenspaces - could be facilitated by the combination of actions within the LACAP. Therefore, there could be cumulative effects related to this, particularly along waterways, in combination with other plans that support increased access to such sites (E.g., the Dublin Regional Tourism Development Strategy).
- The LACAP supports a variety of actions relating to flood resilience and alleviation projects, which could introduce catchment level cumulative impacts on water quality, flow and hydrological regime/characteristics in combination with other plans that support such projects (E.g., Flood Risk Management Climate Change Sectoral Adaptation Plan).
- The effects of multiple LACAP actions have the potential to combine to robustly support a shift to sustainable and active travel modes of transport in combination with other plans (E.g., Greater Dublin Area Cycle Network Plan, National Transport Authority's (NTA) Transport Strategy for the Greater Dublin Area 2022-2042). This has the potential to generate a variety of cumulative positive environmental effects, including positive effects on local air quality, human health, biodiversity and climate.
- The variety of positive effects of associated with the implementation of plan actions - in parallel with actions defined in other plans and programmes that are likely to generate positive environmental effects - have the potential to combine and interact and have long-term and wide encompassing positive environmental effects on a variety of environmental components, including population and human health, climate, biodiversity, water quality and hydrology, traffic and transport, material assets, cultural heritage and landscape and visual amenity.
- The variety of positive climate related effects associated with plan actions - in parallel with actions defined in other plans, including higher order plans, that are likely to generate positive effects on climate (E.g., the CAP23) - have the potential to combine to create a larger and profound positive effect on climate - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.

The potential cumulative environmental effects listed above have the potential to extend beyond the boundary of the local authority functional area.

8. MITIGATION MEASURES

Potential negative environmental effects that may occur as a result of the implementation of the Draft LACAP (without considering any mitigation) have been identified in Section 7 of this report. The SEA Directive requires that mitigation measures to prevent, reduce and as fully as possible offset any potential significant negative environmental effects due to the implementation of a plan are defined. This section of the report describes the mitigation measures to ameliorate the potential negative environmental effects that may occur as a result of the implementation of the Draft LACAP.

In this case, the following forms of mitigation have been adopted to ameliorate the negative environments of the Draft LACAP:

- Mitigation through consideration of alternatives.
- Mitigation through integration of environmental considerations into the LACAP.
- Mitigation through consideration of development management standards/environmental protection objectives contained in the CDP.

8.1 Mitigation through consideration of alternatives

A number of alternatives were considered at an early stage in the process. The environmental effects of these alternatives were evaluated during the SEA process. The preferred Draft LACAP was chosen over the other alternative options considered for the following reasons:

- **Alternative 1 (considered) - The Pareto Approach -** will lead to some positive environmental effects, however it is less likely that this alternative will deliver the wide ranging and effective climate mitigation and adaptation action likely to result from implementation of the preferred Draft LACAP. This alternative approach may also generate several negative environmental effects, which would not be counterbalanced by the potential positive environmental effects associated with the preferred Draft LACAP.
- **Alternative 2 (considered) - The Holistic Approach -** and the preferred Draft LACAP - The Holistic and Participatory Approach - will both broadly deliver suitably wide ranging and effective climate action. These alternatives both have the potential to generate multiple positive environmental effects. Both alternatives have equal potential to generate some negative environmental effects.
- **Alternative 3 (preferred) - Draft LACAP -** was selected over the other Alternative 2 however as it has the best potential to deliver effective climate mitigation and adaptation action and positive environmental effects, given its strong community engagement emphasis, which supports better participation in climate action at community level.

8.2 Mitigation through integration of environmental considerations into the Plan

The plan making process was carried out in parallel with the SEA and AA processes. Regular communication and interaction took place between the environmental assessment team and the plan making team. Environmental considerations that came to light during the SEA and AA processes, including consultation processes, were regularly communicated to the plan making team during the plan making process. As necessary, environmental mitigation measures to ameliorate the potential negative environmental effects of implementing the Draft LACAP were developed and then integrated into the Draft LACAP. Much of the environmental mitigation was embedded in the plan early on in the process as a result of this. This process was carried out in an iterative manner to ensure optimal plan making and environmental outcomes. Environmental considerations were also integrated into the plan so as to facilitate maximizing identified positive environmental effects of the Draft LACAP.

Mitigation measures were suggested that maximize the co-benefits of climate action for other environmental components such local air quality, human health, biodiversity, water quality and other interrelated areas (i.e., win-win solutions).

Additional text clarifying environmental protection related obligations and environmental enhancement opportunities has been attached to a variety of defined actions in the plan. This text has been shaped to ensure that environmental considerations are appropriately taken into account during plan implementation. Again, This text has also been shaped to ensure plan implementation generates the minimum level of negative environmental effects and the maximum level of positive environmental effects. These text additions are presented in Table 8-1.

A set of integrated environmental protection and enhancement considerations have been defined that Decarbonising zone opportunities must accord with. These considerations are presented in Table 8-2.

Several environmental governance principles were established to ensure plan implementation generates the minimum level of negative environmental effects and the maximum level of positive environmental effects. These environmental governance principles shall underpin and guide plan implementation and shall apply to and be integrated into all actions/activities which result due to the implementation of the plan. These principles are defined in Table 8-3.

For clarity and succinct, only the defined mitigation measures have been presented in this section of the report. The reader is asked to refer to Appendix 3.2 - Detailed Evaluation of Environmental Effects of Plan Implementation, for an understanding of the potential environmental effects associated with the actions and opportunities which are being mitigated (in the case of negative environmental effects) or maximized (in the case of positive environmental effects).

These environmental mitigation measures to be integrated into the Draft LACAP will prevent, reduce and fully offset any potential significant negative environmental effects, and will maximize potential environmental benefits and co-benefits of the Draft LACAP.

Due to the inter-relationship between various environmental components, environmental mitigation measures defined for one component can also serve to benefit another environmental component.

Table 8-1: Proposed Environmental Mitigation Measures - Additional text to be included in plan actions clarifying environmental protection related obligations and environmental enhancement opportunities

Draft LACAP Action Reference	Draft LACAP Action	Mitigation Measure
E8	Engage with independent BREEAM assessor and utilise Building Assessment Methodology throughout delivery of Swords Cultural Quarter flagship project. BREEAM is a leading validation and certification system for sustainable built environment.	Attach the following text to the action: Engage with independent BREEAM assessor and utilise Building Assessment Methodology throughout delivery of Swords Cultural Quarter flagship project. having appropriate regard to environmental sensitivities such as amenity value, cultural heritage and archaeology that may be impacted by any built development at the Swords Cultural Quarter which is supported by the BREAMM process. BREEAM is a leading validation and certification system for sustainable built environment.
E14	Targeted LED upgrades across smaller FCC premises, not suitable for EPC	Attach the following text to the action: 'while ensuring the lumen levels and spectral range are maintained or reduced/controlled to avoid effects to biodiversity.'
E16	Renewal of remaining 1.5% of public lighting stock & pitch lighting	Attach the following text to the action: 'while ensuring the lumen levels and spectral range are maintained or reduced/controlled to avoid effects to biodiversity.'
E17	Continue to make energy efficiency retrofits to social housing under the DHLGH-supported Energy Retrofit Programme. Ensure that all of FCC's social housing stock has a B2 or cost optimal energy rating by 2030.	Attach the following text to the action: 'having due regard to environmental sensitivities such as local human receptors, European sites and biodiversity, and the need to appropriately protect and conserve protected structures in accordance with relevant protected structures regulations.'
E18	Complete Pilot programme in Strandmill Estate, Portmarnock, in conjunction with SEAI and REIL offering retrofit upgrades to private homeowners, availing of economies of scale when coupled with public housing upgrades. Partially funded by SEAI government grants.	Attach the following text to the action: Complete Pilot programme in Strandmill Estate, Portmarnock, in conjunction with SEAI and REIL offering retrofit upgrades to private homeowners, availing of economies of scale when coupled with public housing upgrades; having due regard to the need to appropriately conserve and maintain any protected structures subject to upgrades in accordance with relevant protected structures regulations, and environmental sensitivities such as local human receptors, European sites and biodiversity. Partially funded by SEAI government grants.

Draft LACAP Action Reference	Draft LACAP Action	Mitigation Measure
E25	Deliver Blanchardstown District Heating Scheme	Attach the following text to the action: 'having due regard to the need to protect sensitive aspects of the receiving environment, such as water bodies, biodiversity, flora and fauna, European sites and local population, from potential negative effects of development, including linear development associated with the project.'
E27	Install PV panels on suitable Council roofs such as civic offices, libraries and community buildings	Attach the following text to the action: 'where it is confirmed through a glint and glare assessment that such solar development will not have any potential glint and glare impact on sensitive receptors, or otherwise, where it is confirmed that such solar development constitutes exempted development under the Planning and Development Regulations by virtue of its size or location outside a Solar Safeguarding Zone, and having due regard to all other environmental sensitivities that could be impacted by such development.'
E28	Develop Wind Energy Strategy	Attach the following text to the action: 'having due regard to environmental sensitivities such as archaeology, European sites, biodiversity, the noise environment, landscape character, visual amenity etc.'
E32	Conduct research and develop case studies from the Council's historic building stock that undertake pre- and post- works energy performance assessments and devise of appropriate and sensitive retrofitting/energy upgrading of traditional buildings to inform works to other Council-owned properties and to guide private owners	Attach the following text to the action: 'having appropriate regard to the need to protect and conserve the architectural or cultural heritage value that may be associated with such buildings, and protected species that may be present in such buildings.'
E33	Promote and encourage routine maintenance and good housekeeping to maintain the older building stock of the county in good condition in order to reduce energy consumption and extend the building's life-cycle (e.g. Fingal's Stitch in Time Grant, National Schemes of Built Heritage Investment Scheme, Historic Structures Fund, Community Monument Fund).	Attach the following text to the action: 'having appropriate regard to the need to protect and conserve the architectural or cultural heritage value that may be associated with such buildings, and protected species that may be present in such buildings, and all other environmental sensitivities that may be affected by such works such as European sites and biodiversity.'
T1	Increase the meterage of high quality walkways in the county and improve the meterage of existing walkways in the county.	Attach the following text to the action:

Draft LACAP Action Reference	Draft LACAP Action	Mitigation Measure
		'having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality and cultural heritage.'
T2	Increase the km of protected cycle lanes and off road cycle lanes and greenways in the county annually; in line with the Greater Dublin Cycling Network Plan, and the FCC Greenway Plan - including Fingal Coastal Way, the Sutton to Malahide Cycleway, the Broadmeadow Way, Church Fields Link Road, and the Royal Canal Urban Greenway, etc.	Attach the following text to the action: 'having due regard to environmental sensitivities such as the receiving water environment, local air quality, biodiversity, European sites and cultural heritage.'
T3	Deliver/alter infrastructure to improve connectivity/permeability in order to promote active travel	Attach the following text to the action: 'having due regard to environmental sensitivities such as European sites and biodiversity.'
T4	Deliver new pedestrian / cycling road crossings, which give priority to pedestrians and cyclists. Develop and implement a work programme for the replacement of pedestrian crossings with ones which give priority to pedestrians & cyclists.	Attach the following text to the action: 'having due regard to environmental sensitivities such as European sites and biodiversity.'
T5	Install junction build outs in accordance with Design Manual for Urban Roads & Streets 2020, increasing safety to users.	Attach the following text to the action: 'having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality and cultural heritage.'
T11	Identify opportunities for reallocation of existing road space to promote active travel and improve public space.	Reallocate road space to provide for sustainable travel alternatives, having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality and cultural heritage.
T12	Enhancement / reallocation of roads & street space to promote active travel and improve public space. Implement in all 3 LEAs	Attach the following text to the action: 'having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality and cultural heritage.'
T18	Implement Safe Routes to School programme	Attach the following text to the action:

Draft LACAP Action Reference	Draft LACAP Action	Mitigation Measure
		'having due regard to environmental sensitivities such as local human receptors, Biodiversity, European sites, water quality and hydrology, and amenity value etc.'
T20	Support the development and expansion of existing public transport services including MetroLink, BusConnects and DART expansion to Balbriggan	Attach the following text to the action: 'whilst advocating and exerting influence to ensure such projects promote climate action co-benefits and do not contravene relevant environmental protection criteria or cause significant negative environmental effects.'
T21	To facilitate the provision of Park and Ride facilities in appropriate locations at transport nodes and along strategic transport corridors in accordance with the NTA Strategy, and encourage the inclusion of EV charge points and bike parking.	Attach the following text to the action: 'whilst advocating and exerting influence to ensure such projects promote climate action co-benefits and do not contravene relevant environmental protection criteria or cause significant negative environmental effects.'
T24	Implement the DLA EVCP strategy through delivery of sufficient EVCP's	Attach the following text to the action: 'having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality and cultural heritage.'
T25	Expand availability of EV charging points for Council staff and operational vehicles	Attach the following text to the action: 'having due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality and cultural heritage.'
T26	Provide EV charging infrastructure (in addition to 20% charge points) to development plan standards, for new social housing developed by the Local Authority. Provide Electric vehicle charge points in car parking for new Fingal Corporate buildings.	Attach the following text to the action: 'When delivering this action, have due regard to environmental sensitivities such as the receiving water environment, biodiversity, European sites, local air quality and cultural heritage, when carrying out charging point infrastructure development.'
F3	To engage with the Fingal Coastal Liaison Group with the integration of adaptation strategies into planning policies, etc.	Attach the following text to the action: 'provided such strategies are unlikely to cause significant negative environmental effects.'
F4	Develop and implement Coastal Protection Plan for Portrane	Attach the following text to the action:

Draft LACAP Action Reference	Draft LACAP Action	Mitigation Measure
		'having due regard to the need to promote nature based solutions and Sustainable Drainage Systems, and environmental sensitivities associated with coastal areas such as the receiving marine environment, biodiversity, European sites and recreation and amenity value.'
F5	Progress Flood Alleviation schemes in conjunction with the OPW - including Mill Stream Skerries, Bissett Strand and The Green Malahide Village, Portmarnock Bridge.	Attach the following text to the action: 'having due regard to the need to promote nature based solutions and Sustainable Drainage Systems, and environmental sensitivities at these locations, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology, visual amenity and recreation and amenity value.'
F6	Continued engagement with the OPW to progress further studies of areas within Fingal at risk of flooding, and development of suitable schemes such as Strand Road Sutton and Santry	Attach the following text to the action: 'having due regard to the need to promote nature based solutions and Sustainable Drainage Systems, and environmental sensitivities at these locations, including water quality, biodiversity, European sites, riparian corridors and aquatic ecology, visual amenity and recreation and amenity value.'
F7	Progress appropriate minor works schemes to resolve recurring flood issues, where possible, ensuring the schemes are designed and implemented to promote SUDs / nature based solutions.	Attach the following text to the action: '/protection of biodiversity and European sites and avoidance of habitat fragmentation.'
F11	Restore St Ita's wetlands to maximise water attenuation capacity and nature conservation benefits	Attach the following text to the action: 'having due regard to the need to protect other environmental sensitivities. Ensure the works are designed and implemented in a manner that: 1. Does not result in the occurrence of significant adverse environmental effects and, 2. Promotes SuDS/nature based solutions/protection of biodiversity and avoidance of habitat fragmentation. 3. Ensures all excavated material defined as a waste is properly managed in accordance with the provisions of the Waste Management Act.'

Draft LACAP Action Reference	Draft LACAP Action	Mitigation Measure
F17	Ensure the inclusion of water conservation and SuDS measures in all developments, to reduce the level of surface water run-of, improve water quality and contribute to adaptation to climate change through natural based solutions.	Attach the following text to the action: 'Ensure all SuDS related construction works are designed and implemented in a manner that does not result in the occurrence of significant adverse environmental effects and does not result in adverse effects to European sites and biodiversity.'
F18	Drive the implementation of SuDS in FCC Capital projects, including new builds, retrofits etc, and monitor the level of implementation.	Attach the following text to the action: 'Ensure all SuDS related construction works are designed and implemented in a manner that does not result in the occurrence of significant adverse environmental effects and does not result in adverse effects to European sites and biodiversity.'
F23	Assess Resilience of Bridge Infrastructure vulnerable to impact of climate change	Attach the following text to the action: 'having appropriate regard to the need to appropriately protect and conserve protected structures in accordance with relevant protected structures regulations.'
F26	Use the findings of the Fingal Cultural Heritage & Climate Risk Assessment to prioritise and pilot adaptative and palliative measures for heritage assets in Council ownership	Attach the following text to the action: 'having due regard to need to protect and enhance heritage assets, and prevent negative impacts on protected species, including bats.'
N1	Prepare and implement multi-functional management plans for the Rogerstown, Malahide and Baldoyle Estuaries and their surrounding lands	Attach the following text to the action: 'having due regard to environmental sensitivities at these locations, including water quality, biodiversity, European sites, wetland habitat, aquatic ecology, visual amenity and recreation and amenity value.
N4	Develop SUDS demonstration sites in the Tolka Valley, Ward River Valley, Balbriggan town Park and Rogerstown estuary	Attach the following text to the action: 'Ensure all SuDS related construction works are designed and implemented in a manner that does not result in the occurrence of significant adverse environmental effects.'
N13	Restore marine ecosystem along Fingal coast by supporting restoration projects of Oyster beds, Shellfish beds, Seagrass beds and Kelp stands	Attach the following text to the action:

Draft LACAP Action Reference	Draft LACAP Action	Mitigation Measure
		Restore marine ecosystem along Fingal coast by supporting restoration projects - designed, led and implemented by appropriately competent, trained ecologists - of Oyster beds, Shellfish beds, Seagrass beds and Kelp stands; having due regard to environmental sensitivities such as European sites and biodiversity.
N14	Prepare wetland and river restoration project for the Bog of the Ring and the Matt river corridor	Attach the following text to the action: 'having due regard to the need to protect other environmental sensitivities, and the need to ensure the works are designed and implemented in a manner that: 1. Does not result in the occurrence of significant adverse environmental effects and, 2. Promotes the protection and enhancement of biodiversity.'
R8	Assessment of Construction & Demolition Waste Management Plans for proposed developments to ensure all potential waste streams are identified at an early stage and appropriate measures put in place to promote prevention, reuse, recycling and recovery of waste in line with the waste hierarchy. The segregation and management of different waste streams is also assessed.	Attach the following text to the action: 'having due regard to environmental sensitivities such as European sites and biodiversity, and water and soil quality.'
R13	Prepare Circular Cities Action Plan	Attach the following text to the action: 'having due regard to need to ensure all waste collection and management activities are carried out in accordance with waste management legislation and in a manner that does not cause significant negative environmental effects or nuisance.'
R14	Implement measures under the Circular Cities Action Plan	Attach the following text to the action: 'having due regard to need to ensure all waste collection and management activities are carried out in accordance with waste management legislation and in a manner that does not cause significant negative environmental effects or nuisance.'
R17	Extending opening hours in Coolmine in line with Estuary Recycle Centre	Attach the following text to the action:

Draft LACAP Action Reference	Draft LACAP Action	Mitigation Measure
		'whilst ensuring waste management activities at the facility continue to be carried out in accordance with the requirements of waste management legislation and in a manner that does not cause significant negative environmental effects or nuisance.'
R18	Expand the bring bank network (bottles, cans & textiles) throughout Fingal by a minimum of 3 sites annually, giving consideration to new areas of populations and development.	Attach the following text to the action: 'whilst ensuring these sites are appropriately located, designed and managed so as not to cause significant adverse environmental effects.'
R20	Assess Council lands & buildings for potential for renewable energy, biodiversity; green infrastructure, sustainable agriculture & other sustainable projects.	Attach the following text to the action: 'having appropriate regard to relevant planning and environmental protection criteria.'
R21	Develop renewable energy, green infrastructure, biodiversity, sustainable agriculture & other sustainable projects on Council lands & buildings.	Attach the following text to the action: 'having due regard to all environmental sensititives that may be impact by significant development projects, including renewable energy projects, such landscape character and visual amenity, population and human health, biodiversity, European sites, noise, water and soil related sensitivities.'
C10	Promote and support SEAI's Better Energy Communities and Sustainable Energy Communities	Attach the following text to the action: 'where specific supported energy efficiency and renewable energy projects will not lead to unintended negative environmental effects in a local community.'
C12	Involve residents and community groups, e.g. Tidy Towns/community garden groups, in the establishment of newly planted trees in their area, e.g. watering	Attach the following text to the action: 'having due regard to environmental sensitivities such as European sites and biodiversity.'

Table 8-2: Proposed Environmental Mitigation Measures - Integrated Environmental Considerations relating to Decarbonising Zone Opportunities suggested for inclusion in the plan

The opportunities progressed, and any associated activities and development, such as energy, heating or active travel related development, shall have due regard to the need to protect sensitive aspects of the receiving environment, including local human receptors; European sites and biodiversity; heritage features, protected structures and the context in which such features sit; and the receiving water, soils and local air quality environment.
Any opportunities progressed that result in the development of renewable energy development, such as wind turbine development or solar panel development, shall specifically have due regard to the need to protect sensitive aspects of the environment from the typical effects of such development, including avifauna effects or landscape and visual related effects, including glint and glare.
Fingal County Council will advocate and exert influence to ensure that opportunities progressed that lead to the development of additional electricity network infrastructure, including linear cable infrastructure development, by electricity network operators, does not contravene relevant planning and environmental protection criteria or cause significant negative environmental effects.
Any opportunities progressed that support the upgrade of public lighting, shall have due regard to the need to ensure the lumen levels and spectral range of such lighting are maintained or reduced/controlled to avoid effects on biodiversity.

Table 8-3: Proposed Environmental Mitigation Measures - Environmental Governance Principles suggested for inclusion in the plan - specifically the plan implementation section

Promote climate action projects that support and maximise environmental co-benefits, such as biodiversity protection and enhancement; improved air, water or soil quality; or enhanced recreation, amenity and cultural heritage value, to ensure win-win benefits are gained.
Support or facilitate climate action related projects and initiatives which seek to make improvements in soil structure, management and health by increasing soil organic carbon - which will create the environmental co-benefits of improving flood resilience by enhancing water holding capacity of soils and increasing the level of GHG sequestration associated with land use functions.
Ensure all development underpinned or supported by climate action is planned and implemented in a manner that appropriately considers the potential for environmental co-benefits, potential environmental impacts and environmental protection requirements. No climate action related development project that is likely to have a significant negative effect on the receiving environment shall be supported.
Flood and coastal defence projects, or related maintenance works, shall be carried out in a manner that promotes climate action-biodiversity related co-benefits, and shall have due regard for the protection and enhancement of rare, protected or important habitats and species.
Ensure climate action related projects are carried out in a manner that promotes climate action-cultural heritage co-benefits, and do not result in unauthorised physical damage to cultural, archaeological or architectural features, or unauthorised or inappropriate alteration of the context of sensitive cultural heritage features.
Ensure climate action related projects are carried out in a manner that promotes climate action water quality co-benefits, and align with the provisions of the Water Framework Directive and relevant River Basin Management Plan.

8.3 Mitigation through consideration of environmental protection objectives contained in the County Development Plan

In addition to the environmental mitigation measures integrated into the Draft LACAP, the development management standards and environmental protection measures defined in the CDP will serve to mitigate the environmental effects of any development proposals supported by the Draft LACAP. These development management standards/environmental protection measures have been defined for the express purpose of ensuring proper planning and sustainable development in the County. The CDP has been subject to its own SEA and AA. The Draft LACAP has been prepared having appropriate regard to the policies and objectives contained in the County Development Plan.

8.4 Conclusion

The reasonable alternative evaluation presented in Section 6 and summarised in Section 8.1 has resulted in the development of a Draft LACAP that achieves the best environmental outcomes in comparison to other reasonable alternative considered.

The adoption of the mitigation measures to be integrated into the Draft LACAP, in combination with the continued adoption of the development planning and control related environmental protection measures defined in the CDP will prevent, reduce and as fully as possible offset any potential negative environmental effects due to the implementation of the Draft LACAP. No further mitigation measures are required for the Draft LACAP.

9. MONITORING MEASURES

The SEA Directive requires that the environmental effects of the implementation of a plan are monitored in order *'to identify at an early stage unforeseen effects, and to be able to undertake appropriate remedial action.'*

A series of indicators and targets have been established for identified SEOs to enable ongoing monitoring and measurement of LACAP implementation performance, the environmental effects of the implementation of the LACAP and the efficacy of environmental mitigation measures. Such monitoring will be carried out regularly to support plan implementation.

SEO indicators are simple and effective quantifiable indicators used to measure the environmental effects of implementing the Draft LACAP and the progress of SEO objectives and targets. SEO targets set focussed, measurable aims and thresholds that the Draft LACAP can support the achievement of.

FCC are responsible for implementation of the SEA monitoring programme. The environmental effects (including positive, negative and cumulative effects) of LACAP implementation will be monitored once every year over the course of the plan's five-year lifetime. This monitoring will be carried out by the Environment and Climate Change section of FCC who will report on progress and performance the relevant SPC annually. A monitoring report will be prepared to document monitoring outcomes. This report shall be made available for public inspection.

It is recommended that LACAP monitoring and review is undertaken in parallel with CDP monitoring and review processes for efficiency and given that similar data sets will be used to measure the progress of each plan.

Where monitoring identifies that the implementation of the LACAP is having a significant negative environmental effect, an in-depth review of the LACAP should take place and the LACAP should be updated in a manner that satisfactorily mitigates these environmental effects (i.e., through the adoption of additional environmental mitigation measures.). Similarly, where monitoring indicates that potential positive environmental effects associated with LACAP implementation are not being adequately realised, the LACAP should be reviewed and updated in a manner that supports the realisation of all potential positive environmental effects, having regard to the overall vision and high-level objectives of the plan.

The SEA Monitoring Programme established for the Draft LACAP is contained in Table 9-1. This monitoring programme has been developed in accordance with EPA guidelines entitled 'Guidance on SEA Statements and Monitoring' (2020). The monitoring programme includes detail on the indicators, targets and data sources used to monitor and measure progress.

Table 9-1: SEA Monitoring Programme

Environmental Component	SEO Code	Strategic Environmental Objective	Indicators	Targets	Data Source
Overall	O1	Ensure, where appropriate, that lower-level plans and projects contribute to overall environmental monitoring processes within the County.	Lower-level plan and project accordance with the plan.	Require all lower-level plans and projects have appropriate regard to and appropriately support all action and development proposals defined in the Plan. Require that all development projects in the County appropriately align and accord with action defined in the Plan.	Review of Local Area Plans. Internal monitoring of likely significant environmental effects of development projects.
Population & Human Health	PHH1	Avoid or, minimise impacts to population and human health.	Number of spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan.	No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan.	Consultation with the Health Service Executive (HSE) and the EPA.
	PHH2	Ensure the Decarbonising Zone avoids and minimises impacts to the existing economic activities within the area and does not compromise/conflict with existing land use objectives.	Compliance of action and development supported by the plan with policies and land use objectives protective/supportive of economic development in the county defined in the County Development Plan (CDP) or County Local Area Plans.	No contravention of policies and land use objectives protective/supportive of economic development in the county defined in the CDP or County Local Area Plans. Planning permission for development proposals supported by the plan only to be granted where development complies with policies protective/supportive of economic development.	Internal monitoring of compliance with CDP Policy Objectives. Internal monitoring of likely significant environmental effects of development projects.
Biodiversity, Flora & Fauna	B1	Ensure Climate Action does not conflict with biodiversity protection, restoration and rehabilitation.	Compliance of action and development supported by the plan with policies providing for the protection and enhancement of Biodiversity and flora and fauna defined in Chapter 'Green Infrastructure and Biodiversity' of the CDP. Condition of habitats impacted by climate change (Area km^2 /length metres).	No contravention of policies providing for the protection and enhancement of Biodiversity and flora and fauna defined in Chapter 'Green Infrastructure and Biodiversity' of the CDP. Ensure no habitats are impacted by the effects of climate change. Ensure no reduction in the number of geographic distribution of species as a result of climate change effects.	Internal monitoring of compliance with CDP Policy Objectives. Internal monitoring of compliance with the County Biodiversity Action Plan. Internal monitoring of likely significant environmental effects of development projects.

Environmental Component	SEO Code	Strategic Environmental Objective	Indicators	Targets	Data Source
			Number and geographical distribution of Species or Species population trends impacted by climate change. Compliance of action and development supported by the plan with policies providing for the protection and enhancement of Biodiversity and flora and fauna defined in the County's Biodiversity Action Plan.	No contravention of policies providing for the protection and enhancement of Biodiversity and flora and fauna defined in the County's Biodiversity Action Plan. Planning permission for development proposals supported by the plan only to be granted where development complies with policy supporting biodiversity protection and enhancement.	
	B2	Ensure compliance with Habitats and Birds Directives with regard to protection of European Sites and Annexed habitats and species[71].	Condition of European Sites and annexed species.	No adverse impacts on the condition of European Sites and Annexed habitats and species as a result of plan implementation.	Internal monitoring of likely significant environmental effects of development projects. Consultation with the NPWS. Department of Housing, Local Government and Heritage report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive. Department of Housing, Local Government and Heritage's National Birds Directive Monitoring Report for the Birds Directive under Article 12.
	B3	Support Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function as stepping stones (designated or not) - are of major importance for wild fauna and flora and essential for the migration,	Condition of features of the landscape which - by virtue of their linear and continuous structure or their function as stepping stones (designated or not) - are of major importance for wild fauna and flora. Linear meters of riparian corridors enhanced with native planting.	No adverse impacts on the condition of features of the landscape which - by virtue of their linear and continuous structure or their function as stepping stones (designated or not) - are of major importance for wild fauna and flora as a result of plan implementation.	Internal monitoring of likely significant environmental effects of development projects.

[71] 'Annexed habitats and species' refer to those listed under Annex I, II & IV of the EU Habitats Directive and Annex I of the EU Birds Directive.

Environmental Component	SEO Code	Strategic Environmental Objective	Indicators	Targets	Data Source
		dispersal and genetic exchange of wild species.	Fragmentation or breaks in continuity of habitats and loss of wildlife corridors, stepping stones and connectivity (km^2). Number of developments permitted that have significant greenspace proposals.	Increase linear metres of riparian corridor enhanced with native planting. Reduce habitat fragmentation or breaks. Increase number of developments permitted that have significant greenspace proposals.	
	B4	To avoid or minimise significant impacts on semi-natural habitats, species, environmental features or other sustaining resources in designated national sites and to comply with the Wildlife Acts 1976-2012 with regard to listed species.	Condition of semi-natural habitats, species, environmental features or other sustaining resources in designated national sites. Status of listed species in the Wildlife Acts 1976 - 2012.	No adverse impacts on condition of semi-natural habitats, species, environmental features or other sustaining resources in designated national sites as a result of plan implementation. No adverse impacts on listed species in the Wildlife Acts 1976 - 2012 as a result of plan implementation.	Internal monitoring of likely significant environmental effects of development projects. Mapping of LR important habitats and species as part of the County Biodiversity Plan.
	B5	Go beyond biodiversity protection to deliver biodiversity enhancement, wherever possible, in response to the biodiversity emergency.	Compliance of development supported by the plan with policies providing for the protection and enhancement of Biodiversity and flora and fauna defined in Chapter 'Green Infrastructure and Biodiversity' of the CDP. No. of developments permitted that have significant greenspace proposals. Improved biodiversity areas (Area km^2 /length metres). Compliance of development supported by the plan with policies providing for the protection and enhancement of Biodiversity and flora and fauna defined in the County's Biodiversity Action Plan.	No contravention of policies providing for the protection and enhancement of Biodiversity and flora and fauna defined in Chapter 'Green Infrastructure and Biodiversity' of the CDP. Increase number of developments permitted that have significant greenspace proposals. Increase quantum of improved biodiversity areas. No contravention of policies providing for the protection and enhancement of Biodiversity and flora and fauna defined in the County's Biodiversity Action Plan. Planning permission for development proposals supported by the plan only to be granted where development complies with	Internal monitoring of compliance with CDP Policy Objectives. Internal monitoring of compliance with the County Biodiversity Action Plan. Internal monitoring of likely significant environmental effects of development projects.

Environmental Component	SEO Code	Strategic Environmental Objective	Indicators	Targets	Data Source
				policy supportive of biodiversity protection and enhancement.	
Landscape, Seascape & Visual Amenity	L1	Avoid or, minimise impacts to statutory landscape designations defined in the CDP.	Status of Landscape Character Areas, the Seascape, High Amenity Zones, Historic Landscape Character Areas and Views and Prospects. Number of developments permitted that result in avoidable adverse impacts on Landscape Character Areas, the Seascape, High Amenity Zones, Historic Landscape Character Areas and Views and Prospects.	All action and development proposals supported by the plan must comply with policy objectives relating to the protection of Landscape Character Areas, the Seascape, High Amenity Zones, Historic Landscape Character Areas and Views and Prospects defined in the CDP. No development supported by the plan should have an adverse impact on Landscape Character Areas, the Seascape, High Amenity Zones, Historic Landscape Character Areas and Views and Prospects.	Internal monitoring of compliance with CDP Policy Objectives. Internal monitoring of likely significant environmental effects of development projects.
	L2	Avoid or minimise adverse visual effects on residential receptors or other sensitive visual receptors.	Number of developments permitted that result in avoidable adverse visual impacts on residential receptors or other sensitive visual receptors.	No development supported by the plan should have a significant adverse visual impact on residential receptors or other sensitive visual receptors. All development supported by the plan should adhere to relevant Development Management Standards defined in the CDP, in particular standards defined in relation to physical and visual impacts.	Internal monitoring of likely significant environmental effects of development projects.
Cultural Heritage - Archaeology & Architectural	CH1	Avoid impacts upon archaeological heritage (including entries to the Record of Monuments and Places (RMP)) and architectural heritage (including entries to the Record of Protected Structures (RPS) and National Inventory of Architectural Heritage (NIAHs)).	Percentage of features contained in the RMP (and, where relevant, the associated surrounding context) protected from adverse effects due to action and development occurring as a result of this plan. Percentage of features contained in the RPS and NIAH (and, where relevant, the associated surrounding context) protected from adverse	No features contained in the RMP (nor the associated surrounding context) should be significantly adversely affected as a result of the implementation of this plan. No features contained in the RPS and NIAH (nor the associated surrounding context) should be significantly adversely affected as a	Internal monitoring of likely significant environmental effects of development projects. Consultation with the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media

Environmental Component	SEO Code	Strategic Environmental Objective	Indicators	Targets	Data Source
			effects due to action and development occurring as a result of this plan.	result of the implementation of this plan.	
Soils	S1	Avoid or minimise effects on mineral resources or soils.	Number of instances of significant adverse impacts on mineral resources or soils occurring, including the pollution, loss or degradation of mineral resources or soils, as a result of action and development supported by the plan.	No instances of significant adverse impacts on mineral resources or soils occurring as a result of action and development supported by the plan.	Internal monitoring of likely significant environmental effects of development projects.
Land Use	LU1	Avoid or minimise effects on existing land use.	Number of instances of significant adverse impacts on existing land use as a result of plan implementation.	No instances of significant adverse impacts on existing land use as a result of plan implementation.	Internal monitoring of likely significant environmental effects of development projects.
Air Quality and Noise	AQN1	Increase the number of people travelling to work or school via public transport or by non-mechanical means.	% change in modal split. Length of new sustainable transport routes developed.	Reduction in private car use. Extension and improvement of the sustainable transport network in the plan area.	Central Statistics Office (CSO) Population data - Commuting in Ireland. Internal monitoring of length of new sustainable transport routes developed.
	AQN2	Avoid or minimise effects on local air quality.	Number of developments permitted that result in avoidable adverse air quality impacts on sensitive receptors. Number of exceedances of ambient air quality standards in the County, as monitored under the EPA's National Ambient Air Quality Monitoring Network.	No development supported by the plan should have a significant adverse air quality impact on sensitive receptors. All development supported by the plan should adhere to relevant Development Management Standards defined in the CDP relating to the protection of air quality. Minimise ambient air quality standard exceedances in the County.	Internal monitoring of likely significant environmental effects of development projects. Consultation with the EPA. Review of EPA Air Quality Monitoring undertaken in the County.
	AQN3	Avoid or minimise adverse noise impacts.	Number of sensitive receptors exposed to noise nuisance.	No sensitive receptors exposed to nuisance noise in the County.	Internal monitoring of likely significant environmental effects of development projects. Monitoring of internal noise complaint investigations undertaken. Consultation with the EPA.

Environmental Component	SEO Code	Strategic Environmental Objective	Indicators	Targets	Data Source
Water	W1	Maintain and/or improve, the quality and status of surface waters.	Status of surface water bodies as reported by the EPA Water Monitoring Programme for the Water Framework Directive (WFD) Status of bathing waters as monitored under the Bathing Water Directive.	Number of Pollution Incidents detected due to poor bathing water quality results. Not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status.' No deterioration in the status of any bathing waters, having appropriate regard to bathing water mandatory and guidelines values defined in the Bathing Water Directive. Implementation of the objectives of the second cycle of the national River Basin Management Plan.	EPA surface water monitoring data and reports. EPA bathing water monitoring data and reports.
	W2	Maintain and/or improve, the chemical and quantitative status of groundwaters.	Status of groundwater bodies as reported by the EPA National Groundwater Monitoring Programme for the WFD.	No deterioration in the status of groundwater quality, having appropriate regard to Groundwater Quality Standards and Threshold Values defined under Directive 2006/118/EC.	EPA groundwater monitoring data and reports.
	W3	Prevent impact upon the WFD status of surface waters and groundwater in line with the requirements of the WFD.	Number of instances of significant adverse impact on surface water or groundwater bodies resulting in a reduction in water quality or the ability of a water body to achieve 'good' water quality status.	No instances of significant adverse impact on surface water or groundwater bodies resulting in a reduction in water quality or the ability of a water body to achieve 'good' water quality status.	Internal monitoring of likely significant environmental effects of development projects. Consultation with the EPA.
	W4	Comply as appropriate with the provisions of the Flood Risk Management Guidelines.	Number of incompatible developments (supported by the plan) permitted within flood risk areas.	Minimise developments (supported by the plan) granted permission on lands which pose - or are likely to pose in the future - a significant flood risk, having appropriate regard to the Flood Risk Management guidelines.	Internal monitoring of development projects granted planning permission.
	W5	Prevent impact upon drinking water quality	Number of non-compliances with Drinking Water Quality Standards defined in the European Union (Drinking Water) Regulations 2023.	No non-compliances with Drinking Water Quality Standards defined in the European Union (Drinking Water) Regulations 2023.	EPA Drinking Water Quality Reports.

Environmental Component	SEO Code	Strategic Environmental Objective	Indicators	Targets	Data Source
Material Assets	MAI1	Avoid or minimise effects on built/amenity assets and infrastructure	Number of incompatible developments (supported by the plan) adversely affecting built/amenity assets and infrastructure.	No incompatible development (supported by the plan) adversely affecting built/amenity assets and infrastructure.	Internal monitoring of likely significant environmental effects of development projects.
	MAI2	Avoid or minimise effects on effects upon existing and (where known) planned infrastructure.	Number of incompatible developments (supported by the plan) adversely affecting existing or planned infrastructure, including water supply, wastewater management, energy and transport infrastructure.	No incompatible development (supported by the plan) adversely affecting existing or planned material assets infrastructure.	Internal monitoring of likely significant environmental effects of development projects, including monitoring of effects on other future planned or committed material asset infrastructure projects. Consultation with Irish Water, Gas Networks Ireland, ESB Networks and Transport Infrastructure Ireland.
	MAI3	Promote sustainable transportation.	% change in modal split. Kilometres of permanent segregated cycling network. Kilometres of permanent integrated cycling network. Number of Electric Vehicle charging points in the county. Total Area of road reallocated for sustainable alternatives (m^2).	Percentage increase in the number of public transport users in the County Increase kilometres of permanent segregated cycling network. Increase kilometres of permanent segregated cycling network. Increase number of Electric Vehicle charging points in the county. Increase Total Area of road reallocated for sustainable alternatives.	CSO Population data - Commuting in Ireland. Internal monitoring of length of new sustainable transport routes developed.
	MAI4	Promote sustainable waste management.	Tonnes of hazardous waste received at Council Waste Management Facilities annually. Tonnes of W.E.E.E. waste received at Council Waste Management Facilities annually. Tonnes of Bulky waste received at Council Waste Management Facilities annually.	Increase waste recycling in the County. Reduce waste generation in the County.	EPA Waste Statistics. Consultation with the EPA.

Environmental Component	SEO Code	Strategic Environmental Objective	Indicators	Targets	Data Source
			Tonnes of garden waste received at Council Waste Management Facilities annually.		
	MAI5	Promote sustainable water use and drainage management.	Level of water use in the County. Compliance with Sustainable Drainage System (SuDs) related development management standards defined in the CDP.	Reduced water use in the county. All development (supported by the plan) must comply with SuDs related development management standards defined in the CDP.	CSO water consumption data. Internal monitoring of flood risk associated with of development projects and development project compliance with relevant flood risk and management related development management standards.
Tourism & Recreation	TR1	Avoid or minimise effects upon tourism and recreation amenities.	Visitor trips to local authority functional area	Stable or increasing number of visitor trips to local authority functional area	Fáilte Ireland Data on Tourism Performance
Climate Change	CF1	Delivery of the necessary action to support the national target of 80% electricity from renewable sources by 2030.	Level of Greenhouse Gas (GHG) emissions in the County. Level of renewable energy infrastructure in the County.	Reduce GHG emissions associated with the Energy sector in the County. Increase the level of renewable energy infrastructure in the County.	EPA National Emission Inventory. Baseline Emission Inventory for the County. Megawatt hour (MWh) output from renewable energy infrastructure in the county.
	CF2	Actively support the delivery of all national climate policy as appropriate to the county with the prioritisation and acceleration of evidence-based measures.	Level of GHG emissions in the County	Reduce GHG emissions for all sectors in the County.	EPA National Emission Inventory. Baseline Emission Inventory for the County.
	CF3	CF3: Assist in the delivery of the climate neutrality objective at local and community levels.	Level of GHG emissions in the County. Level of GHG emissions in the Decarbonising Zone.	Reduce GHG emission in the County to Net Zero. Reduce Decarbonising Zone GHG emissions to Net Zero.	EPA National Emission Inventory. Baseline Emission Inventory for the County.

Environmental Component	SEO Code	Strategic Environmental Objective	Indicators	Targets	Data Source
			Net addition of tree cover added.	Increase level of tree cover in the County.	Baseline Emission Inventory for the Decarbonising Zone.
	CF4	Deliver a Decarbonising Zone (DZ) by 2050 within the local authority area to act as a test bed for a range of climate mitigation and adaptation measures in a specifically defined area through the identification of projects and outcomes that will assist in the delivery of the National Climate Objective.	Level of GHG emissions in the Decarbonising Zone.	Reduce Decarbonising Zone GHG emissions to Net Zero.	Baseline Emission Inventory for the Decarbonising Zone.
Inter-relationships	IR1	Maintain and improve the health of people, ecosystems and natural processes Actively seek to integrate opportunities for environmental enhancement during adaptation to climate change	Number of blue and green infrastructure measures included as part of development projects that have been granted planning permission.	Increase the number of blue and green infrastructure measures included as part of development projects that have been granted planning permission.	Review of granted planning permissions.

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APPENDIX 1

Relationship of the Plan with other relevant Plans and Programmes

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https://uss.ftco.ie/DMS/view_document.aspx?ID=960902&Latest=true

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APPENDIX 2

Consultation Feedback

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https://uss.ftco.ie/DMS/view_document.aspx?ID=962488&Latest=true

https://uss.ftco.ie/DMS/view_document.aspx?ID=963673&Latest=true

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APPENDIX 3

Detailed Evaluation of the Environmental Effects of Plan Implementation

Appendix 3.1 - Approach and Methodology for the Detailed Evaluation of Environmental Effects of Plan Implementation

A detailed evaluation of the potential effects of the Preferred LACAP on the baseline environment has been carried out in accordance with best practice guidelines. An evaluation matrix template has been developed to facilitate the evaluation of the Preferred LACAP on Strategic Environmental Objectives (SEOs) relevant to each Environmental Component.

A dedicated evaluation matrix has been prepared for each Theme Area in the Draft LACAP. Draft LACAP Actions associated with that Theme Area are listed on one axis of this matrix. The corresponding potential environmental effects of the actions are then described. An evaluation of the environmental effects of Draft LACAP Actions on Environmental Components, having regard to the SEOs relevant to each Environment Component, was then carried out for each Theme Area of the Draft LACAP in accordance with the requirements of the SEA Directive and best practice guidelines. Potential effects of the Draft LACAP on Environmental Components/SEOs have been categorised as follows:

- Potential Positive Environmental Impact (indicated in the matrix by a '+').[72]
- Potential Negative Environmental Impact (indicated in the matrix by a '-').[73]
- Potential Positive and Negative Environmental Impacts (indicated in the matrix by a '+/-').
- Uncertain Environmental Impact ((indicated in the matrix by a '?').
- Neutral, No or Insignificant Environmental Impact (indicated in the matrix by a '0').

The evaluation considers all potential direct, indirect/secondary, cumulative[74], synergistic[75], short, medium and long-term, permanent and temporary, positive and negative environmental effects.

Detail on the SEOs associated with Environmental Components which the environmental effects of the Draft LACAP have been measured against is provided in Table 1 overleaf.

Completed Evaluation Matrices for each Draft LACAP Theme Area are presented in Appendix 1.2.

[72] Potential Positive Environmental Impacts are defined as having the potential to support the achievement of an SEO.
[73] Potential Negative Environmental Impacts are defined as having the potential to hinder the achievement of an SEO.
[74] The addition of many minor or insignificant effects, including effects of other projects, to create larger, more significant effects.
[75] The addition of effects to create a total effect greater than the sum of the individual effects so that the nature of the final impact is different to the nature of the individual impact.

Table 1 - Strategic Environmental Objectives against which the environmental effects of the Draft LACAP have been measured

Environmental Component	SEO Code	Strategic Environmental Objective
Overall	O1	Ensure, where appropriate, that lower-level plans and projects contribute to overall environmental monitoring processes within the County.
Population & Human Health	PHH1	Avoid or, minimise impacts to population and human health.
	PHH2	Ensure the Decarbonising Zone avoids and minimises impacts to the existing economic activities within the area and does not compromise/conflict with existing land use objectives.
Biodiversity, Flora & Fauna	B1	Ensure Climate Action does not conflict with biodiversity protection, restoration and rehabilitation.
	B2	Ensure compliance with Habitats and Birds Directives with regard to protection of European Sites and Annexed habitats and species.[76]
	B3	Support Article 10 of the Habitats Directive with regard to the management of features of the landscape which - by virtue of their linear and continuous structure or their function as stepping stones (designated or not) - are of major importance for wild fauna and flora and essential for the migration, dispersal and genetic exchange of wild species.
	B4	To avoid or minimise significant impacts on semi-natural habitats, species, environmental features or other sustaining resources in designated national sites and to comply with the Wildlife Acts 1976-2012 with regard to listed species.
	B5	Go beyond biodiversity protection to deliver biodiversity enhancement, wherever possible, in response to the biodiversity emergency.
Landscape, Seascape & Visual Amenity	L1	Avoid or minimise impacts on statutory landscape designations defined in the CDP.
	L2	Avoid or minimise adverse visual effects on residential receptors or other sensitive visual receptors.
Cultural Heritage - Archaeology & Architectural	CH1	Avoid impacts upon archaeological heritage (including entries to the Record of Monuments and Places (RMP)) and architectural heritage (including entries to the Record of Protected Structures (RPS) and National Inventory of Architectural Heritage (NIAHs)).
Soils	S1	Avoid or minimise effects on mineral resources or soils.

[76] 'Annexed habitats and species' refer to those listed under Annex I, II & IV of the EU Habitats Directive and Annex I of the EU Birds Directive.

Environmental Component	SEO Code	Strategic Environmental Objective
Land Use	LU1	Avoid or minimise effects on existing land use.
Air Quality and Noise	AQN1	Increase the number of people travelling to work or school via public transport or by non-mechanical means.
	AQN2	Avoid or minimise effects on local air quality.
	AQN3	Avoid or minimise adverse noise impacts.
Water	W1	Maintain and/or improve, the quality and status of surface waters.
	W2	Maintain and/or improve, the chemical and quantitative status of groundwaters.
	W3	Prevent impact upon the WFD status of surface waters and groundwater in line with the requirements of the WFD.
	W4	Comply as appropriate with the provisions of the Flood Risk Management Guidelines.
	W5	Prevent impact upon drinking water quality.
Material Assets	MAI1	Avoid or minimise effects on built/amenity assets and infrastructure.
	MAI2	Avoid or minimise effects on effects upon existing and (where known) planned infrastructure.
	MAI3	Promote sustainable transportation.
	MAI4	Promote sustainable waste management.
	MAI5	Promote sustainable water use and drainage management.
Tourism & Recreation	TR1	Avoid or minimise effects upon tourism and recreation amenities.
Climate Change	CF1	Delivery of the necessary action to support the national target of 80% electricity from renewable sources by 2030.
	CF2	Actively support the delivery of all national climate policy as appropriate to the county with the prioritisation and acceleration of evidence-based measures.
	CF3	CF3: Assist in the delivery of the climate neutrality objective at local and community levels.
	CF4	Deliver a Decarbonising Zone (DZ) by 2050 within the local authority area to act as a test bed for a range of climate mitigation and adaptation measures in a specifically defined area through the identification of projects and outcomes that will assist in the delivery of the National Climate Objective.

Environmental Component	SEO Code	Strategic Environmental Objective
Inter-relationships	IR1	Maintain and improve the health of people, ecosystems and natural processes Actively seek to integrate opportunities for environmental enhancement during adaptation to climate change

Appendix 3.2 - Evaluation Matrix - Detailed Evaluation of Environmental Effects of Plan Implementation

Energy and Buildings

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
E1	Continuous Improvement by maintaining ISO 50001 energy management system	This action will promote organisational energy efficiency within the local authority organisation. This action has the potential to support organisational GHG emission reductions. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	+	0	0	+	+
E2	Annual Monitoring & Reporting to SEAI	This is a monitoring/tracking related action and will have no real environmental effect when considered in isolation. The action will support the delivery of organisational sector GHG emission reductions and energy efficiency generally.	0	0	0	0	0	0	0	0	0	+	0
E3	Publish Fingal County Council's Energy Review Periodically	This action will promote organisational energy efficiency within the local authority organisation. This action has the potential to support organisational GHG emission reductions. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	+	0	0	+	+
E4	Continuous Improvement through the Energy Performance Contract for County Hall (Swords) and Civic Offices, during the service stage	This action will promote organisational energy efficiency within the local authority organisation. This action has the potential to support organisational GHG emission reductions. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	+	0	0	+	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
E5	Procure upgrades through an Energy Performance Contract for Draíocht Arts Centre and public library in Blanchardstown with potential of including Balbriggan Town Hall & Library/ Watery Lane Depot/ Ballycoolin Training Centre	This action will promote organisational energy efficiency within the local authority organisation. This action has the potential to support organisational GHG emission reductions. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	+	0	0	+	+
E6	IES Building Energy Modelling to be completed in County hall and Grove Road offices. Further modelling of digital assets to be included in other EPC projects.	This is a modelling related action and will have no real environmental effect when considered in isolation. The action will support the delivery of organisational sector GHG emission reductions and energy efficiency generally.	0	0	0	0	0	0	0	0	0	+	0
E7	Refurbishment programme for Fingal Corporate buildings to include energy reviews and retrofits as standard in line with Public Sector targets for 2030.	This action will promote organisational energy efficiency within the local authority organisation. This action has the potential to support organisational GHG emission reductions. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	+	0	0	+	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
E8	Engage with independent BREEAM assessor and utilise Building Assessment Methodology throughout delivery of Swords Cultural Quarter flagship project. BREEAM is a leading validation and certification system for sustainable built environment.	This action will support the local authority in preventing the generation of GHG emissions and negative environmental effects during the construction and operational phases of the Swords Cultural Quarter. The delivery of this action also has the potential to result in several positive environmental effects occurring due to the development of sustainable built environment at the Swords Cultural Quarter (in the areas of population and human health, sustainable waste management, biodiversity, local air quality etc.). Inappropriate development supported by the BREAMM process has the potential to negatively affect environmental sensitivities such as amenity value, cultural heritage and archaeology, associated with the location of the project, if not designed and managed appropriately.	+	+	-	-	0	0	+	0	+	0	+
E9	Undertake a feasibility study on utilising the existing Bore Hole with heat pump technology in County Hall Offices to provide heating, and to provide cooling to IT Comms room.	This is a study related action and will have no real environmental effect when considered in isolation. Depending on the outcome of this study, it has the potential to support the delivery of organisational sector GHG emission reductions and energy efficiency generally.	0	0	0	0	0	0	0	0	0	+	0
E10	BER Audits to be carried out on corporate buildings and libraries to determine BER ratings	This is a monitoring related action and will have no real environmental effect when considered in isolation. The action will support the delivery of organisational GHG emission reductions and energy efficiency generally.	0	0	0	0	0	0	0	0	0	+	0
E11	Roll out of real time check metering and energy monitoring platform across significant energy using buildings to analyse and understand usage.	This is a monitoring related action and will have no real environmental effect when considered in isolation. The action will support the delivery of organisational sector GHG emission reductions and energy efficiency generally.	0	0	0	0	0	0	0	0	0	+	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
E12	Implementation of identified DeliveREE/ Pathfinder projects across FCC premises to include the decarbonisation of significant energy using buildings.	This action will support the local authority reducing its organisational GHG emissions in line with climate policy and legislation and emission reduction targets. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	+	0	0	0	+
E13	Feasibility study for retrofit/ fabric upgrades across the 2 Civic Offices	This is a study related action and will have no real environmental effect when considered in isolation. Depending on the outcome of this study, it has the potential to support the delivery of organisational sector GHG emission reductions and energy efficiency generally.	0	0	0	0	0	0	0	0	0	+	0
E14	Targeted LED upgrades across smaller FCC premises, not suitable for EPC	This action will support the local authority reducing its organisational GHG emissions in line with climate policy and legislation and emission reduction targets. The action is likely to have a slight positive environmental effect in terms of GHG emissions however, the spectrum of light from outdoor LED sources has potential to impact nocturnal species. Therefore there is also scope for there to be a slight negative effect if unmitigated.	0	0	0	0	0	0	0	0	0	0	0
E15	Targeted M&E upgrades across smaller FCC premises, not suitable for EPC. Identifying projects and packages through Planned Preventative Maintenance	This action will promote organisational energy efficiency within the local authority organisation. This action has the potential to support organisational GHG emission reductions. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	0	0	0	+	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
E16	Renewal of remaining 1.5% of public lighting stock & pitch lighting	This action will support the local authority reducing its organisational GHG emissions in line with climate policy and legislation and emission reduction targets. The action is likely to have a slight positive environmental effect in terms of GHG emissions however, the spectrum of light from outdoor LED sources has potential to impact nocturnal species. Therefore there is also scope for there to be a slight negative effect if unmitigated.	0	-	0	0	0	0	+	0	0	0	+
E17	Continue to make energy efficiency retrofits to social housing under the DHLGH-supported Energy Retrofit Programme. Ensure that all of FCC's social housing stock has a B2 or cost optimal energy rating by 2030.	This action will support the reduction of Residential sector GHG emissions. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements. There is the potential for light and air pollution during retrofitting works. Retrofitting works may also negatively affect the appropriate conservation of protected structures. Therefore there is also scope for there to be negative effects if unmitigated.	0	-	0	-	0	0	+/-	0	0	0	+
E18	Complete Pilot programme in Strandmill Estate, Portmarnock, in conjunction with SEAI and REIL offering retrofit upgrades to private homeowners, availing of economies of scale when coupled with public housing upgrades. Partially funded by SEAI government grants.	This action will support the reduction of Residential sector GHG emissions. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements. There is the potential for light and air pollution during retrofitting works. Therefore there is scope for there to be a slight negative effect if unmitigated. The retrofitting of housing stock also has the potential to lead to negatively affect the architectural value associated with protected structures, if not carried out sensitively and managed appropriately.	0	-	0	-	0	0	+/-	0	0	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
E19	Build on the pilot roll out of EnergyCloud to c. 60 social homes in Swords in 2024 with further roll out to social homes across the county	This action will support the reduction of Residential sector GHG emissions. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	+	0	0	0	+
E20	IGBC Home Performance Index Assessments carried out and where feasible certification obtained for all new social housing projects developed by the local authority.	This action will support the local authority in preventing the generation of GHG emissions due to the construction and operation of new local authority social housing. The delivery of this action also has the potential to result in several positive environmental effects occurring due to the development of sustainable built environment.	+	0	0	0	0	0	+	0	0	0	+
E21	Pilot study to research and potentially futureproof new build social housing schemes for district heating	This is a study related action and will have no real environmental effect when considered in isolation. Depending on the outcome of this study, it has the potential to support the delivery of Residential sector GHG emission reductions and energy efficiency generally.	0	0	0	0	0	0	0	0	0	+	0
E22	Green Procurement - Design Team appointments to include a sustainability specialism capable of informing all stages of the design process and documenting the required evidence to achieve accreditation under a recognised Building Assessment Method such as the IGBC Home Performance Index, BREEAM and LEED	This is a resourcing/personnel related action and will have no real environmental effect when considered in isolation. The action has the potential to support the delivery of Residential sector GHG emission reductions and energy efficiency generally.	0	0	0	0	0	0	0	0	0	+	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
E23	In accordance with the incoming embodied carbon amendments to the Construction Products Regulations, the Building Control Authority will encourage compliance and monitor/enforce the display of carbon footprint on all construction products.	This is a monitoring action and will have no real environmental effect when considered in isolation. The action will promote the reduction of lifecycle GHG emissions in the construction sector generally.	0	0	0	0	0	0	+	0	0	0	+
E24	Continue to develop a strategic approach to town centre regeneration through Town Centre First: A Policy Approach for Irish Towns and by utilising existing buildings and unused lands for new development, promote residential occupancy in our rural towns and villages and provide for a mix of uses within these areas.	This action has the broad potential to promote good spatial planning and support sustainable land use and sustainable transportation. The action has the potential to support utilising existing built environment for residential occupancy, which can reduce the requirement for construction of new residential development generally, and the associated embodied GHG emissions associated with such development.	0	0	0	0	0	+	+	0	+/-	0	0
E25	Deliver Blanchardstown District Heating Scheme	This action will support development that has the potential to result in a reduction of heating related Residential sector GHG emissions in the local area. In the absence of any mitigation, such development, which will include extensive pipe laying works, could potentially have a variety of significant, negative environmental effects, including effects on: water quality, biodiversity, flora and fauna; the receiving air environment (due to the generation of construction dust), the receiving noise environment (due to the generation of construction phase noise), and the receiving human environment.	-	-	0	0	0	0	+/-	-	0	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
E26	Assess potential for viable renewable energy projects on a temporary/permanent basis, on council controlled lands	This is an assessment related action and will have no real environmental effect when considered in isolation. Depending on the outcome of the assessment, it has the potential to support the delivery of renewable energy projects on local authority lands.	0	0	0	0	0	0	0	0	0	0	0
E27	Install PV panels on suitable Council roofs such as civic offices, libraries and community buildings	This action will support the local authority reducing its organisational GHG emissions in line with climate policy and legislation and emission reduction targets. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements. The development of PV panels on Council roofs has the potential to result in negative glint and glare impacts on sensitive environmental receptors, including Dublin Airport, in the absence of mitigation.	-	0	0	0	0	0	0	0	+/-	0	+
E28	Develop Wind Energy Strategy	This is an action that serves to promote the development of wind energy projects. The implementation of the action when considered alone (i.e. the development of the Strategy itself) will have no real environmental effect when considered in isolation. However, the supporting of such developments could result in environmental conflicts such as collision risk and vibration effects, particularly with regard to marine life, thus further consideration and mitigation measures are required.	0	-	0	0	0	0	0	0	0	0	+
E29	Review Energy Statements for planning applications.	This action will support the development of new buildings that are energy efficient. The adoption of this action can potentially result in reduced energy consumption in new buildings and prevent GHG emissions. The action is likely to have a slight positive effect on climate - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	+	0	0	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
E30	Work with SMEs in partnership with SEAI to promote energy efficient adaptations	This promotional action will broadly support the effective delivery of climate action in the community. It has the potential to support the realisation of GHG emission reduction in the commercial sector.	0	0	0	0	0	0	0	0	0	0	+
E31	Work with SMEs to promote energy efficient adaptations through the energy efficiency grant from LEO	This promotional action will broadly support the effective delivery of climate action in the community. It has the potential to support the realisation of GHG emission reduction in the commercial sector.	0	0	0	0	0	0	0	0	0	0	+
E32	Conduct research and develop case studies from the Council's historic building stock that undertake pre- and post- works energy performance assessments and devise of appropriate and sensitive retrofitting/energy upgrading of traditional buildings to inform works to other Council-owned properties and to guide private owners	This action has the potential to have significant positive effects on cultural heritage and architectural assets and the amenity value attained by people from these assets. This action has the potential to support carrying out retrofitting/upgrade works at historic structures and traditional buildings which could result in significant negative effects if unmitigated. This action has the potential to have adverse effects on Bats which are Annex IV species, as many roosts are located within old unused buildings.	0	-	0	+/-	0	0	0	0	+	0	0
E33	Promote and encourage routine maintenance and good housekeeping to maintain the older building stock of the county in good condition in order to reduce energy consumption and extend the building's life-cycle (e.g. Fingal's Stitch in Time Grant, National Schemes of Built Heritage Investment Scheme, Historic Structures Fund, Community Monument Fund).	This action has the potential to have significant positive effects on cultural heritage and architectural assets and the amenity value attained by people from these assets. This action has the potential to support carrying out retrofitting/upgrade works at historic structures and traditional buildings which could result in significant negative effects if unmitigated. This action has the potential to have adverse effects on Bats which are Annex IV species, as many roosts are located within old unused buildings.	0	-	0	+/-	0	0	0	0	+	0	0

Key: PHH - Population & Human Health. BFF - Biodiversity, Flora & Fauna. L - Landscape, Seascape & Visual Amenity. CH - Cultural Heritage - Archaeology & Architectural. S - Soils. LU - Land Use. AQN - Air Quality and Noise. W - Water. MA - Material Assets. TR- Tourism & Recreation. CC - Climate Change.

Transport

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T1	Increase the meterage of high quality walkways in the county and improve the meterage of existing walkways in the county.	This action supports the development of additional walkway infrastructure. In the absence of any mitigation, works involved in the construction of additional walkway infrastructure have the potential to generate a range of slight to significant environmental effects, including noise impacts, local air quality impacts (through the generation of construction dust), impacts on water quality (through the run-off of silt and cement based products during construction), biodiversity impacts, cultural heritage asset impacts and impacts on traffic and transport (through the temporary creation of traffic diversions and congestion). The ongoing operation of a walkway network may have a slight to significant effect on traffic flows associated with other modes of transport, in absence of proper design of such networks the outset and additional mitigation as may be required. The delivery of an expanded safe active travel network has the potential to have a significant positive effect on population and human health through the promotion of modes of travel that benefit human health. The delivery of an expanded safe active travel network has the potential to promote the use of sustainable and active travel modes in the community, encourage modal shift and support the reduction of vehicle related emissions. This is likely to have a slight to moderate positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	+	-	0	-	0	0	-	-	0	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T2	Increase the km of protected cycle lanes and off road cycle lanes and greenways in the county annually; in line with the Greater Dublin Cycling Network Plan, and the FCC Greenway Plan - including Fingal Coastal Way, the Sutton to Malahide Cycleway, the Broadmeadow Way, Church Fields Link Road, and the Royal Canal Urban Greenway, etc.	This action supports the development of additional cycling infrastructure. In the absence of any mitigation, works involved in the construction of additional cycling infrastructure have the potential to generate a range of slight to significant environmental effects, including noise impacts, local air quality impacts (through the generation of construction dust), impacts on water quality (through the run-off of silt and cement based products during construction), biodiversity impacts, cultural heritage asset impacts and impacts on traffic and transport (through the temporary creation of traffic diversions and congestion). The ongoing operation of a cycle network may have a slight to significant effect on traffic flows associated with other modes of transport, in absence of proper design of such networks the outset and additional mitigation as may be required. The delivery of an expanded safe active travel network has the potential to have a significant positive effect on population and human health through the promotion of modes of travel that benefit human health. The delivery of an expanded safe active travel network has the potential to promote the use of sustainable and active travel modes in the community, encourage modal shift and support the reduction of vehicle related emissions. This is likely to have a slight to moderate positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	+	-	0	-	0	0	+/-	-	+/-	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T3	Deliver/alter infrastructure to improve connectivity/permeability in order to promote active travel	This action has potential to improve the quality of sustainable/active travel networks in the local authority's functional area and promote the use of sustainable and healthy modes of transport - which help realise the potential positive environmental effects associated with sustainable/active travel.	0	0	0	0	0	0	0	0	+	0	+
T4	Deliver new pedestrian / cycling road crossings, which give priority to pedestrians and cyclists. Develop and implement a work programme for the replacement of pedestrian crossings with ones which give priority to pedestrians & cyclists.	This action has the potential to encourage modal shift to active travel modes. It will help fully realise the potential positive environmental effects associated with increasing the level of active travel.	+	0	0	0	0	0	0	0	+	0	+
T5	Install junction build outs in accordance with Design Manual for Urban Roads & Streets 2020, increasing safety to users.	This action has the potential to encourage modal shift to walking. It will help fully realise the potential positive environmental effects associated with increasing the level of active travel. In the absence of any mitigation, works involved in the junction development/upgrade projects have the potential to generate a range of slight to significant environmental effects, including noise impacts, local air quality impacts (through the generation of construction dust), impacts on water quality (through the run-off of silt and cement based products during construction), biodiversity impacts, cultural heritage asset impacts and impacts on traffic and transport (through the temporary creation of traffic diversions and congestion).	+	-	0	-	0	0	-	-	+/-	0	0
T6	Increase the quantity of bicycle parking and virtual parking bays in the public domain.	This action has the potential to encourage modal shift to cycling. It will help fully realise the potential positive environmental effects associated with increasing the level of active travel.	+	0	0	0	0	0	0	0	0	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T7	Assist in the provision of bicycle stands in private community space, such as community centres, sport clubs etc.	This action has the potential to encourage modal shift to cycling. It will help fully realise the potential positive environmental effects associated with increasing the level of active travel.	+	0	0	0	0	0	0	0	0	0	0
T8	Continued provision of Bike Sharing Schemes across the county	This action has the potential to encourage modal shift to cycling. It will help fully realise the potential positive environmental effects associated with increasing the level of active travel.	+	0	0	0	0	0	0	0	0	0	0
T9	Provision of E scooters across the county	This action has the potential to encourage modal shift to active travel. It will help fully realise the potential positive environmental effects associated with increasing the level of active travel.	+	0	0	0	0	0	0	0	0	0	0
T10	Implement pilot schemes for mobility/emobility to promote sustainable mobility by encouraging creativity and innovation in the county.	This action has the potential to encourage modal shift to active travel. It will help fully realise the potential positive environmental effects associated with increasing the level of active travel.	+	0	0	0	0	0	0	0	0	0	0
T11	Identify opportunities for reallocation of existing road space to promote active travel and improve public space.	In the absence of any mitigation, works involved in the updating of road space have the potential to generate a range of slight to significant environmental effects, including noise impacts, local air quality impacts (through the generation of construction dust), impacts on water quality (through the run-off of silt and cement based products during construction), and biodiversity impacts. The delivery of expanded sustainable/active travel networks has the potential to promote the use of sustainable and active travel modes in the community, encourage modal shift and support the reduction of vehicle related emissions. This is likely to have a slight to moderate positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	+	-	0	0	0	0	+/-	-	0	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T12	Enhancement / reallocation of roads & street space to promote active travel and improve public space. Implement in all 3 LEAs	In the absence of any mitigation, works involved in the updating of road space have the potential to generate a range of slight to significant environmental effects, including noise impacts, local air quality impacts (through the generation of construction dust), impacts on water quality (through the run-off of silt and cement based products during construction), and biodiversity impacts. The delivery of expanded sustainable/active travel networks has the potential to promote the use of sustainable and active travel modes in the community, encourage modal shift and support the reduction of vehicle related emissions. This is likely to have a slight to moderate positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	+	-	0	0	0	0	+/-	-	0	0	+
T13	Implement traffic calming programme. To include provision of infrastructure for encouraging modal shift (Ramps, VAS, Pedestrian Crossings etc)	This action will promote the development of safe sustainable and active travel networks. This action has the potential to encourage modal shift and the use of active travel modes and networks. It will help fully realise the potential positive environmental effects associated with sustainable/active travel. The introduction of traffic calming measures across the local authority also has the potential to improve traffic flow and reduce GHG emissions associated with the congested movement of traffic in urban areas. The minor infrastructural works that are likely to be supported by this action are unlikely to have any significant environmental effect, assuming standard, good construction practice is adopted.	+	0	0	0	0	0	+	0	+	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T14	Assess the feasibility of re-allocating existing Pay & Display spaces to bike parking where ample Pay & Display parking.	This action will promote the development of safe sustainable and active travel networks. This action has the potential to encourage modal shift and the use of active travel modes and networks. It will help fully realise the potential positive environmental effects associated with sustainable/active travel.	+	0	0	0	0	0	0	0	0	0	0
T15	Introduction of Pay & Display schemes in accordance with adopted bye-Laws to discourage car use (To decrease car dependency)	This action will promote the development of safe sustainable and active travel networks. This action has the potential to encourage modal shift and the use of active travel modes and networks. It will help fully realise the potential positive environmental effects associated with sustainable/active travel.	+	0	0	0	0	0	0	0	0	0	0
T16	Provide programmes and initiatives that support community-wide adoption of active travel modes e.g. Learn 2 Cycle with a Disability lessons, Adult Cycling lessons, Walking Buses, Cycling Buses; and opportunities for marginalised groups to engage in Active Travel	This action will promote the development of safe sustainable and active travel networks. This action has the potential to encourage modal shift and the use of active travel modes and networks. It will help fully realise the potential positive environmental effects associated with sustainable/active travel.	+	0	0	0	0	0	0	0	0	0	0
T17	Examine the potential for 30 km/h speed limits in towns and villages in line with the Road Safety Plan recommendations.	This action will promote the development of safe sustainable and active travel networks. This action has the potential to encourage modal shift and the use of active travel modes and networks. It will help fully realise the potential positive environmental effects associated with sustainable/active travel. A reduction in speed limits across the local authority also has the potential to improve traffic flow and reduce GHG emissions associated with the congested movement of traffic in urban areas.	+	0	0	0	0	0	+	0	+	0	0+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T18	Implement Safe Routes to School programme	This action has the potential to encourage modal shift and the use of active travel networks. This action supports the development of additional pedestrian and cycling infrastructure. In the absence of any mitigation, works involved in the construction of additional pedestrian and cycling infrastructure have the potential to generate a range of slight to significant environmental effects, including noise impacts (due to construction plant operation), local air quality impacts (through the generation of construction dust), impacts on water quality (through the run-off of silt and cement based products during construction) and biodiversity impacts. This action also has the potential to generate some degree of positive environmental effect due to a reduction in vehicle use. The action has the potential to have a positive impact on population and human health by reducing traffic risk at schools.	+	-	0	0	0	0	-	-	+	0	0
T19	Implement the School Streets initiative	This action will promote the development of safe sustainable and active travel networks. This action has the potential to encourage modal shift and the use of active travel modes and networks. It will help fully realise the potential positive environmental effects associated with sustainable/active travel. The action has the potential to have a positive impact on population and human health by reducing traffic risk at schools.	+	0	0	0	0	0	0	0	0	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T20	Support the development and expansion of existing public transport services including MetroLink, BusConnects and DART expansion to Balbriggan	In the absence of any mitigation, such large-scale infrastructural projects have the potential to generate a wide variety of negative environmental effects - that range from slight in magnitude to profound - on, inter alia, population and human health receptors, ecological receptors, the soils and geological environment, the water environment, the traffic and transport environment, and landscape character and visual amenity.	+/-	-	-	0	-	0	0	-	-	0	0
T21	To facilitate the provision of Park and Ride facilities in appropriate locations at transport nodes and along strategic transport corridors in accordance with the NTA Strategy, and encourage the inclusion of EV charge points and bike parking.	In the absence of any mitigation, works involved in constructing park and ride facilities have the potential to generate a range of slight to significant environmental effects, including noise impacts, local air quality impacts (through the generation of construction dust), impacts on water quality (through the run-off of silt and cement based products during construction), and biodiversity impacts. The delivery of expanded sustainable/active travel networks has the potential to promote the use of sustainable and active travel modes in the community, encourage modal shift and support the reduction of vehicle related emissions. This is likely to have a slight to moderate positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	+	-	0	0	0	0	+/-	-	0	0	+
T22	Promote and facilitate additional car sharing schemes	This promotional action will support the reduction of private car use and can contribute to a reduction in Transport sector GHG emissions.	0	0	0	0	0	0	+	0	0	0	+
T23	Promote and facilitate additional community car sharing schemes	This promotional action will support the reduction of private car use and can contribute to a reduction in Transport sector GHG emissions.	0	0	0	0	0	0	+	0	0	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T24	Implement the DLA EVCP strategy through delivery of sufficient EVCP's	The expansion of the EV charging network will lead to the development of multiple charging points and ancillary electrical infrastructure including grid connection routes across the extent of the local authority's functional area. In the absence of any mitigation, works involved in the construction of additional charging point infrastructure have the potential to generate a range of slight to significant environmental effects, including noise impacts, local air quality impacts (through the generation of construction dust), impacts on water quality (through the run-off of silt and cement based products during construction), and biodiversity impacts. The delivery of good network of charging infrastructure has the potential to promote the use of sustainable travel modes in the community, encourage modal shift and support the reduction of vehicle related emissions. This is likely to have a slight to moderate positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	+	-	0	0	0	0	+/-	-	0	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T25	Expand availability of EV charging points for Council staff and operational vehicles	This action has the potential to lead to the development of additional electric charging infrastructure at local authority sites. In the absence of any mitigation, works involved in the construction of additional charging point infrastructure have the potential to generate a range of slight to significant environmental effects, including noise impacts, local air quality impacts (through the generation of construction dust), impacts on water quality (through the run-off of silt and cement based products during construction), and biodiversity impacts. This action will support the use of EV in the local authority organisation and will underpin the reduction of GHG emissions associated with local authority vehicle fleet operations.	0	-	0	0	0	0	+/-	-	0	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T26	Provide EV charging infrastructure (in addition to 20% charge points) to development plan standards, for new social housing developed by the Local Authority. Provide Electric vehicle charge points in car parking for new Fingal Corporate buildings.	The expansion of the EV charging network will lead to the development of multiple charging points and ancillary electrical infrastructure including grid connection routes across the extent of the local authority's functional area. In the absence of any mitigation, works involved in the construction of additional charging point infrastructure have the potential to generate a range of slight to significant environmental effects, including noise impacts, local air quality impacts (through the generation of construction dust), impacts on water quality (through the run-off of silt and cement based products during construction), and biodiversity impacts. The delivery of good network of charging infrastructure has the potential to promote the use of sustainable travel modes in the community, encourage modal shift and support the reduction of vehicle related emissions. This is likely to have a slight to moderate positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	+	-	0	0	0	0	+/-	-	0	0	+
T27	Continued electrification of the Council's vehicle fleet as market technology develops	Increasing the level of local authority vehicles that use sustainable sources of energy will have a slight positive effect on climate.	0	0	0	0	0	0	0	0	0	0	+
T28	Maintenance and upgrade of public footpath network and regional and local roads to encourage modal shift to walking and cycling	This action will promote the development of safe sustainable and active travel networks. This action has the potential to encourage modal shift and the use of active travel modes and networks. It will help fully realise the potential positive environmental effects associated with sustainable/active travel. Such maintenance works are unlikely to have a significant environmental effect, assuming standard, good construction practice is adopted.	+	0	0	0	0	0	0	0	0	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T29	Explore the use of sustainable methods of road surfacing that minimise the use of raw materials.	This is a study related action and will have no real environmental effect when considered in isolation. Depending on the outcome of this study, it has the potential to support the reduction of embodied GHG emissions associated with raw material use in road projects.	0	0	0	0	0	0	+	0	0	0	0
T30	Continued implementation of the national public sector remote working strategy	This action supports local authority staff working at home and promotes the reduction in transport emissions associated with home to work commuting using ICE based vehicles, which has the potential to generate some degree of positive effects on climate and local air quality.	0	0	0	0	0	0	+	0	0	0	+
T31	Aim to reduce kilometres travelled by private ICE vehicles within work hours and incentivise modes such as cycling, electric vehicles.	This action broadly supports the ambition to reduce ICE vehicle use and promote sustainable travel modes, which can result in transport emission reductions and positive effects on climate and local air quality, however the action is broad and non-specific nature.	0	0	0	0	0	0	+	0	0	0	+
T32	Prepare and finalise the Smarter Travel Workplace Strategy for staff of Fingal County Council, and engage on the implementation of the strategy	This action will likely promote sustainable transport and travel options for local authority staff and the reduction in transport emissions associated with home to work commuting and work operations using ICE based vehicles - which has the potential to generate some degree of positive effects on climate and local air quality.	0	0	0	0	0	0	+	0	0	0	+
T33	Promotion of Cycle-to-Work Scheme for Council staff	This action will likely promote active travel options for local authority staff and the reduction in transport emissions associated with home to work commuting using ICE based vehicles - which has the potential to generate some degree of positive effects on climate and local air quality.	0	0	0	0	0	0	+	0	0	0	+
T34	Provide eco driving training to Council drivers	This action has the potential to result in fuel efficiency improvements in the local authority vehicle fleet which will reduce/minimise vehicle fleet related GHG emissions. This has the potential to generate some degree of positive effects on climate and local air quality.	0	0	0	0	0	0	+	0	0	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
T35	Implement carbon offset programme for official flights and investigate an appropriate offsetting scheme for the Council's other business travel emissions.	This action will broadly support the offset of local authority transport related GHG emissions and can potentially lead to some degree of positive effect on climate.	0	0	0	0	0	0	0	0	0	0	+

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Flood Resilience

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
F1	Update Council Emergency Response Plans to include flood event response	This action has the potential to support improving the effectiveness of major emergency response plans implemented in response to flood events. The action will generate a positive effect for environmental receptors that are at risk of being negatively impacted by flood events - by reducing the risk of such flood events.	+	0	+	+	0	0	0	0	+	0	0
F2	Ensure annual update of the specific risks to service provision in each FCC Department that may be impacted by Climate Change, building on the Climate Change Risk Assessment developed for the CAP.	This action will support maintaining local authority service provisions during climate change related events such as flooding or wildfires occurring in the local authority's functional area. The action has the potential to generate a positive effect for all environmental receptors, including population and human receptors and heritage assets that are served or maintained by the local authority.	+	+	+	+	0	0	+	0	+	0	+
F3	To engage with the Fingal Coastal Liaison Group with the integration of adaptation strategies into planning policies, etc.	This is an administrative related action and will have no real environmental effect when considered in isolation (i.e., the meetings held). Depending on the outcome of the meetings and the engagement carried out, this action has the potential to improve coastal protection and mitigate climate change risk associated with coastal flooding and erosion. The adaptation strategies and associated planning policies may themselves support coastal protection works and development that could potentially have negative environmental effects on water quality, hydrology, the marine environment, biodiversity etc., in absence of any mitigation.	0	-	+	0	+	0	0	-	+	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
F4	Develop and implement Coastal Protection Plan for Portrane	The progression of coastal flood resilience and protection related action has the potential to lead to significant development taking place at and in the vicinity of the coast. In the absence of any mitigation, such development could potentially have a variety of significant, negative environmental effects, including effects on: water quality, biodiversity, including flora and fauna reliant on aquatic eco-systems; the receiving air environment (due to the generation of construction dust), the receiving noise environment (due to the generation of construction phase noise), and the receiving human environment. Coastal flood resilience action has the potential to have positive environmental effects. The possible development of nature based solutions and SuDS as part of a coastal defence strategy has the potential to have slight to significant, positive effects on biodiversity and water quality. The delivery of coastal flood resilience action has the potential to reduce coastal flood risk and prevent future coastal flood events. Reducing coastal flood risk can generate significant, positive effects for a variety of environmental receptors that could be negatively impacted by flood events; including human receptors, ecological receptors and cultural heritage assets. The implementation of a coastal defence strategy is likely to have slight to significant positive effects on the receiving soils environment - through the prevention of coastal erosion. This may have also a beneficial impact on inter-related environmental receptors.	+/-	+/-	+	+	+	0	-	+/-	+	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
F5	Progress Flood Alleviation schemes in conjunction with the OPW - including Mill Stream Skerries, Bissett Strand and The Green Malahide Village, Portmarnock Bridge.	The progression of flood resilience related action has the potential to lead to significant development taking place at and in the vicinity of water bodies. In the absence of any mitigation, such development could potentially have a variety of significant, negative environmental effects, including effects on: water quality and the hydrology of water bodies; biodiversity, including flora and fauna reliant on aquatic eco-systems; the receiving air environment (due to the generation of construction dust), the receiving noise environment (due to the generation of construction phase noise), and the receiving human environment. Flood resilience action has the potential to have positive environmental effects also. The possible development of nature based solutions and SuDS as part of a flood resilience scheme has the potential to have slight to significant, positive effects on biodiversity and water quality at or downstream of a particular water body. The delivery of flood resilience action also has the potential to reduce flood risk and prevent flood events. Reducing flood risk can generate significant, positive effects for a variety of environmental receptors that could be negatively impacted by flood events; including human receptors, ecological receptors and cultural heritage assets.	+/-	+/-	+	+	0	0	-	+/-	+	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
F6	Continued engagement with the OPW to progress further studies of areas within Fingal at risk of flooding, and development of suitable schemes such as Strand Road Sutton and Santry	The progression of flood resilience related action, including coastal flood resilience action, has the potential to lead to significant development taking place at and in the vicinity of water bodies and the coast. In the absence of any mitigation, such development could potentially have a variety of significant, negative environmental effects, including effects on: water quality and the hydrology of water bodies; biodiversity, including flora and fauna reliant on aquatic eco-systems; the receiving air environment (due to the generation of construction dust), the receiving noise environment (due to the generation of construction phase noise), and the receiving human environment. Flood resilience action has the potential to have positive environmental effects also. The possible development of nature based solutions and SuDS as part of a flood resilience scheme has the potential to have slight to significant, positive effects on biodiversity and water quality at or downstream of a particular water body. The delivery of flood resilience action also has the potential to reduce flood risk and prevent flood events. Reducing flood risk can generate significant, positive effects for a variety of environmental receptors that could be negatively impacted by flood events; including human receptors, ecological receptors and cultural heritage assets.	+/-	+/-	+	+	0	0	-	+/-	+	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
F7	Progress appropriate minor works schemes to resolve recurring flood issues, where possible, ensuring the schemes are designed and implemented to promote SUDs / nature based solutions.	The progression of minor flood resilience related action has the potential to lead to minor development taking place at and in the vicinity of water bodies. Such minor works have the potential to have slight to moderate, negative effects on the water environment and biodiversity, including flora and fauna. It is unlikely such minor works will have a significant effect on the local air quality, noise and human environment given the likely scale, extent and duration of such works. Flood resilience action has the potential to have positive environmental effects also. The possible development of nature based solutions and SuDS as part of such minor works has the potential to have slight to moderate, positive effects on biodiversity and water quality at or downstream of particular water bodies. The delivery of flood resilience action also has the potential to reduce flood risk and prevent flood events. Reducing flood risk can generate significant, positive effects for a variety of environmental receptors that could be negatively impacted by flood events; including human receptors, ecological receptors and cultural heritage assets.	+	+/-	+	+	0	0	0	+/-	+	0	0
F8	Develop a coastal monitoring programme to measure coastal erosion along the Fingal coast	This is a monitoring related action and will have no real environmental effect when considered in isolation.	0	0	0	0	0	0	0	0	0	0	0
F9	Facilitate the development of a National Coastal Monitoring Survey Programme	This is a monitoring related action and will have no real environmental effect when considered in isolation.	0	0	0	0	0	0	0	0	0	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
F10	Identify sites where flood defence features can be removed or relocated to increase flood capacity of rivers and estuaries	This is a study related action and will have no real environmental effect when considered in isolation. Generally, the action will support the delivery of improved flood resilience in the local authority functional area by identifying opportunities for flood resilience improvements.	0	0	0	0	0	0	0	0	0	0	0
F11	Restore St Ita's wetlands to maximise water attenuation capacity and nature conservation benefits	In the absence of mitigation, the construction and excavation works associated with this action have the potential to have negative environmental effects on receiving environment sensitivities such as water quality (due to silt run-off), hydrology (due to changes in the hydrological regime), biodiversity, flora and fauna, and population and human health (due to construction phase noise, dust or traffic).	-	-	0	0	0	0	0	-	0	0	0
F12	Record on a GIS layer the council surface water system and make it available to all relevant staff from Operations & Planning. This must include all SuDS systems and flood embankments	This is a tracking/monitoring related action and will have no real environmental effect when considered in isolation. It will generally support the delivery of surface water management and flood resilience action across local authority departments.	0	0	0	0	0	0	0	0	+	0	0
F13	Prepare a maintenance register for the entire surface water system within the county, including SuDS, pipes and culverts to aid proactive maintenance, alleviate flooding and maintain water quality	This is a tracking/monitoring related action and will have no real environmental effect when considered in isolation. It will generally support the effective maintenance of surface water management systems.	0	0	0	0	0	0	0	0	+	0	0
F14	Develop an improved maintenance plan for SuDS assets that are taken in charge by FCC, ensuring their continued operation.	This action will promote good flood risk management and flood risk reduction. Proper stormwater/surface water network maintenance will generate a positive effect for environmental receptors that are at risk of being negatively impacted by flood events - by reducing the risk of such flood events.	+	0	+	+	0	0	0	+	+	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
F15	Promote and encourage community involvement in the retrofit of SuDS in existing developments, maintaining community rain gardens, discourage hard paving in gardens and retrofit raingardens / water butt installations	This action will facilitate a broader understanding of SuDS. The action is promotional in nature and will not have a real discernible environmental effect in and of itself. Such promotional action will underpin and broadly support the effective delivery of community level SuDS and nature based solutions however. The adoption of this action can potentially lead to some positive environmental effects on water quality, hydrology and biodiversity, flora and fauna.	0	+	0	0	0	0	0	+	+	0	0
F16	Develop a Blue/Green Roof Guideline to assist both internal and external stakeholders implement these systems as per the County Development Plan objectives	This action has the potential to have wide ranging slight to moderate positive effects on local biodiversity, water quality and hydrology, and landscape character and visual amenity. Promoting vegetative growth may result in an additional degree of carbon sequestration, marginally offsetting the effects of GHG emissions.	0	+	+	0	0	0	+	+	0	0	+
F17	Ensure the inclusion of water conservation and SuDS measures in all developments, to reduce the level of surface water run-of, improve water quality and contribute to adaptation to climate change through natural based solutions.	Ensuring all development appropriately encompasses SuDS/nature based solutions has the potential to result in wide ranging slight to significant positive environmental effects on water quality, hydrology and biodiversity. In the absence of mitigation, the construction of SuDS has the potential to result in some negative environmental effects on water quality (e.g. due to the run-off of soil or cement based material) or biodiversity (due to works impacting on water quality/aquatic ecology), for example.	0	+/-	0	0	0	0	0	+/-	+	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
F18	Drive the implementation of SuDS in FCC Capital projects, including new builds, retrofits etc, and monitor the level of implementation.	Ensuring all development appropriately encompasses SuDS/nature based solutions has the potential to result in wide ranging slight to significant positive environmental effects on water quality, hydrology and biodiversity. In the absence of mitigation, the construction of SuDS has the potential to result in some negative environmental effects on water quality (e.g. due to the run-off of soil or cement based material) or biodiversity (due to works impacting on water quality/aquatic ecology), for example.	0	+/-	0	0	0	0	0	+/-	+	0	0
F19	Create a case study of SuDS at Local Area Plan level	This action will underpin and broadly support the effective delivery of local area level SuDS and nature based solutions. The adoption of this action can potentially lead to some positive environmental effects on water quality, hydrology and biodiversity, flora and fauna.	0	+	0	0	0	0	0	+	+	0	0
F20	Ensure new Local Area Plans feature Urban Greening Proposals.	The development of greenspace in urban areas has the potential to have slight to significant positive effects on biodiversity. Such proposals may improve the aesthetic quality of urban areas, which could have slight to significant positive effects on the receiving landscape and visual environment.	0	+	+	0	0	0	0	0	0	0	0
F21	Assess the feasibility of green roofs on all new Fingal public, operational and social buildings and provide where viable and appropriate. Evaluate date from CARO / UCD project on Green Roof substrates.	This action has the potential to have a slight positive effect on local biodiversity, water quality and hydrology, and landscape character and visual amenity.	0	+	+	0	0	0	0	+	0	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
F22	Assess resilience of regional and local roads in line with Climate Adaptation Strategy issued by the Department of Transport	This is an assessment related action and will not have a real environmental effect when considered in isolation. This action will however promote the protection of road assets from climate change risks - such as a climate change influenced flooding.	0	0	0	0	0	0	0	0	+	0	0
F23	Assess Resilience of Bridge Infrastructure vulnerable to impact of climate change	This is an inspection related action and will not have a real environmental effect when considered in isolation. This action will however promote the protection of bridge assets from climate change risks - such as climate change influenced flooding.	0	0	0	0	0	0	0	0	+	0	0
F24	Develop maintenance and condition survey programmes for Council owned historic buildings and ancient monuments that are informed by climate change impacts.	This action will support the protection of architectural/archaeological assets from climate change risks. It has the potential to have slight to significant, positive effects on cultural heritage and architectural assets.	0	0	0	+	0	0	0	0	0	0	0
F25	Archaeological and heritage assets to form part of all climate risk assessments including opportunities for integration of cultural heritage in adaptative mitigations e.g. green infrastructure, cycle ways, nature-based solutions etc.	This action will support the protection of architectural/archaeological assets from climate change risks. It has the potential to have slight to significant, positive effects on cultural heritage and architectural assets.	0	0	0	+	0	0	0	0	0	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
F26	Use the findings of the Fingal Cultural Heritage & Climate Risk Assessment to prioritise and pilot adaptative and palliative measures for heritage assets in Council ownership	This action will support the protection of architectural/archaeological assets from climate change risks. It has the potential to have slight to significant, positive effects on cultural heritage and architectural assets. This action has the potential to support adaptive and palliative measures taking place at heritage assets, including protected structures and monuments. Such measure may include works that could adversely impact on the architectural or value of structures or arcaheology. This action has the potential to have adverse effects on Bats which are Annex IV species, as many roosts are located within old unused buildings that could constitute heritage assets.	0	-	0	+/-	0	0	0	0	0	0	0
F27	Support and develop citizen science projects such as Fingal X Heritage as a means of monitoring climate change impacts on Fingal's heritage assets and raising public awareness	This action has the potential to generate some degree of positive effects on climate and heritage assets.	0	0	0	+	0	0	0	0	0	0	+
F28	Identify projects and opportunities for collaboration with relevant stakeholders to assess and prioritise cultural heritage sites vulnerable to climate change	This action will support the protection of architectural/archaeological assets from climate change risks. It has the potential to have slight to significant, positive effects on cultural heritage and architectural assets.	0	0	0	+	0	0	0	0	0	0	0
F29	Build climate resilience of archaeological and built heritage in public and private ownership through the Community Monuments Fund	This action will support the protection of architectural/archaeological assets from climate change risks. It has the potential to have slight to significant, positive effects on cultural heritage and architectural assets.	0	0	0	+	0	0	0	0	0	0	0

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Nature Based Solutions

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
N1	Prepare and implement multi-functional management plans for the Rogerstown, Malahide and Baldoyle Estuaries and their surrounding lands	This action will promote the protection and further development of green infrastructure. The protection and development of green infrastructure has the potential to have wide ranging and slight to significant positive effects on tourism and recreation amenity and water quality and hydrology.	0	0	0	0	0	0	0	+	+	+	0
N2	Map and survey all significant/historic stands of woodland within the county e.g. in excess of 5ha, and review the effectiveness of the protection offered under the Green Infrastructure Network Zoning of woodlands in the County Development Plan	This is a mapping/review related action will have no real environment effect when considered in isolation. It will broadly support developing an understanding of the woodland protection requirement, which could potentially lead to better protection of woodlands and positive effects for biodiversity present in woodland habitats.	0	+	0	0	0	0	0	0	0	0	0
N3	Review measures to improve Biodiversity nett gain on all projects, including Biodiversity pilot programme on new build housing. Architects will adhere to Biodiversity officers protocol for nesting boxes.	This action has the potential to improve local biodiversity.	0	+	0	0	0	0	0	0	0	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
N4	Develop SUDS demonstration sites in the Tolka Valley, Ward River Valley, Balbriggan town Park and Rogerstown estuary	Such promotional action will underpin and broadly support the effective delivery of community level SuDS and nature based solutions however. The adoption of this action can potentially lead to some positive environmental effects on water quality, hydrology and biodiversity, flora and fauna. In the absence of mitigation, the construction of SuDS has the potential to result in some negative environmental effects on water quality (e.g. due to the run-off of soil or cement based material) or biodiversity (due to works impacting on water quality/aquatic ecology), for example.	0	+/-	0	0	0	0	0	+/-	+	0	0
N5	Implement wildfire fire management strategy for Howth Head	This action will promote the protection of important habitats and species from climate change risks - such as a climate change influenced wildfire - and has the potential to generate a significant positive effect for important habitats and species, through preventing the destruction of habitat in this area.	0	+	0	0	0	0	0	0	0	0	0
N6	Explore funding models for carbon offsetting to fund wetland and woodland development	This is a study/research based action and will not have a real environmental effect when considered in isolation. This action will broadly support the offset of GHG emissions and can potentially lead to some degree of positive effect on climate and on biodiversity through the enhancement of wetland and woodland development.	0	+	0	0	0	0	0	0	0	0	+
N7	Commission a study to report on the ecosystem services/nature-based solutions provided by Fingal's trees with reference to their economic/climate change adaptation benefits	This a study based action and will not have a real environmental effect when considered in isolation. This action will broadly support and promote the adoption of nature based solutions, such as tree planting, to achieve positive environmental outcomes, such as carbon sequestration.	0	0	0	0	0	0	0	0	+	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
N8	Assess and adopt tree valuation methods for compensatory / replacement planting, e.g. CAVAT, iTree	This action will broadly support and promote the adoption of nature based solutions, such as tree planting, to achieve positive environmental outcomes, such as carbon sequestration and biodiversity improvements.	0	+	0	0	0	0	0	0	0	0	0
N9	Initiate a programme of targeted Strategic Annual Tree Planting including identifying and mapping priority locations, to include sites suitable for woodland creation. Reviewed in an annual works programme, presenting what is planned for the coming year. Taking advantage of government funding programmes such as the New Woodland Creation Scheme on Public Lands	This action has the potential to have wide ranging slight to moderate significant effects on local biodiversity, and slight to significant effects on landscape character and visual amenity. Promoting vegetative growth may result in an additional degree of carbon sequestration, marginally offsetting the effects of GHG emissions. The potential positive effects on biodiversity associated with this measure can be fully realised with the parallel adoption of Action N10.	0	+	+	0	0	0	+	0	0	0	0
N10	Prepare a list of suitable tree species recommended for differing situations / functions and make available to developers and other stakeholders following the Guiding Principle of 'right tree in the right place.'	This effective delivery of this action can optimise the potential positive environmental effects associated with increased tree planting.	0	+	0	0	0	+/	+	0	0	0	+
N11	Undertake study to identify the habitats and species at risk of climate change	This action will promote the protection of biodiversity from climate change risks - such as climate change influenced flooding or wildfires - and has the potential to have wide ranging slight to significant positive effects on local biodiversity.	0	+	0	0	0	0	0	0	0	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
N12	Carry out feasibility studies of developing a Marine Protection Area along the Fingal Coast and on the restoration of Oyster beds, Shellfish beds, Seagrass beds and Kelp stands	This study based action can potentially support and promote the protection and enhancement of the important habitats and species present along coastal locations, which could lead to wide ranging slight to very significant positive effects on biodiversity, flora and fauna, and slight to significant positive effects on tourism and recreation amenity and water quality.	0	+	0	0	0	0	0	+	0	+	0
N13	Restore marine ecosystem along Fingal coast by supporting restoration projects of Oyster beds, Shellfish beds, Seagrass beds and Kelp stands	These actions are likely to support and promote the protection and enhancement of the important habitats and species present along coastal locations, which could lead to wide ranging slight to very significant positive effects on biodiversity, flora and fauna, and slight to significant positive effects on tourism and recreation amenity and water quality. In the absence of mitigation, the carrying out of inappropriate restoration works or measures could potentially lead to negative environmental effects on biodiversity, flora and fauna or water quality.	0	+/-	0	0	0	0	-	+/-	0	+	0
N14	Prepare wetland and river restoration project for the Bog of the Ring and the Matt river corridor	The restoration works associated with this action have the potential to have negative environmental effects on receiving environment sensitivities such as water quality (due to silt run-off), hydrology (due to changes in the hydrological regime), and biodiversity, flora and fauna, in the absence of mitigation.	0	-	0	0	0	0	0	-	0	0	0
N15	Increase pollinator areas in public parks and open spaces	This action has the potential to have wide ranging slight to significant positive effects on local biodiversity.	0	+	0	0	0	0	0	0	0	0	0
N16	Continue supporting the use of public allotments as a way communities can grow their own food, and lower food miles and food waste	This action has the potential to contribute to a degree to reducing the level of GHG emissions associated with the production and transportation of food.	0	0	0	0	0	0	+	0	+	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
N17	Map and protect strategic agricultural land for national food security purposes	This is a mapping related action which will not have a real environmental effect in isolation.	0	0	0	0	0	0	0	0	0	0	0
N18	Engage with the agri-food sector to gain an understanding of how Fingal might better support more sustainable farming practices	This is a stakeholder engagement-related action which will not have a real environmental effect in isolation. Depending on the success of the engagement carried out, this action may, to some extent, promote sustainable agriculture in the local authority functional area - which could lead to Agriculture sector GHG emission reductions, positive impacts on biodiversity and water quality, and reduced adverse land use related impacts.	0	+	0	0	0	+	+	+	0	0	0
N19	Develop climate change initiatives in partnership with local farmers and other stakeholders	This action can potentially support the promotion of sustainable agricultural in the local authority functional area - which could lead to Agriculture sector GHG emission reductions, positive impacts on biodiversity and water quality, and reduced adverse land use related impacts.	0	+	0	0	0	+	+	+	0	0	0

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Circular Economy and Resource Management

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
R1	Develop a Green Public Procurement (GPP) strategy	The effective promotion and expanded adoption of green public procurement processes has the potential to increase the frequency at which the local authority sources goods and services that have a reduced environmental impact. The successful and effective promotion of green public procurement has the potential to generate some degree of positive environmental effects generally.	0	0	0	0	0	0	0	0	+	0	+
R2	Develop a monitoring and reporting tool to ensure GPP is embedded into all Procurements	The effective promotion and expanded adoption of green public procurement processes has the potential to increase the frequency at which the local authority sources goods and services that have a reduced environmental impact. The successful and effective promotion of green public procurement has the potential to generate some degree of positive environmental effects generally.	0	0	0	0	0	0	0	0	+	0	+
R3	Ensure GPP Monitoring & Reporting is undertaken to ensure Green Criteria is included in contracts.	The effective promotion and expanded adoption of green public procurement processes has the potential to increase the frequency at which the local authority sources goods and services that have a reduced environmental impact. The successful and effective promotion of green public procurement has the potential to generate some degree of positive environmental effects generally.	0	0	0	0	0	0	0	0	+	0	+
R4	Implement Environmental Management System for Council buildings including reduction in waste and water usage, and increased recycling	This action will support a reduction in organisational waste generation and water usage and will promote the recycling of waste - in accordance with the waste hierarchy. This action is likely to support proper management of waste and reduce the risk of improper disposal of waste - which may lead to the occurrence of environmental pollution.	0	0	0	0	0	0	0	0	+	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
R5	31 Community centres to participate in FCC Keen to be Green initiative over 5 stages	This action has the potential to improve the sustainability performance of community centre buildings. This action has the potential to support community level GHG emission reductions. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	0	0	0	0	+
R6	Support and promote the implementation of the targets of the National Waste Management Plan for a Circular Economy 2023-2029	This action is likely to promote effective waste management and waste/material circularity. Any measures that improve resource efficiency/circularity will broadly support the reduction of lifecycle GHG emissions associated with the production of materials and goods. This is likely to result in a positive environmental effect generally.	0	0	0	0	0	0	0	0	+	0	0
R7	Establish a network of public drinking water fountains to help reduce plastic waste in partnership with Uisce Eireann	This action has the potential to lead to slight positive environmental effects, through the reduction of plastic use and the generation of plastic waste requiring management.	0	0	0	0	0	0	0	0	+	0	0
R8	Assessment of Construction & Demolition Waste Management Plans for proposed developments to ensure all potential waste streams are identified at an early stage and appropriate measures put in place to promote prevention, reuse, recycling and recovery of waste in line with the waste hierarchy. The segregation and management of different waste streams is also assessed.	This action has the potential to generate slight to significant positive environmental effects by promoting the prevention, reuse, recycling and appropriate recovery of waste generated during construction and demolition related projects. Improving waste circularity can in turn lead to resource efficiency improvements and lifecycle GHG emission reductions more broadly. The inappropriate or improper management of Construction and Demolition waste could potentially lead to negative environmental effects, including impacts on biodiversity or the water and soils environment.	0	-	0	0	-	0	+	-	+	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
R9	Assessment of all apartment complexes within Fingal on the management of food waste and use of brown bins. Engagement with apartment management companies to ensure compliance with legislation and to encourage segregation of food waste by residents and subsequent collection by authorised collectors.	This action has the potential to generate slight to significant positive environmental effects by promoting food waste segregation and recycling.	0	0	0	0	0	0	0	0	+	0	+
R10	Waste Collection Permit and Waste Facility Permit holders desktop annual return (AR) validation and on site verification audits to improve traceability of the various waste streams	This is a monitoring related action and will have no real environmental effect when considered in isolation. It will however broadly support the waste enforcement functions of the local authority, promote and encourage compliance with waste legislation and reduce the likelihood of improper/inappropriate waste disposal leading to environmental pollution or nuisance.	0	0	0	0	0	0	0	0	+	0	0
R11	Waste Presentation Bye-Law Project - identify households who currently don't have a standard waste collection service in place, investigate and determine how they are managing their waste; encourage compliance with FCC Waste Presentation Bye-Laws and take legal action if required to ensure compliance	This action will support the waste enforcement functions of the local authority, promote and encourage compliance with waste legislation and reduce the likelihood of improper/inappropriate waste disposal leading to environmental pollution or nuisance.	0	0	0	0	0	0	0	0	+	0	0
R12	Assessment of commercial premises within Fingal to ensure compliance with the Waste Presentation Bye-Laws and the Waste Management (Food Waste) Regulations 2009	This action will support the waste enforcement functions of the local authority, promote and encourage compliance with waste legislation and reduce the likelihood of improper/inappropriate waste management.	0	0	0	0	0	0	0	0	+	0	0

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
	in terms of waste segregation and in particular food waste.												
R13	Prepare Circular Cities Action Plan	This action is likely to promote effective waste management and waste/material circularity. Any measures that improve resource efficiency/circularity will broadly support the reduction of lifecycle GHG emissions associated with the production of materials and goods. This is likely to result in a positive environmental effect generally. This action plan has some potential to support the development of waste related infrastructure/systems and the carrying out of waste management operations that could generate environmental nuisance in the form of odour, noise, dust, litter or traffic congestion, or result in the run-off of waste leachate.	0	0	0	0	0	0	-	-	+/-	0	+
R14	Implement measures under the Circular Cities Action Plan,	This action is likely to promote effective waste management and waste/material circularity. Any measures that improve resource efficiency/circularity will broadly support the reduction of lifecycle GHG emissions associated with the production of materials and goods. This is likely to result in a positive environmental effect generally. This action plan has some potential to support the development of waste related infrastructure/systems and the carrying out of waste management operations that could generate environmental nuisance in the form of odour, noise, dust, litter or traffic congestion, or result in the run-off of waste leachate.	0	0	0	0	0	0	-	-	+/-	0	+
R15	Incorporate circular economy principles in FCC Economic Development Strategy	This action is likely to promote effective waste management and waste/material circularity. Any measures that improve resource efficiency/circularity will broadly support the reduction of lifecycle GHG emissions associated with the production of materials	0	0	0	0	0	0	0	0	+	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
		and goods. This is likely to result in a positive environmental effect generally.											
R16	Reduce carbon footprint of Council supported events.	This action will support the local authority reducing community level GHG emissions in line with climate policy and legislation and emission reduction targets. The action is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	0	0	0	0	+
R17	Extending opening hours in Coolmine in line with Estuary Recycle Centre	This action is likely to promote effective waste management and waste/material circularity, and in particular, waste recycling. Any measures that improve resource efficiency/circularity will broadly support the reduction of lifecycle GHG emissions associated with the production of materials and goods. This is likely to result in a positive environmental effect generally. The extension of operating hours at this waste management facility has the potential to increase the duration, frequency and magnitude of environmental effects associated with this facility, including noise, odour, dust and traffic related effects.	0	0	0	0	0	0	-	0	+/-	0	+
R18	Expand the bring bank network (bottles, cans & textiles) throughout Fingal by a minimum of 3 sites annually, giving consideration to new areas of populations and development.	This action is likely to promote effective waste management and waste/material circularity, and in particular, waste recycling. Any measures that improve resource efficiency/circularity will broadly support the reduction of lifecycle GHG emissions associated with the production of materials and goods anew. This is likely to result in a positive environmental effect generally. The development of bring banks has the potential to generate localised, slight to moderate negative environmental effects, including negative noise, nuisance and traffic congestion related impacts, in the absence of appropriate design or mitigation.	0	0	0	0	0	0	-	-	+/-	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
R19	Provide paints, musical instruments and bicycles from Estuary & Coolmine civic amenity centres to community groups for re-use. Identify other used items that could be collected at the Civic Amenity Centres and re-purposed, re-imagined or repaired for re-use.	Promoting the repair and reuse of such items will promote product circularity and resource efficiency in accordance with cradle to cradle principles, and will also broadly support the reduction of lifecycle GHG emissions associated with the production of materials and goods anew	0	0	0	0	0	0	0	0	+	0	+
R20	Assess Council lands & buildings for potential for renewable energy, biodiversity; green infrastructure, sustainable agriculture & other sustainable projects.	The assessment process associated with this action will not have any real environmental effect when considered in isolation. The action could potentially support the carrying out of a variety of environmentally beneficial projects, including renewable energy and green infrastructure projects that could generate a range of slight to significant positive environmental effects, including positive effects on climate, water quality, the soils environment and biodiversity. In the absence of mitigation, the action could support the carrying out of potentially significant development which could have negative slight to significant environmental effects, including impacts on landscape character and visual amenity (in the case of renewable energy projects on local authority lands such as the development wind turbines or ground-based or rooftop solar PV panels, for example), impacts on population and human health (due to solar panel glint and glare, or wind turbine related noise impacts, for example), biodiversity impacts, and impacts on the water or soils environment (due to development construction phase run-off of silt or cement based material). Such potential effects can be mitigated by considering planning and environmental related matters and constraints early on during the assessment/design process.	-	+/-	-	0	+/-	0	0	+/-	+	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
R21	Develop renewable energy, green infrastructure, biodiversity, sustainable agriculture & other sustainable projects on Council lands & buildings.	The action could potentially support the carrying out of a variety of environmentally beneficial projects, including renewable energy and green infrastructure projects that could generate a range of slight to significant positive environmental effects, including positive effects on climate, water quality, the soils environment and biodiversity. In the absence of mitigation, the action could support the carrying out of potentially significant development which could have negative slight to significant environmental effects, including impacts on landscape character and visual amenity (in the case of renewable energy projects on local authority lands such as the development wind turbines or ground-based or rooftop solar PV panels, for example), impacts on population and human health (due to solar panel glint and glare, or wind turbine related noise impacts, for example), biodiversity impacts, and impacts on the water or soils environment (due to development construction phase run-off of silt or cement based material). Such potential effects can be mitigated by considering planning and environmental related matters and constraints early on during the assessment/design process.	-	+/-	-	0	+/-	0	0	+/-	+	0	+
R22	Identify opportunities for the acquisition of land and buildings by agreement/CPO for renewable energy/ regeneration/active travel/greenway / green infrastructure projects etc	The carrying out of acquisition/CPO processes associated with this action will not have any real environmental effect when considered in isolation.	0	0	0	0	0	0	0	0	0	0	0

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Community Engagement

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
C1	Promote & Administer Community Climate Action grants for 2023 - 2026. Approve grants to communities to deliver climate action projects across the thematic areas as [er Grant guidelines.	The promotion of community climate action projects has the potential to have a slight positive effect on climate - having regard to the share of GHG emission reductions that can be supported via this action relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	0	0	0	0	+
C2	Deliver Climate Action Week program of events in conjunction with DLA	This promotional action will underpin and support the effective delivery of climate action in the community by promoting awareness and understanding of climate action related issues. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+
C3	Develop an annual calendar of climate action & environmental awareness days of significance which will include international and national days, such as the World Earth Day, World Sand Dune day, National Reuse Month, National Bike Week, Dublin Climate Action Week, All Dublin Clean up week. Targeted campaigns to promote activities as per calendar timeline.	This promotional action will underpin and support the effective delivery of climate action in the community by promoting awareness and understanding of climate action related issues. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+
C4	Utilise various forms of media including FCC social media, FCC website, newsletters, & cinema campaigns to promote climate action awareness.	This promotional action will underpin and support the effective delivery of climate action in the community by promoting awareness and understanding of climate action related issues. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
C5	Develop a library of climate material including webinars, books, articles and digital training resources covering Climate Science, Climate Action, Just Transition, the LACAP, National and Local on climate action and make available to the public through the Fingal's social media channels and Fingal Libraries.	This awareness/education related action will not have a real, significant environmental effect when considered in isolation. It will underpin and support the effective delivery of climate action in the community by promoting and awareness and understanding of climate action related issues. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+
C6	Engage with DLA to scope requirement for delivering Climate Action Awareness in Schools, through training providers, in advance of Climate Action Awareness being mainstreamed within school curriculum.	This promotional action will underpin and support the effective delivery of climate action at schools by promoting and awareness and understanding of climate action related issues. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+
C7	Engage with schools and An Taisce and provide resources & funding to deliver green flags and achieve green schools status.	This action will support the promotion of good environmental management at schools and has the potential to generate some degree of positive effects on biodiversity and climate.	0	+	0	0	0	0	0	0	0	0	+
C8	Provide resources including funding to schools in Fingal as support to engage in resource management projects. Projects may include composting for schools, gardening and vegetable growing projects, resources packs and installation of water butts.	This action will support the promotion of good environmental management at schools and has the potential to generate some degree of positive effects on biodiversity and climate.	0	+	0	0	0	0	0	0	0	0	+
C9	Provide an annual energy awareness event in partnership	This promotional action will support the effective delivery of climate action in the community. The	0	0	0	0	0	0	0	0	0	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
	with Codema, SEAI and other stakeholders	adoption of this action will support the full realisation of the plan vision in the community.											
C10	Promote and support SEAI's Better Energy Communities and Sustainable Energy Communities	This promotional action will support the effective delivery of climate action in the community. The adoption of this action will support the full realisation of the plan vision in the community. The carrying out of the type of energy efficiency upgrades or small-scale renewable energy development supported by this programme has some potential to have negative localised effects - such as impacts on protected structures, or localised impacts on visual amenity or biodiversity, in the absence of mitigation.	0	-	-	-	0	0	0	0	+	0	+
C11	Pilot Climate Action workshops with Tidy Town committees to promote awareness of climate action at a local level.	This promotional action will underpin and support the effective delivery of climate action in towns by promoting an awareness and understanding of climate action related issues. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+
C12	Involve residents and community groups, e.g. Tidy Towns/community garden groups, in the establishment of newly planted trees in their area, e.g. watering	This promotional action will underpin and support the effective delivery of climate action in the community by promoting awareness and understanding of climate action related issues. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+
C13	Guided by the Memorandum of Understanding signed between the GAA and CCMA, towards working together on sustainability and climate action projects, engage with the Green Club Programme through a nominated lead, working with the CARO and GAA, in the promotion and support of projects by	This promotional action will underpin and support the effective delivery of climate action in the GAA community by promoting awareness and understanding of climate action related issues. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community. This action will support the promotion of good environmental management at GAA Clubs and has the	0	+	0	0	0	0	0	0	0	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
	participating clubs, to meet the objectives, and during key phases, of the programme to 2029	potential to generate some degree of positive effects on biodiversity and climate.											
C14	Keen to be Green Communities: supporting community groups to develop climate awareness projects such as Bike repair workshops, clothes swaps, community gardens, green festivals.	This promotional action will underpin and support the effective delivery of climate action in the community by promoting awareness and understanding of climate action related issues. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+
C15	Work with Global Action Plan on the further development of Climate Action Heroes programme across communities	This promotional action will underpin and support the effective delivery of climate action in the community by promoting awareness and understanding of climate action related issues. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+
C16	Promote LEADER Projects on sustainability	This promotional action will underpin and support the effective delivery of climate action in the business community by promoting awareness and understanding of sustainability and climate action related issues. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+
C17	Provide resources including equipment and funding for marine clean-up and awareness events. Deliver an annual coastal event in the community such as awareness of and protection measures for sand dunes.	This action has the potential to generate some degree of positive effects on the marine environment.	0	0	0	0	0	0	0	+	0	0	0
C18	Sport Grants - Clubs must provide evidence of 'circular economy' and other	This action is likely to promote effective waste management and waste/material circularity at Sports Clubs. Any measures that improve resource	0	0	0	0	0	0	0	0	+	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
	sustainable initiatives as appropriate.	efficiency/circularity will broadly support the reduction of lifecycle GHG emissions associated with the production of materials and goods. This is likely to result in a positive environmental effect generally.											
C19	Review Fingal Skills Strategy which includes the development of green skills across all economic sectors	This promotional action will underpin and support the effective delivery of climate action across all economic sectors by promoting the development of sustainability and climate action related skills. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+
C20	Expand participation in Green Skills Sub-Group under Fingal Skills Strategy	This promotional action will underpin and support the effective delivery of climate action across all economic sectors by promoting the development of sustainability and climate action related skills. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+
C21	Establish an Agri-Food Skills Sub-Group under Fingal Skills Strategy to promote diversification within the Agri-Food Sector	This promotional action will underpin and support the effective delivery of climate action across all economic sectors by promoting the development of sustainability and climate action related skills. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the community.	0	0	0	0	0	0	0	0	0	0	+
C22	Provide Climate Awareness training for all staff and elected members and identify opportunities to embed climate awareness across all departments	This education/awareness related action will underpin and support the effective delivery of climate action in the local authority by promoting awareness of relevant sustainability and climate related matters. The adoption of this action will support the full realisation of the vision and main objectives of the plan in the local authority organisation.	0	0	0	0	0	0	0	0	0	0	+
C23	Develop climate action induction pack for all new staff.	This education/awareness related action will underpin and support the effective delivery of climate action in the local authority by promoting awareness of relevant sustainability and climate related matters. The adoption of this action will support the full realisation of the vision	0	0	0	0	0	0	0	0	0	0	+

Action Ref.	Draft LACAP Action	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
		and main objectives of the plan in the local authority organisation.											

Key: PHH - Population & Human Health. BFF - Biodiversity, Flora & Fauna. L - Landscape, Seascape & Visual Amenity. CH - Cultural Heritage - Archaeology & Architectural. S - Soils. LU - Land Use. AQN - Air Quality and Noise. W - Water. MA - Material Assets. TR- Tourism & Recreation. CC - Climate Change.

Register of Opportunities for Decarbonising Zone

Opportunity	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
Upgrade of residential building stock for energy efficiency & renewable heat systems	This opportunity will support the reduction of Residential sector GHG emissions. The opportunity is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this opportunity relative to national GHG emission reduction targets and requirements. There is the potential for light and air pollution during retrofitting works. Retrofitting works may also negatively affect the appropriate conservation of protected structures. Therefore there is also scope for there to be negative effects if unmitigated.	0	-	0	-	0	0	+	0	0	0	+
Upgrade of social housing stock for energy efficiency & renewable heat systems	This opportunity will support the reduction of Residential sector GHG emissions. The opportunity is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this opportunity relative to national GHG emission reduction targets and requirements. There is the potential for light and air pollution during retrofitting works. Retrofitting works may also negatively affect the appropriate conservation of protected structures. Therefore there is also scope for there to be negative effects if unmitigated. The development of PV panels on Residential buildings has the potential to result in negative glint and glare impacts on sensitive environmental receptors.	0	-	0	-	0	0	+	0	0	0	+
Residential rooftop solar PV	This opportunity will support the local community in reducing its GHG emissions in line with climate policy and legislation and emission reduction targets. The opportunity is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via	0	-	-	0	0	0	+	0	0	0	+

Opportunity	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQ N	W	MA	TR	CC
	this opportunity relative to national GHG emission reduction targets and requirements. The development of PV panels on Residential buildings has the potential to result in negative glint and glare impacts on sensitive environmental receptors.											
District heating for residential building stock	This opportunity will support development that has the potential to result in a reduction of heating related Residential sector GHG emissions in the local area. In the absence of any mitigation, such development, which will include extensive pipe laying works, could potentially have a variety of significant, negative environmental effects, including effects on: water quality, biodiversity, flora and fauna; the receiving air environment (due to the generation of construction dust), the receiving noise environment (due to the generation of construction phase noise), and the receiving human environment.	-	-	0	0	0	0	+/-	-	0	0	+
Support development of group or neighbourhood approaches for residential retrofit, renewable heating, and solar installation	This opportunity will support the reduction of Residential sector GHG emissions. The opportunity is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this opportunity relative to national GHG emission reduction targets and requirements. There is the potential for light and air pollution during retrofitting works. Retrofitting works may also negatively affect the appropriate conservation of protected structures. Therefore there is also scope for there to be negative effects if unmitigated. The development of PV panels on Residential buildings has the potential to result in negative glint and glare impacts on sensitive environmental receptors.	0	-	-	-	0	0	+	0	0	0	+
Tackling the split incentive - raise awareness of tax incentives for	This opportunity will support the reduction of Residential sector GHG emissions. The opportunity is	0	-	0	-	0	0	+	0	0	0	+

Opportunity	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQ N	W	MA	TR	CC
retrofit of rented properties, and future requirements for minimum BER for rented properties	likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this opportunity relative to national GHG emission reduction targets and requirements. There is the potential for light and air pollution during retrofitting works. Retrofitting works may also negatively affect the appropriate conservation of protected structures. Therefore there is also scope for there to be negative effects if unmitigated.											
Energy upgrade of priority Fingal County Council buildings in the decarbonising zone	This opportunity will support the local authority in reducing its organizational GHG emissions in line with climate policy and legislation and emission reduction targets. The opportunity is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this opportunity relative to national GHG emission reduction targets and requirements. There is the potential for light and air pollution during retrofitting works. Retrofitting works may also negatively affect the appropriate conservation of protected structures. Therefore there is also scope for there to be negative effects if unmitigated.	0	-	0	-	0	0	+	0	0	0	+
Upgrade of commercial and public building stock for energy efficiency & renewable heat systems	This opportunity will support reducing its organizational and commercial sector GHG emissions in line with climate policy and legislation and emission reduction targets. The opportunity is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this opportunity relative to national GHG emission reduction targets and requirements. There is the potential for light and air pollution during retrofitting works. Retrofitting works may also negatively affect the appropriate conservation of protected structures. Therefore there is also scope for there to be negative effects if unmitigated.	0	-	0	-	0	0	+	0	0	0	+

Opportunity	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
Commercial rooftop solar PV	This opportunity will support the Commercial sector in reducing its organizational GHG emissions in line with climate policy and legislation and emission reduction targets. The opportunity is likely to have a slight positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this opportunity relative to national GHG emission reduction targets and requirements. The development of PV panels on buildings has the potential to result in negative glint and glare impacts on sensitive environmental receptors.	0	-	-	0	0	0	+	0	0	0	+
Lighting upgrades for commercial buildings	This opportunity broadly supports the reduction of County GHG emissions in line with climate policy and legislation and emission reduction targets. The opportunity is likely to have a slight positive environmental effect in terms of GHG emissions however, the spectrum of light from LED sources has the potential to impact nocturnal species. Therefore there is also scope for there to be slight negative effects if unmitigated.	0	-	0	0	0	0	+	0	0	0	+
District heating for commercial & public sectors	This opportunity will support development that has the potential to result in a reduction of heating related Commercial and public sector GHG emissions in the local area. In the absence of any mitigation, such development, which will include extensive pipe laying works, could potentially have a variety of significant, negative environmental effects, including effects on: water quality, biodiversity, flora and fauna; the receiving air environment (due to the generation of construction dust), the receiving noise environment (due to the generation of construction phase noise), and the receiving human environment.	-	-	0	0	0	0	+/-	-	0	0	+
Explore opportunities for waste heat recovery and utilisation	This opportunity has the potential to lead to positive effects on climate.	0	0	0	0	0	0	0	0	0	0	+

Opportunity	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQ N	W	MA	TR	CC
Support development of group energy performance contracting for the commercial and public sectors to deliver retrofit and renewable heating	This opportunity has the potential to lead to positive effects on climate. There is the potential for light and air pollution during retrofitting works. Retrofitting works may also negatively affect the appropriate conservation of protected structures. Therefore, there is also scope for there to be negative effects if unmitigated.	0	-	0	-	0	0	+	0	0	0	+
Explore opportunities for engagement with commercial sector - improving efficiency of building energy management systems	This is an engagement related opportunity and will not have a significant effect in and off itself.	0	0	0	0	0	0	0	0	0	0	0
Create special action group including local 'significant energy users' to explore opportunities for collaboration and synergies on decarbonisation projects	This is an engagement related opportunity and will not have a significant effect in and off itself.	0	0	0	0	0	0	0	0	0	0	0
Explore opportunities for enhanced green procurement for local authority and public sector bodies within the decarbonising zone	The effective promotion and expanded adoption of green public procurement processes has the potential to increase the frequency at which the local authority sources goods and services that have a reduced environmental impact. The successful and effective promotion of green public procurement has the potential to generate some degree of positive environmental effects generally.	0	+	0	0	+	0	+	+	0	0	+
Conversion to electric vehicles – private car, LGV, HGV	Increasing the level of vehicles that use sustainable sources of energy will have a slight positive effect on climate - having regard to the share of GHG emission reductions that can be supported via this opportunity relative to national GHG emission reduction targets and requirements.	0	0	0	0	0	0	+	0	0	0	+
Explore opportunities for expansion of electric car-sharing schemes within the decarbonising zone	Increasing the level of vehicles that use sustainable sources of energy will have a slight positive effect on climate - having regard to the share of GHG emission reductions that can be supported via this opportunity	0	0	0	0	0	0	+	0	0	0	+

Opportunity	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
	relative to national GHG emission reduction targets and requirements.											
Electrification of buses, and supporting development of charging opportunities	The expansion of the EV charging network could potentially lead to the development of multiple charging points and ancillary electrical infrastructure including grid connection routes across the extent of the DZ area. In the absence of any mitigation, works involved in the construction of additional charging point infrastructure have the potential to generate a range of slight to significant environmental effects, including noise impacts, local air quality impacts (through the generation of construction dust), impacts on water quality (through the run-off of silt and cement based products during construction), and biodiversity impacts. The delivery of a good network of charging infrastructure has the potential to promote the use of sustainable travel modes in the community, encourage modal shift and support the reduction of vehicle related emissions. This is likely to have a slight to moderate positive environmental effect - having regard to the share of GHG emission reductions that can be supported via this opportunity relative to national GHG emission reduction targets and requirements.	0	-	0	-	-	0	+/-	-	0	0	+
Supporting increase in use of public transport	This opportunity has the potential to lead to positive effects on climate.	0	0	0	0	0	0	0	0	0	0	+
Explore opportunities for new public transport and active travel linkages to nearby rail services	This opportunity has the potential to lead to positive effects on climate. The lead on development of active travel infrastructure could potentially lead to negative environmental effects, including effects on existing traffic and transport conditions, and construction	+	+/-	0	0	0	0	+/-	-	0	0	+

Opportunity	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
	related effects, including noise, dust, biodiversity impacts and traffic congestion.											
Explore opportunities for pedestrianising a street or streets within the town centre area	Works involved in repurposing car parks are likely to be minor in nature and are unlikely to lead to any significant negative environmental effects. The opportunity has the potential to support modal shift and positive effects on local air quality and the climate environment.	0	0	0	0	0	0	+	0	0	0	+
Active travel - programmes for schools such as walking bus, school streets, green schools, local air quality monitors	This opportunity has the potential to encourage modal shift to active/sustainable travel modes. It will help fully realize the potential positive environmental effects associated with increasing the level of active travel.	0	0	0	0	0	0	+	0	0	0	+
Active travel - explore opportunities for 'bike libraries' or 'try-a-bike' schemes	This opportunity has the potential to encourage modal shift to active/sustainable travel modes. It will help fully realize the potential positive environmental effects associated with increasing the level of active travel.	0	0	0	0	0	0	+	0	0	0	+
Explore opportunities to repurpose car parks for use as 'last mile' delivery hubs	Works involved in repurposing car parks are likely to be minor in nature and are unlikely to lead to any significant negative environmental effects. The opportunity has the potential to support modal shift and positive effects on the climate environment.	0	0	0	0	0	0	+	0	0	0	+
Review opportunities to reallocate public parking spaces to alternative public amenity uses	Works involved in reallocating parking spaces are likely to be minor in nature and are unlikely to lead to any significant negative environmental effects. The opportunity has the potential to support modal shift and positive effects on the climate environment.	0	0	0	0	0	0	+	0	0	0	+
Explore opportunities to collaborate with the 'Cycle Right' programme within the decarbonising zone, and	This opportunity has the potential to encourage modal shift to active/sustainable travel modes. It will help fully realize the potential positive environmental effects associated with increasing the level of active travel.	0	0	0	0	0	0	+	0	0	0	+

Opportunity	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQ N	W	MA	TR	CC
opportunities to expand this to forms of e-mobility.												
Facilitating new electricity network infrastructure where required by electricity network operators	This opportunity has the potential to underpin renewable energy development and associated GHG emission reductions. In the absence of any mitigation, such development, which could include cable laying works, could potentially have a variety of slight to significant, negative environmental effects, including effects on: water quality, biodiversity, flora and fauna; the receiving air environment (due to the generation of construction dust), the receiving noise environment (due to the generation of construction phase noise), and the receiving human environment.	-	-	0	0	0	0	+/-	-	0	0	+
Engage with demand response companies and key stakeholders within the decarbonising zone, to support the development of demand response and energy storage in residential, commercial and public sectors.	This opportunity has the potential to underpin renewable energy development and associated GHG emission reductions. In the absence of any mitigation, infrastructure supported by this opportunity could potentially have a variety of slight to significant, negative environmental effects, including effects on: the aesthetic quality of built environment, the receiving noise environment, or construction related effects.	-	-	0	0	0	0	+/-	-	0	0	+
Engage with SEAI Sustainable Energy Community (SEC) programme and mentors to support development of SECs, engagement and project delivery within the decarbonising zone	This promotional/engagement opportunity will support the effective delivery of climate opportunity in the community. The adoption of this opportunity will support the full realization of the plan vision in the community. The carrying out of the type of energy efficiency upgrades or small-scale renewable energy development supported by this programme has some potential to have negative localized effects - such as impacts on protected structures, or localized impacts on visual amenity or biodiversity, in the absence of mitigation.	0	-	-	-	0	0	0	0	0	0	+

Opportunity	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
Engage with public sector bodies located in the decarbonising zone to understand their decarbonisation plans and find synergies and opportunities	This is a stakeholder engagement opportunity which will have no environmental effect in isolation. The opportunity will underpin and support climate opportunity in the DZ generally.	0	0	0	0	0	0	0	0	0	0	+
Create a regular drop-in 'energy clinic' where the public can receive advice on how they can take climate action. Explore possible links with Sustainable Energy Communities mentors.	This is a community and public engagement opportunity which will have no environmental effect in isolation. The opportunity will underpin and support climate opportunity in the DZ generally.	0	0	0	0	0	0	0	0	0	0	+
Establish local 'climate champions' who embody and support climate action. Explore possible links with sustainable Energy Communities mentors.	This is a community and public engagement opportunity which will have no environmental effect in isolation. The opportunity will underpin and support climate opportunity in the DZ generally.	0	0	0	0	0	0	0	0	0	0	+
Create information supports or a 'toolkit' for local businesses on how they can reduce their emissions, encompassing existing programmes and support in Ireland and guidance on Scope 1, 2, and 3 emissions	This is a community engagement opportunity which will have no environmental effect in isolation. The opportunity will underpin and support climate opportunity in the DZ generally.	0	0	0	0	0	0	0	0	0	0	+
Promote upskilling and educational opportunities for facilities managers in the commercial sector.	This is a stakeholder engagement opportunity which will have no environmental effect in isolation. The opportunity will underpin and support climate opportunity in the commercial sector in the DZ generally.	0	0	0	0	0	0	0	0	0	0	+
Explore potential to use local authority buildings as community spaces for groups participating in decarbonising zone projects	This is a community engagement opportunity which will have no environmental effect in isolation. The opportunity will underpin and support climate opportunity in the DZ generally.	0	0	0	0	0	0	0	0	0	0	+
Engage with local credit unions and banks to explore opportunities for low interest loans for residential sector climate action projects	This is a stakeholder engagement opportunity which will have no environmental effect in isolation. The opportunity will underpin and support climate opportunity in the DZ generally.	0	0	0	0	0	0	0	0	0	0	+

Opportunity	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
Explore opportunities for collaboration with 'Green Schools' programme, and wider engagement with schools about the decarbonising zone projects	This opportunity will support the promotion of good environmental management at schools and has the potential to generate some degree of positive effects on biodiversity and climate.	0	0	0	0	0	0	0	0	0	0	+
Explore opportunities for enhanced roll-out and engagement programme for 'Home Energy Savings Kits'	This promotional opportunity will not have any real environmental effect in isolation. It will promote energy use awareness and energy efficiency in the Residential sector to some degree.	0	0	0	0	0	0	0	0	0	0	+
Develop a DZ data gathering & monitoring project to explore additional and complementary ways to track emissions and communicate progress	This is a monitoring engagement opportunity which will have no environmental effect in isolation. The opportunity will underpin and support climate opportunity in the DZ generally.	0	0	0	0	0	0	0	0	0	0	+
Set up 'Balbriggan decarbonising zone' project webpage	This is a monitoring engagement opportunity which will have no environmental effect in isolation. The opportunity will underpin and support climate opportunity in the DZ generally.	0	0	0	0	0	0	0	0	0	0	+
Engage with data providers to explore access to transport analytics to inform data gathering and monitoring for the project. Engage with data providers to explore activity metrics for retail zones to evaluate the impact of transport measures	This is a monitoring engagement opportunity which will have no environmental effect in isolation. The opportunity will underpin and support climate opportunity in the DZ generally.	0	0	0	0	0	0	0	0	0	0	+
Explore opportunities for enhanced modal shift monitoring on key routes	This is a monitoring engagement opportunity which will have no environmental effect in isolation. The opportunity will underpin and support climate opportunity in the DZ generally.	0	0	0	0	0	0	0	0	0	0	+
Explore opportunities nature-based solutions in the decarbonising zone	Broadly, this opportunity has the potential to have wide ranging slight to moderate significant effects on local biodiversity, and slight to significant effects on landscape character and visual amenity. Promoting vegetative growth may result in an additional degree	+	+/-	0	+	0	0	0	+/-	0	0	+

Opportunity	Potential Environmental Effects	PHH	BFF	L	CH	S	LU	AQN	W	MA	TR	CC
	of carbon sequestration, marginally offsetting the effects of GHG emissions.											
Explore opportunities for circular economy in the decarbonising zone	Broadly, this opportunity has the potential to promote circularity and the reduction in lifecycle GHG emissions.	0	0	0	0	0	0	0	0	+	0	+
Enhanced tree planting initiatives in the public realm	Broadly, this opportunity has the potential to have wide ranging slight to moderate significant effects on local biodiversity, and slight to significant effects on landscape character and visual amenity. Promoting vegetative growth may result in an additional degree of carbon sequestration, marginally offsetting the effects of GHG emissions.	+	+/-	0	+	0	0	0	+/-	0	0	+
Explore opportunities for rain gardens, garden ponds, green and blue roofs on private lands	Broadly, this opportunity has the potential to have wide ranging slight to moderate significant effects on local biodiversity and water quality/hydrology, and slight to significant effects on landscape character and visual amenity. Promoting vegetative growth may result in an additional degree of carbon sequestration, marginally offsetting the effects of GHG emissions.	+	+/-	0	+	0	0	0	+/-	0	0	+
Advocate and support reduction in food waste - awareness of existing programmes and apps	Broadly, this opportunity has the potential to promote circularity and the reduction in lifecycle GHG emissions.	0	0	0	0	0	0	0	0	+	0	+
Explore and develop opportunities for a more just transition in the DZ such as skills training, and a focus on energy poverty.	This opportunity will mainly result in social benefits. It is unlikely the opportunity will result in any significant environmental effects, although it has the potential to lead to GHG emission reductions.	0	0	0	0	0	0	0	0	0	0	+

Key: PHH - Population & Human Health. BFF - Biodiversity, Flora & Fauna. L - Landscape, Seascape & Visual Amenity. CH - Cultural Heritage - Archaeology & Architectural. S - Soils. LU - Land Use. AQN - Air Quality and Noise. W - Water. MA - Material Assets. TR- Tourism & Recreation. CC - Climate Change.

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