




# APPROPRIATE ASSESSMENT SCREENING REPORT

FOR  
CLIMATE ADAPTATION STRATEGY  
FOR CORK COUNTY COUNCIL

September 2019

ON BEHALF OF  
Atlantic Seaboard South Region  
Climate Action Regional Office  
(CARO)



Prepared by

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## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	BACKGROUND .....	1
1.2	LEGISLATIVE CONTEXT .....	1
1.3	QUALITY ASSURANCE AND COMPETENCE .....	2
1.4	STAGES OF AA .....	2
1.5	SCREENING STEPS .....	3
1.6	STAGE 1 SCREENING ASSESSMENT METHODOLOGIES .....	4
1.6.1	<i>Desk Study</i> .....	4
1.6.2	<i>Assessment of Impacts</i> .....	4
<b>2</b>	<b>STAGE 1 SCREENING .....</b>	<b>5</b>
2.1	MANAGEMENT OF NATURA 2000 SITE .....	5
2.2	DESCRIPTION OF THE PLAN.....	5
2.2.1	<i>Background</i> .....	5
2.2.2	<i>Climate Adaptation Strategy Objectives</i> .....	6
2.2.3	<i>Identification of Relevant Natura 2000 Sites</i> .....	9
2.3	ASSESSMENT OF SIGNIFICANCE OF POTENTIAL IMPACTS .....	19
2.3.1	<i>In-combination Effects</i> .....	19
2.3.2	<i>Screening Matrix</i> .....	20
2.3.3	<i>Findings of No Significant Effects Matrix</i> .....	23
<b>3</b>	<b>CONCLUSION .....</b>	<b>26</b>
3.1	REASON FOR CONCLUSION.....	26
<b>4</b>	<b>REFERENCES .....</b>	<b>27</b>
	<b>APPENDIX 1 – CRITERIA ASSESSMENT OF OBJECTIVES AND ACTIONS .....</b>	<b>28</b>

## LIST OF TABLES

Table 1.	Definition of Durations (EPA, 2017). .....	4
Table 2.	Impact Significance Criteria (EPA, 2017). .....	5
Table 3.	Cork County Council Climate Adaptation Strategy Objectives .....	6
Table 4.	Natura 2000 sites within a 15km radius of the Strategy area. ....	9

## LIST OF FIGURES

Figure 1.	The four stages of the Appropriate Assessment Process (DEHLG, 2010). .....	2
Figure 2.	Area encompassed by Strategy.....	8
Figure 3.	Natura 2000 sites located within 15km of the strategy’s area. ....	18

# 1 INTRODUCTION

## 1.1 Background

Member States are required to designate Special Areas of Conservation (SACs) and Special Protected Areas (SPAs) under the EU Habitats and Birds Directives, respectively. SACs and SPAs are collectively known as Natura 2000 sites. An 'Appropriate Assessment' (AA) is a required assessment to determine the likelihood of significant impacts, based on best scientific knowledge, of any plans or projects on Natura 2000 sites. A screening for AA determines whether a plan or project, either alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site, in view of its conservation objectives.

This AA Screening has been undertaken to determine the potential for significant impacts on nearby Sites with European conservation designations (i.e. Natura 2000 Sites). The purpose of this assessment is to determine, the appropriateness, or otherwise, of the proposed development in the context of the conservation objectives of such sites.

## 1.2 Legislative Context

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of SACs and the Birds Directive (79/409/EEC) seeks to protect birds of special importance by the designation of SPAs. It is the responsibility of each member state to designate SPAs and SACs, both of which will form part of Natura 2000, a network of protected sites throughout the European Community.

An Appropriate Assessment is required under Article 6 of the Habitats Directive where a project or plan may give rise to significant effects upon a Natura 2000 Site, and paragraphs 3 and 4 states that:

6(3) Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site, in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

6(4) If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.

The current assessment was conducted within this legislative framework and the published DEHLG (2009) guidelines. As outlined in these, it is the responsibility of the proponent of the project to provide a comprehensive and objective Screening for Appropriate Assessment, which can then be used by the competent authority in order to conduct the Appropriate Assessment (DEHLG, 2009).

### 1.3 Quality assurance and competence

Enviroguide Consulting, is a wholly Irish Owned multi-disciplinary consultancy specialising in the areas of Environment, Waste Management and Planning. Both directors carry scientific qualifications and have a wealth of experience working within the Environmental Consultancy sectors, having undergone extensive training and continued professional development.

Enviroguide Consulting as a company remains fully briefed in European and Irish environmental policy and legislation. Both directors have a diploma from the Law Society of Ireland in Environmental and Planning Law and have a Master's degree in Environmental and Natural Resources Law at University College Cork.

Enviroguide's staff members are highly qualified in their field. Professional memberships include the Chartered Institution of Wastes Management (CIWM), the Irish Environmental Law Association and Chartered Institute of Ecology and Environmental Management (CIEEM).

All reports have been carried out by qualified and experienced ecologists and environmental consultants. Donnacha Woods, Project Ecologist with Enviroguide, undertook the desktop research for this report. Donnacha has an M.Sc. (Biodiversity and Conservation) from Trinity College, and over 6 years' experience as an ecologist and is an Associate member of CIEEM. He has worked on a wide range of conservation, research and ecological monitoring projects across several different countries.

Muriel Ennis, Principal Environmental Consultant, has an M.Sc. in Ecosystem Conservation and Landscape Management and over 10 years' experience as an Environmental / Ecology Consultant and is also an Associate member of CIEEM. She has worked on a range of projects from Strategic Flood Studies to residential developments.

### 1.4 Stages of AA

This Appropriate Assessment Screening Report (the "**Screening Report**") has been prepared by Enviroguide Consulting which considers whether the proposed Climate Adaptation Strategy is likely to have a significant effect on a European Site and whether a Stage 2 Appropriate Assessment is required.

The AA process is a four-stage process, with issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

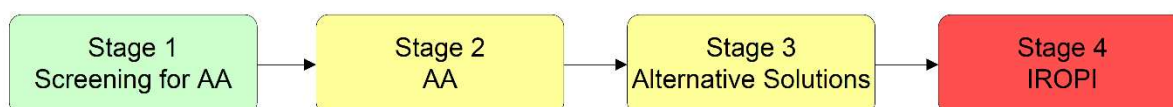


FIGURE 1. THE FOUR STAGES OF THE APPROPRIATE ASSESSMENT PROCESS (DEHLG, 2010).

The four stages of an AA can be summarised as follows:

- **Stage 1: *Screening*.** The first stage of the AA process is to determine the likelihood of significant impacts of a proposal.
- **Stage 2: *Natura Impact Statement (NIS)*.** The second stage of the AA process assesses the impact of the proposal (either alone or in combination with other projects or plans) on the integrity of the Natura 2000 site, with respect to the conservation objectives of the site and its ecological structure and function. A Natura Impact Statement containing a professional, scientific examination of the proposal is required and should include any mitigation measure to avoid, reduce or offset negative impacts.
- **Stage 3: *Assessment of alternative solutions*.** If the outcome of Stage 2 is negative i.e. adverse impacts to the sites cannot be scientifically ruled out, despite mitigation, the plan or project should proceed to Stage 3 or be abandoned. This stage examines alternative solutions to the proposal.
- **Stage 4: *Assessment where no alternative solutions exist and where adverse impacts remain*.** The final stage is the main derogation process examining whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project to adversely affect a Natura 2000 site, where no less damaging solution exists.

The purpose of Stage 1, the Screening Stage is to determine the necessity or otherwise for a NIS. Screening for AA examines the likely effects of a project or plan alone, and in combination with other projects or plans, upon a Natura 2000 site, and considers whether it can be objectively concluded that these effects will not be significant.

If it is determined during screening stage that the proposal may have a significant effect on a Natura 2000 site, or such a significant effect cannot be ruled out, then a NIS will need to be prepared. The Screening is outlined in Section 2.

## 1.5 Screening Steps

This Screening for AA, or Stage 1 of AA, has been undertaken in accordance with the European Commission Methodological Guidance on the provision of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC (EC, 2001) and the European Commission Guidance 'Managing Natura 2000 sites' (EC, 2000). Screening for AA involves the following:

- Establish whether the Strategy is necessary for the management of a Natura 2000 site;
- Description of the Strategy;
- Identification of Natura 2000 sites potentially affected;
- Identification and description of individual and cumulative impacts likely to result from the Strategy;
- Assessment of the significance of the impacts identified above on site-integrity; and
- Exclusion of sites where it can be objectively concluded that there will be no significant effects.

This Stage 1, Screening, examines whether likely effects upon a Natura 2000 site will be significant and determines whether the AA process for the proposed Strategy alone and in combination with other developments in the area requires a Stage 2.

## 1.6 Stage 1 Screening Assessment Methodologies

### 1.6.1 Desk Study

A desk study was carried out to evaluate all available information on the area's natural environment. This comprised a review of a wide range of available publications, datasets and resources where applicable, including the following sources:

- Climate Adaptation Strategy – Cork County Council;
- National Parks and Wildlife Service (NPWS) datasets;
- Geological Survey Ireland (GSI) online datasets and mapping;
- Environmental Protection Agency (EPA) mapping and datasets;
- National Biodiversity Data Centre (NBDC) online mapping and species records;
- OSI aerial imagery and Discovery Series mapping;
- Satellite imagery from various sources and dates (Google, Digital Globe, Bing);
- The Status of EU Protected Habitats in Ireland (NPWS);

For a complete list of the specific documents consulted as part of this assessment, see *Section 4 References*.

### 1.6.2 Assessment of Impacts

The potential impacts of the Objectives and Actions of the Corks County Councils Climate Adaptation Strategy are assessed against the criteria as outlined in *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2001), the significance of these is assessed using key indicators:

- Habitat loss or alteration;
- Habitat / species fragmentation;
- Disturbance and / or displacement of species;
- Changes in population density; and
- Changes in water quality and resource.

While also assessing key indicators, the following terms are defined when quantifying duration:

**TABLE 1. DEFINITION OF DURATIONS (EPA, 2017).**

Description of Duration	Corresponding Time Frame
<b>Momentary Effects</b>	Effects lasting from seconds to minutes
<b>Brief Effects</b>	Effects lasting less than a day
<b>Temporary Effects</b>	Effects lasting less than a year
<b>Short-term Effects</b>	Effects lasting one to seven years.
<b>Medium-term Effects</b>	Effects lasting seven to fifteen years.

<b>Long-term Effects</b>	Effects lasting fifteen to sixty years
<b>Permanent Effects</b>	Effects lasting over sixty years
<b>Reversible Effects</b>	Effects that can be undone, for example through remediation or restoration
<b>Frequency of Effects</b>	Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)

Furthermore, the criterion for confidence levels of the predicted likely impacts are given below in Table 2.

**TABLE 2. IMPACT SIGNIFICANCE CRITERIA (EPA, 2017).**

Significance of Effects	Definition
<b>Imperceptible</b>	An effect capable of measurement but without significant consequences.
<b>Not significant</b>	An effect which causes noticeable changes in the character of the environment but without significant consequences.
<b>Slight Effects</b>	An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
<b>Moderate Effects</b>	An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
<b>Significant Effects</b>	An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment

While assessing Corks Climate Adaptation Strategy, each Objective and Action were assessed using the key indicators as per *Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2001).

## 2 STAGE 1 SCREENING

### 2.1 Management of Natura 2000 Site

Cork County Council's Climate Adaption Strategy is not directly connected with or necessary for the management of Natura 2000 sites in County Cork or elsewhere.

### 2.2 Description of the Plan

#### 2.2.1 Background

The Earth's Climate is changing. While natural fluctuations in climate are considered normal, emerging research and observational records from across the world show rates of change that are far greater than those experienced in recent history. Global temperatures have risen and are projected to rise further bringing changes in weather patterns, rising sea levels and increased frequency and intensity of extreme weather. Ireland's climate is changing in line with



global patterns, and these changes are bringing significant and wide-ranging economic, environmental and social impacts.

Climate change is now recognised as a global challenge with policy responses required in terms of both mitigating the causes of climate change and in adapting to the now inevitable consequences of our changing climate. Action at local level is vitally important to help reduce the risks and impacts of climate change across communities.

This local authority Climate Adaptation Strategy forms part of Ireland’s national strategy for climate adaptation as set out in the National Adaptation Framework (NAF) which was produced under the provisions of the Climate Action and Low Carbon Development Act 2015.<sup>1</sup>

It is tasked with mainstreaming climate change adaptation over time into all functions, operations and services of the local authority. It seeks to inform or ‘climate proof’ existing plans and policies produced and implemented by the local authority. This ensures a considered, consistent and coherent approach, facing head-on the challenges of a changing climate. Crucially, it also helps in building resilience within the local authority organisation itself as well as across all communities.

### 2.2.2 Climate Adaptation Strategy Objectives

The purpose of the Cork County Council’s Climate Adaptation Strategy is to achieve the national objective of becoming a more climate-resilient society and economy by 2050. In order to help tackle current and future challenges that climate change can present, Cork County Council has set out a number of key objectives in their strategy, under seven thematic principles. The seven themes are listed below:

1. Local Adaptation Governance and Business Operations
2. Infrastructure and Built Environment
3. Landuse and Development
4. Drainage and Flood Management
5. Natural Environment, Built and Cultural Heritage
6. Community Health and Wellbeing
7. Other Sectors and Agencies

Table 3 below outlines Cork County Councils Climate Adaptation Strategy objectives per theme.

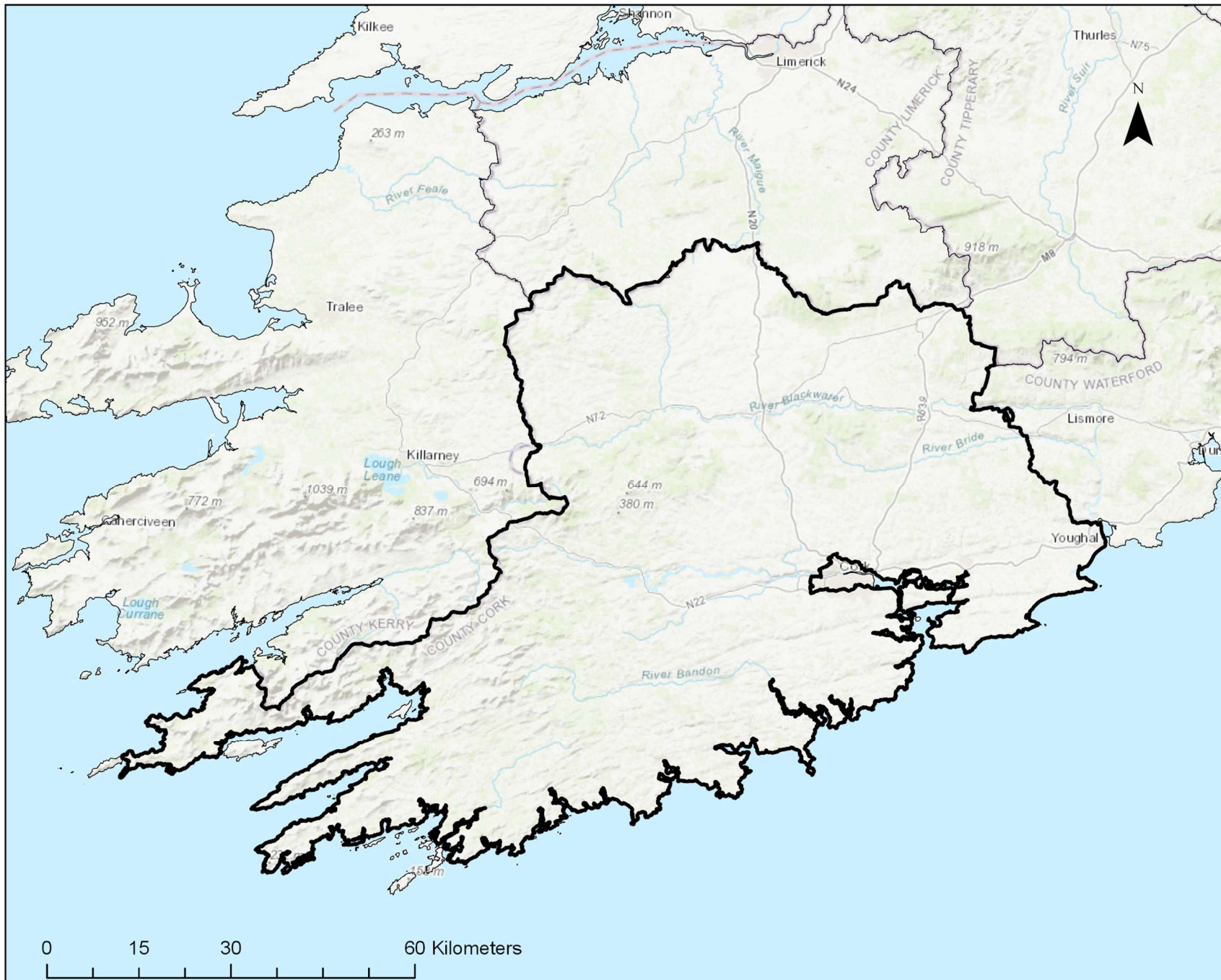
**TABLE 3. CORK COUNTY COUNCIL CLIMATE ADAPTATION STRATEGY OBJECTIVES**

<b>Local Adaptation Governance and Business Operations</b>
To support the successful and practical implementation of adaptation planning
To ensure that climate adaptation is mainstreamed into all activities and operations of Cork County Council
To develop and maintain a resource and risk model for Cork County Council
To build resilience within Cork County Council to support service delivery
To build capacity within Cork County Council to respond effectively to extreme weather events
To identify and support opportunities that may arise from pursuing adaptation efforts through the functions of Cork County Council

<sup>1</sup> Climate Action and Low Carbon Development Act 2015 (S.I. No. 25/2016).

<b>Infrastructure and Built Environment</b>
To increase the resilience of roads and transport infrastructure
To increase the resilience of Cork County Council buildings, housing stock, architectural heritage and other capital assets
To increase the resilience of Cork County Council coastal infrastructure including harbours, piers, beaches
<b>Landuse and Development</b>
To Integrate climate action considerations into landuse planning policy
<b>Drainage and Flood Management</b>
To adapt to the increased risk and impact of flooding
<b>Natural Environment, Built and Cultural Heritage</b>
To protect and enhance the natural environment and support Bio-diversity
To protect Heritage and Cultural Infrastructure
<b>Community Health and Wellbeing</b>
To build capacity and resilience within communities
<b>Other Sectors and Agencies</b>
To collaborate with other Sectors and Agencies in programs relating to climate change

Please find in Appendix 1 a comprehensive list of Cork County Council Climate Adaptation Strategy Objectives and Actions.



**Legend**

 County Cork



**Project**

Appropriate Assessment Screening Report for Climate Adaptation Strategy for Cork Co Co

**Client**

Climate Action Regional Office (CARO)

**Title**

Figure 2: Area encompassed by Strategy

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<b>Drawn by:</b> ME	<b>Projection:</b>
<b>Checked:</b> JD	IRENET95 Irish Transverse Mercator
<b>Date:</b> 29/05/2019	<b>Scale:</b> 1:885,464 @A4

**Notes:**

Site boundaries shown are for illustration purposes only and do not represent legal or exact boundaries.

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

### 2.2.3 Identification of Relevant Natura 2000 Sites

In identifying potentially affected Natura 2000 sites, it has been decided to adopt the precautionary principle and includes all SPAs and SACs within the Strategy area, including a surrounding 15km buffer zone. Within this overall area, a total of 44 SACs and 22 SPAs are found, each site name, corresponding code and qualifying interests are detailed in Table 4 below.

**TABLE 4. NATURA 2000 SITES WITHIN A 15KM RADIUS OF THE STRATEGY AREA.**  
\* = PRIORITY; NUMBERS IN BRACKETS ARE NATURA 2000 CODES

Site Code	Site Name	Qualifying Interests	Location
<b>Special Areas of Conservation (SAC)</b>			
002165	Lower River Shannon SAC	<ul style="list-style-type: none"> <li>- [1110] Sandbanks</li> <li>- [1130] Estuaries</li> <li>- [1140] Tidal Mudflats and Sandflats</li> <li>- [1150] Coastal Lagoons*</li> <li>- [1160] Large Shallow Inlets and Bays</li> <li>- [1170] Reefs</li> <li>- [1220] Perennial Vegetation of Stony Banks</li> <li>- [1230] Vegetated Sea Cliffs</li> <li>- [1310] Salicornia Mud</li> <li>- [1330] Atlantic Salt Meadows</li> <li>- [1410] Mediterranean Salt Meadows</li> <li>- [3260] Floating River Vegetation</li> <li>- [6410] <i>Molinia</i> Meadows</li> <li>- [91E0] Alluvial Forests*</li> <li>- [1029] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)</li> <li>- [1095] Sea Lamprey (<i>Petromyzon marinus</i>)</li> <li>- [1096] Brook Lamprey (<i>Lampetra planeri</i>)</li> <li>- [1099] River Lamprey (<i>Lampetra fluviatilis</i>)</li> <li>- [1106] Atlantic Salmon (<i>Salmo salar</i>)</li> <li>- [1349] Bottle-nosed Dolphin (<i>Tursiops truncatus</i>)</li> <li>- [1355] Otter (<i>Lutra lutra</i>)</li> </ul>	Within Co. Cork
002037	Carrigeenamronety Hill SAC	<ul style="list-style-type: none"> <li>- [1421] Killarney Fern (<i>Trichomanes speciosum</i>)</li> <li>- [4030] Dry Heath</li> </ul>	Within Co. Cork
000077	Ballymacoda (Clonpriest and Pillmore) SAC	<ul style="list-style-type: none"> <li>- [1130] Estuaries</li> <li>- [1140] Tidal Mudflats and Sandflats</li> <li>- [1310] Salicornia Mud</li> <li>- [1330] Atlantic Salt Meadows</li> <li>- [1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</li> </ul>	Within Co. Cork
002036	Ballyhoura Mountains SAC	<ul style="list-style-type: none"> <li>- [4010] Wet Heath</li> <li>- [4030] Dry Heath</li> <li>- [7130] Blanket Bogs (Active)*</li> </ul>	Within Co. Cork
002171	Bandon River SAC	<ul style="list-style-type: none"> <li>- [3260] Floating River Vegetation</li> <li>- [91E0] Alluvial Forests*</li> <li>- [1029] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)</li> <li>- [1096] Brook Lamprey (<i>Lampetra planeri</i>)</li> </ul>	Within Co. Cork

000090	Glengarriff Harbour And Woodland SAC	<ul style="list-style-type: none"> <li>- [91A0] Old Oak Woodlands</li> <li>- [91E0] Alluvial Forests*</li> <li>- [1024] Cork Slug (<i>Geomalacus maculosus</i>)</li> <li>- [1303] Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)</li> <li>- [1355] Otter (<i>Lutra lutra</i>)</li> <li>- [1365] Common (Harbour) Seal (<i>Phoca vitulina</i>)</li> </ul>	Within Co. Cork
000091	Clonakilty Bay SAC	<ul style="list-style-type: none"> <li>- [1140] Tidal Mudflats and Sandflats</li> <li>- [1210] Annual Vegetation of Drift Lines</li> <li>- [2110] Embryonic Shifting Dunes</li> <li>- [2120] Marram Dunes (White Dunes)</li> <li>- [2130] Fixed Dunes (Grey Dunes)*</li> <li>- [2150] Decalcified Dune Heath*</li> </ul>	Within Co. Cork
000093	Caha Mountains SAC	<ul style="list-style-type: none"> <li>- [3110] Oligotrophic Waters containing very few minerals</li> <li>- [3160] Dystrophic Lakes</li> <li>- [4010] Wet Heath</li> <li>- [4030] Dry Heath</li> <li>- [4060] Alpine and Subalpine Heaths</li> <li>- [6230] Species-rich Nardus Grassland*</li> <li>- [7130] Blanket Bogs (Active)*</li> <li>- [8110] Siliceous Scree</li> <li>- [8210] Calcareous Rocky Slopes</li> <li>- [8220] Siliceous Rocky Slopes</li> <li>- [1024] Cork Slug (<i>Geomalacus maculosus</i>)</li> <li>- [1421] Killarney Fern (<i>Trichomanes speciosum</i>)</li> </ul>	Within Co. Cork
000097	Lough Hyne Nature Reserve And Environs SAC	<ul style="list-style-type: none"> <li>- [1160] Large Shallow Inlets and Bays</li> <li>- [1170] Reefs</li> <li>- [8330] Sea Caves</li> </ul>	Within Co. Cork
000102	Sheep's Head SAC	<ul style="list-style-type: none"> <li>- [4010] Wet Heath</li> <li>- [4030] Dry Heath</li> <li>- [1024] Cork Slug (<i>Geomalacus maculosus</i>)</li> </ul>	Within Co. Cork
000106	St. Gobnet's Wood SAC	<ul style="list-style-type: none"> <li>- [91A0] Old Oak Woodlands</li> </ul>	Within Co. Cork
000108	The Gearagh SAC	<ul style="list-style-type: none"> <li>- [3260] Floating River Vegetation</li> <li>- [3270] Chenopodium rubri p.p. and Bidenton p.p. vegetation</li> <li>- [91A0] Old Oak Woodlands</li> <li>- [91E0] Alluvial Forests*</li> <li>- [1355] Otter (<i>Lutra lutra</i>)</li> </ul>	Within Co. Cork
000109	Three Castle Head to Mizen Head SAC	<ul style="list-style-type: none"> <li>- [1230] Vegetated Sea Cliffs</li> <li>- [4030] Dry Heath</li> </ul>	Within Co. Cork
001040	Barley Cove to Ballyrisode Point SAC	<ul style="list-style-type: none"> <li>- [1140] Tidal Mudflats and Sandflats</li> <li>- [1220] Perennial Vegetation of Stony Banks</li> <li>- [1310] Salicornia Mud</li> <li>- [1330] Atlantic Salt Meadows</li> <li>- [1410] Mediterranean Salt Meadows</li> <li>- [2120] Marram Dunes (White Dunes)</li> </ul>	Within Co. Cork

		<ul style="list-style-type: none"> <li>- [2130] Fixed Dunes (Grey Dunes)*</li> <li>- [4030] Dry Heath</li> <li>- [1395] Petalwort (<i>Petalophyllum ralfsii</i>)</li> </ul>	
001070	Myross Wood SAC	<ul style="list-style-type: none"> <li>- [1421] Killarney Fern (<i>Trichomanes speciosum</i>)</li> </ul>	Within Co. Cork
001230	Courtmacsherry Estuary SAC	<ul style="list-style-type: none"> <li>- [1130] Estuaries</li> <li>- [1140] Tidal Mudflats and Sandflats</li> <li>- [1210] Annual Vegetation of Drift Lines</li> <li>- [1220] Perennial Vegetation of Stony Banks</li> <li>- [1310] Salicornia Mud</li> <li>- [1330] Atlantic Salt Meadows</li> <li>- [1410] Mediterranean Salt Meadows</li> <li>- [2110] Embryonic Shifting Dunes</li> <li>- [2120] Marram Dunes (White Dunes)</li> <li>- [2130] Fixed Dunes (Grey Dunes)*</li> </ul>	Within Co. Cork
001058	Great Island Channel SAC	<ul style="list-style-type: none"> <li>- [1140] Tidal Mudflats and Sandflats</li> <li>- [1330] Atlantic Salt Meadows</li> </ul>	Within Co. Cork
001061	Kilkeran Lake and Castlefreke Dunes SAC	<ul style="list-style-type: none"> <li>- [1150] Coastal Lagoons*</li> <li>- [2110] Embryonic Shifting Dunes</li> <li>- [2120] Marram Dunes (White Dunes)</li> <li>- [2130] Fixed Dunes (Grey Dunes)*</li> </ul>	Within Co. Cork
001043	Cleanderry Wood SAC	<ul style="list-style-type: none"> <li>- [91A0] Old Oak Woodlands</li> <li>- [1421] Killarney Fern (<i>Trichomanes speciosum</i>)</li> </ul>	Within Co. Cork
002158	Kenmare River SAC	<ul style="list-style-type: none"> <li>- [1160] Large Shallow Inlets and Bays</li> <li>- [1170] Reefs</li> <li>- [1220] Perennial Vegetation of Stony Banks</li> <li>- [1230] Vegetated Sea Cliffs</li> <li>- [1330] Atlantic Salt Meadows</li> <li>- [1410] Mediterranean Salt Meadows</li> <li>- [2120] Marram Dunes (White Dunes)</li> <li>- [2130] Fixed Dunes (Grey Dunes)*</li> <li>- [4030] Dry Heath</li> <li>- [5130] Juniper Scrub</li> <li>- [6130] Calaminarian Grassland</li> <li>- [8330] Sea Caves</li> <li>- [1014] Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>)</li> <li>- [1303] Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)</li> <li>- [1355] Otter (<i>Lutra lutra</i>)</li> <li>- [1365] Common (Harbour) Seal (<i>Phoca vitulina</i>)</li> </ul>	Within Co. Cork
001547	Castletownshend SAC	<ul style="list-style-type: none"> <li>- [1421] Killarney Fern (<i>Trichomanes speciosum</i>)</li> </ul>	Within Co. Cork
002280	Dunbeacon Shingle SAC	<ul style="list-style-type: none"> <li>- [1220] Perennial Vegetation of Stony Banks</li> </ul>	Within Co. Cork
001873	Derryclogher (Knockboy) Bog SAC	<ul style="list-style-type: none"> <li>- [7130] Blanket Bogs (Active)*</li> </ul>	Within Co. Cork

001879	Glanmore Bog SAC	<ul style="list-style-type: none"> <li>- [3110] Oligotrophic Waters containing very few minerals</li> <li>- [3260] Floating River Vegetation</li> <li>- [4010] Wet Heath</li> <li>- [6230] Species-rich Nardus Grassland*</li> <li>- [7130] Blanket Bogs (Active)*</li> <li>- [1029] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)</li> <li>- [1421] Killarney Fern (<i>Trichomanes speciosum</i>)</li> </ul>	Within Co. Cork
001890	Mullaghanish Bog SAC	<ul style="list-style-type: none"> <li>- [7130] Blanket Bogs (Active)*</li> </ul>	Within Co. Cork
002170	Blackwater River (Cork/Waterford) SAC	<ul style="list-style-type: none"> <li>- [1130] Estuaries</li> <li>- [1140] Tidal Mudflats and Sandflats</li> <li>- [1220] Perennial Vegetation of Stony Banks</li> <li>- [1310] <i>Salicornia</i> Mud</li> <li>- [1330] Atlantic Salt Meadows</li> <li>- [1410] Mediterranean Salt Meadows</li> <li>- [3260] Floating River Vegetation</li> <li>- [91A0] Old Oak Woodlands</li> <li>- [91E0] Alluvial Forests*</li> <li>- [1029] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)</li> <li>- [1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>)</li> <li>- [1095] Sea Lamprey (<i>Petromyzon marinus</i>)</li> <li>- [1096] Brook Lamprey (<i>Lampetra planeri</i>)</li> <li>- [1099] River Lamprey (<i>Lampetra fluviatilis</i>)</li> <li>- [1103] Twaite Shad (<i>Alosa fallax</i>)</li> <li>- [1106] Atlantic Salmon (<i>Salmo salar</i>)</li> <li>- [1355] Otter (<i>Lutra lutra</i>)</li> <li>- [1421] Killarney Fern (<i>Trichomanes speciosum</i>)</li> </ul>	Within Co. Cork
000365	Killarney National Park, Macgillycuddy's Reeks And Caragh River Catchment SAC	<ul style="list-style-type: none"> <li>- [3110] Oligotrophic Waters containing very few minerals</li> <li>- [3130] Oligotrophic to Mesotrophic Standing Waters</li> <li>- [3260] Floating River Vegetation</li> <li>- [4010] Wet Heath</li> <li>- [4030] Dry Heath</li> <li>- [4060] Alpine and Subalpine Heaths</li> <li>- [5130] Juniper Scrub</li> <li>- [6130] Calaminarian Grassland</li> <li>- [6410] Molinia Meadows</li> <li>- [7130] Blanket Bogs (Active)*</li> <li>- [7150] Rhynchosporion Vegetation</li> <li>- [91A0] Old Oak Woodlands</li> <li>- [91E0] Alluvial Forests*</li> <li>- [91J0] Yew Woodlands*</li> <li>- [1024] Cork Slug (<i>Geomalacus maculosus</i>)</li> <li>- [1029] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)</li> <li>- [1065] Marsh Fritillary (<i>Euphydryas aurinia</i>)</li> <li>- [1095] Sea Lamprey (<i>Petromyzon marinus</i>)</li> <li>- [1096] Brook Lamprey (<i>Lampetra planeri</i>)</li> </ul>	Within Co. Cork

		<ul style="list-style-type: none"> <li>- [1099] River Lamprey (<i>Lampetra fluviatilis</i>)</li> <li>- [1103] Twaite Shad (<i>Alosa fallax</i>)</li> <li>- [1106] Atlantic Salmon (<i>Salmo salar</i>)</li> <li>- [1303] Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)</li> <li>- [1355] Otter (<i>Lutra lutra</i>)</li> <li>- [1421] Killarney Fern (<i>Trichomanes speciosum</i>)</li> <li>- [1833] Slender Naiad (<i>Najas flexilis</i>)</li> </ul>	
000101	Roaringwater Bay And Islands SAC	<ul style="list-style-type: none"> <li>- [1160] Large Shallow Inlets and Bays</li> <li>- [1170] Reefs</li> <li>- [1230] Vegetated Sea Cliffs</li> <li>- [4030] Dry Heath</li> <li>- [8330] Sea Caves</li> <li>- [1351] Harbour Porpoise (<i>Phocoena phocoena</i>)</li> <li>- [1355] Otter (<i>Lutra lutra</i>)</li> <li>- [1364] Grey Seal (<i>Halichoerus grypus</i>)</li> </ul>	Within Co. Cork
002281	Reen Point Shingle SAC	<ul style="list-style-type: none"> <li>- [1220] Perennial Vegetation of Stony Banks</li> </ul>	Within Co. Cork
002189	Farranamanagh Lough SAC	<ul style="list-style-type: none"> <li>- [1150] Coastal Lagoons*</li> <li>- [1220] Perennial Vegetation of Stony Banks</li> </ul>	Within Co. Cork
002315	Glanlough Woods SAC	<ul style="list-style-type: none"> <li>- [1303] Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)</li> </ul>	Within the 15km buffer
002187	Drongawn Lough SAC	<ul style="list-style-type: none"> <li>- [1150] Coastal Lagoons*</li> </ul>	Within the 15km buffer
002173	Blackwater River (Kerry) SAC	<ul style="list-style-type: none"> <li>- [4030] Dry Heath</li> <li>- [1024] Kerry Slug (<i>Geomalacus maculosus</i>)</li> <li>- [1029] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)</li> <li>- [1106] Atlantic Salmon (<i>Salmo salar</i>)</li> <li>- [1303] Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)</li> <li>- [1355] Otter (<i>Lutra lutra</i>)</li> </ul>	Within the 15km buffer
002137	Lower River Suir SAC	<ul style="list-style-type: none"> <li>- [1330] Atlantic Salt Meadows</li> <li>- [1410] Mediterranean Salt Meadows</li> <li>- [3260] Floating River Vegetation</li> <li>- [6430] Hydrophilous Tall Herb Communities</li> <li>- [91A0] Old Oak Woodlands</li> <li>- [91E0] Alluvial Forests*</li> <li>- [91J0] Yew Woodlands*</li> <li>- [1029] Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)</li> <li>- [1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>)</li> <li>- [1095] Sea Lamprey (<i>Petromyzon marinus</i>)</li> <li>- [1096] Brook Lamprey (<i>Lampetra planeri</i>)</li> <li>- [1099] River Lamprey (<i>Lampetra fluviatilis</i>)</li> <li>- [1103] Twaite Shad (<i>Alosa fallax</i>)</li> <li>- [1106] Atlantic Salmon (<i>Salmo salar</i>)</li> <li>- [1355] Otter (<i>Lutra lutra</i>)</li> </ul>	Within the 15km buffer

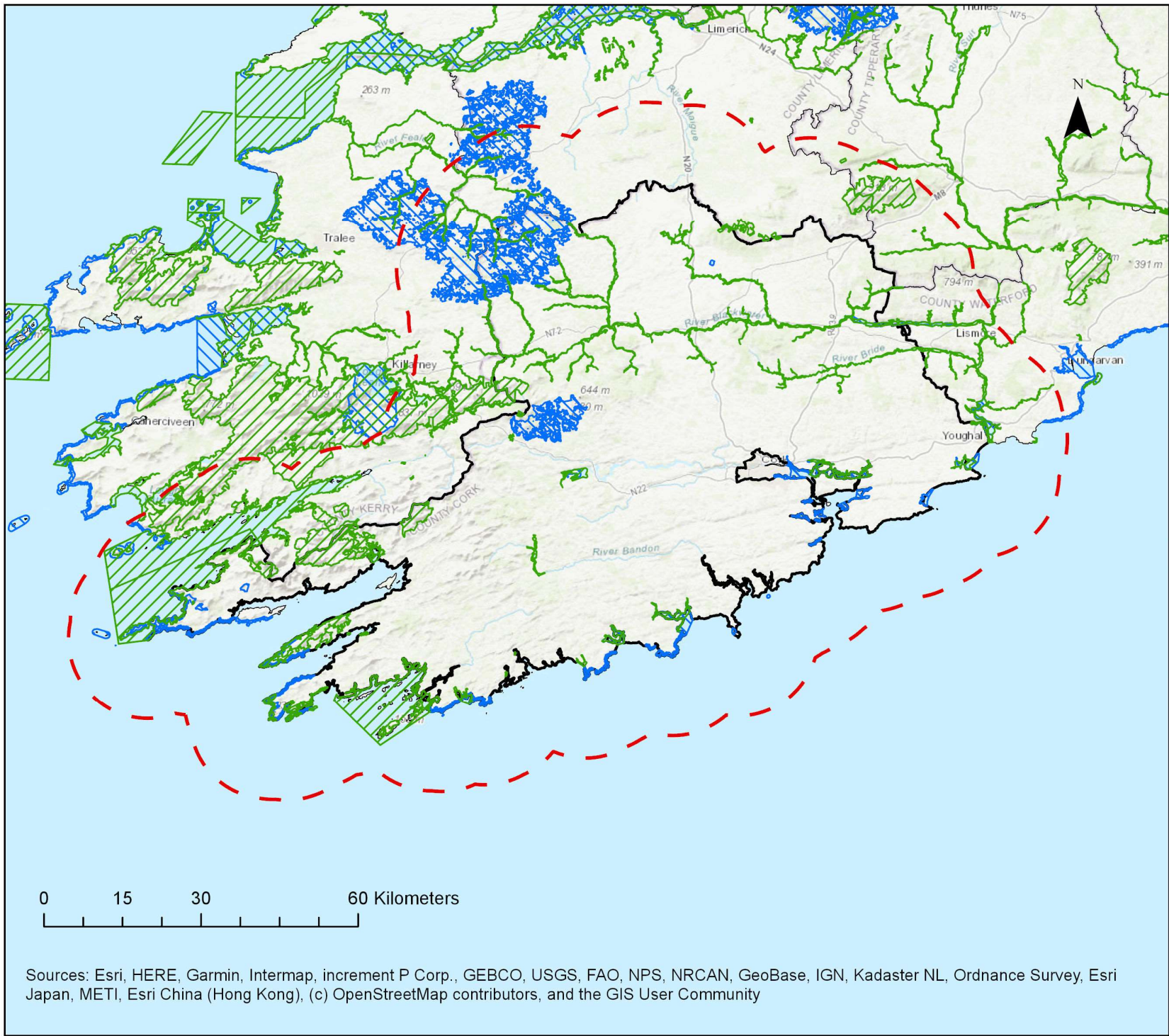


002098	Old Domestic Building, Askive Wood SAC	- Old Domestic Building, Askive Wood SAC	Within the 15km buffer
002257	Moanour Mountain SAC	- [4010] Wet Heath - [4030] Dry Heath	Within the 15km buffer
002123	Ardmore Head SAC	- [1230] Vegetated Sea Cliffs - [4030] Dry Heath	Within the 15km buffer
001371	Mucksna Wood SAC	- [91A0] Old Oak Woodlands	Within the 15km buffer
001881	Maulagowna Bog SAC	- [7130] Blanket Bogs (Active)*	Within the 15km buffer
001342	Clonee And Inchiquin Loughs, Uragh Wood SAC	- [3110] Oligotrophic Waters containing very few minerals - [4010] Wet Heath - [4030] Dry Heath - [8220] Siliceous Rocky Slopes - [91A0] Old Oak Woodlands - [1024] Cork Slug ( <i>Geomalacus maculosus</i> ) - [1303] Lesser Horseshoe Bat ( <i>Rhinolophus hipposideros</i> ) - [1421] Killarney Fern ( <i>Trichomanes speciosum</i> ) - [1833] Slender Naiad ( <i>Najas flexilis</i> )	Within the 15km buffer
		-	
000364	Kilgarvan Icehouse SAC	- [1303] Lesser Horseshoe Bat ( <i>Rhinolophus hipposideros</i> )	Within the 15km buffer
000353	Old Domestic Building, Dromore Wood SAC	- [1303] Lesser Horseshoe Bat ( <i>Rhinolophus hipposideros</i> )	Within the 15km buffer
000646	Galtee Mountains SAC	- [4010] Wet Heath - [4030] Dry Heath - [4060] Alpine and Subalpine Heaths - [6230] Species-rich Nardus Grassland* - [7130] Blanket Bogs (Active)* - [8110] Siliceous Scree - [8210] Calcareous Rocky Slopes - [8220] Siliceous Rocky Slopes	Within the 15km buffer
000335	Ballinskelligs Bay and Inny Estuary SAC	- [1330] Atlantic Salt Meadows - [1410] Mediterranean Salt Meadows - [1395] Petalwort ( <i>Petalophyllum ralfsii</i> )	Within the 15km buffer
<b>Special Protection Areas (SPA)</b>			
004219	Courtmacsherry Bay SPA	- [A003] Great Northern Diver ( <i>Gavia immer</i> ) - [A048] Shelduck ( <i>Tadorna tadorna</i> ) - [A050] Wigeon ( <i>Anas penelope</i> ) - [A069] Red-breasted Merganser ( <i>Mergus serrator</i> ) - [A140] Golden Plover ( <i>Pluvialis apricaria</i> ) - [A142] Lapwing ( <i>Vanellus vanellus</i> )	Within Co. Cork

		<ul style="list-style-type: none"> <li>- [A149] Dunlin (<i>Calidris alpina</i>)</li> <li>- [A156] Black-tailed Godwit (<i>Limosa limosa</i>)</li> <li>- [A157] Bar-tailed Godwit (<i>Limosa lapponica</i>)</li> <li>- [A160] Curlew (<i>Numenius arquata</i>)</li> <li>- [A179] Black-headed Gull (<i>Chroicocephalus ridibundus</i>)</li> <li>- [A182] Common Gull (<i>Larus canus</i>)</li> <li>- [A999] Wetland and Waterbirds</li> </ul>	
004022	Ballycotton Bay SPA	<ul style="list-style-type: none"> <li>- [A052] Teal (<i>Anas crecca</i>)</li> <li>- [A137] Ringed Plover (<i>Charadrius hiaticula</i>)</li> <li>- [A140] Golden Plover (<i>Pluvialis apricaria</i>)</li> <li>- [A141] Grey Plover (<i>Pluvialis squatarola</i>)</li> <li>- [A142] Lapwing (<i>Vanellus vanellus</i>)</li> <li>- [A156] Black-tailed Godwit (<i>Limosa limosa</i>)</li> <li>- [A157] Bar-tailed Godwit (<i>Limosa lapponica</i>)</li> <li>- [A160] Curlew (<i>Numenius arquata</i>)</li> <li>- [A169] Turnstone (<i>Arenaria interpres</i>)</li> <li>- [A182] Common Gull (<i>Larus canus</i>)</li> <li>- [A183] Lesser Black-backed Gull (<i>Larus fuscus</i>)</li> <li>- [A999] Wetland and Waterbirds</li> </ul>	Within Co. Cork
004191	Seven Heads SPA	<ul style="list-style-type: none"> <li>- [A346] Chough (<i>Pyrrhocorax pyrrhocorax</i>)</li> </ul>	Within Co. Cork
004081	Clonakilty Bay SPA	<ul style="list-style-type: none"> <li>- [A048] Shelduck (<i>Tadorna tadorna</i>)</li> <li>- [A149] Dunlin (<i>Calidris alpina</i>)</li> <li>- [A156] Black-tailed Godwit (<i>Limosa limosa</i>)</li> <li>- [A160] Curlew (<i>Numenius arquata</i>)</li> <li>- [A999] Wetland and Waterbirds</li> </ul>	Within Co. Cork
004023	Ballymacoda Bay SPA	<ul style="list-style-type: none"> <li>- [A050] Wigeon (<i>Anas penelope</i>)</li> <li>- [A052] Teal (<i>Anas crecca</i>)</li> <li>- [A137] Ringed Plover (<i>Charadrius hiaticula</i>)</li> <li>- [A140] Golden Plover (<i>Pluvialis apricaria</i>)</li> <li>- [A141] Grey Plover (<i>Pluvialis squatarola</i>)</li> <li>- [A142] Lapwing (<i>Vanellus vanellus</i>)</li> <li>- [A144] Sanderling (<i>Calidris alba</i>)</li> <li>- [A149] Dunlin (<i>Calidris alpina</i>)</li> <li>- [A156] Black-tailed Godwit (<i>Limosa limosa</i>)</li> <li>- [A157] Bar-tailed Godwit (<i>Limosa lapponica</i>)</li> <li>- [A160] Curlew (<i>Numenius arquata</i>)</li> <li>- [A162] Redshank (<i>Tringa totanus</i>)</li> <li>- [A169] Turnstone (<i>Arenaria interpres</i>)</li> <li>- [A179] Black-headed Gull (<i>Chroicocephalus ridibundus</i>)</li> <li>- [A182] Common Gull (<i>Larus canus</i>)</li> <li>- [A183] Lesser Black-backed Gull (<i>Larus fuscus</i>)</li> <li>- [A999] Wetland and Waterbirds</li> </ul>	Within Co. Cork
004161	Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA	<ul style="list-style-type: none"> <li>- [A082] Hen Harrier (<i>Circus cyaneus</i>)</li> </ul>	Within Co. Cork

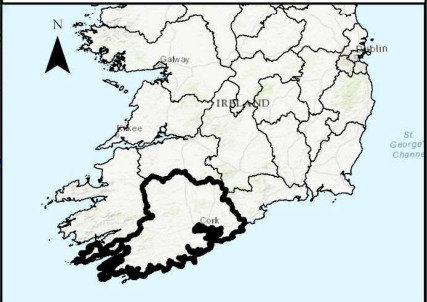
004021	Old Head of Kinsale SPA	<ul style="list-style-type: none"> <li>- [A188] Kittiwake (<i>Rissa tridactyla</i>)</li> <li>- [A199] Guillemot (<i>Uria aalge</i>)</li> </ul>	Within Co. Cork
004028	Blackwater Estuary SPA	<ul style="list-style-type: none"> <li>- [A050] Wigeon (<i>Anas penelope</i>)</li> <li>- [A140] Golden Plover (<i>Pluvialis apricaria</i>)</li> <li>- [A142] Lapwing (<i>Vanellus vanellus</i>)</li> <li>- [A149] Dunlin (<i>Calidris alpina</i>)</li> <li>- [A156] Black-tailed Godwit (<i>Limosa limosa</i>)</li> <li>- [A157] Bar-tailed Godwit (<i>Limosa lapponica</i>)</li> <li>- [A160] Curlew (<i>Numenius arquata</i>)</li> <li>- [A162] Redshank (<i>Tringa totanus</i>)</li> <li>- [A999] Wetland and Waterbirds</li> </ul>	Within Co. Cork
004094	Blackwater Callows SPA	<ul style="list-style-type: none"> <li>- [A038] Whooper Swan (<i>Cygnus cygnus</i>)</li> <li>- [A050] Wigeon (<i>Anas penelope</i>)</li> <li>- [A052] Teal (<i>Anas crecca</i>)</li> <li>- [A156] Black-tailed Godwit (<i>Limosa limosa</i>)</li> <li>- [A999] Wetland and Waterbirds</li> </ul>	Within Co. Cork
004066	The Bull and The Cow Rocks SPA	<ul style="list-style-type: none"> <li>- [A014] Storm Petrel (<i>Hydrobates pelagicus</i>)</li> <li>- [A016] Gannet (<i>Morus bassanus</i>)</li> <li>- [A204] Puffin (<i>Fratercula arctica</i>)</li> </ul>	Within Co. Cork
004095	Kilcolman Bog SPA	<ul style="list-style-type: none"> <li>- [A038] Whooper Swan (<i>Cygnus cygnus</i>)</li> <li>- [A052] Teal (<i>Anas crecca</i>)</li> <li>- [A056] Shoveler (<i>Anas clypeata</i>)</li> <li>- [A999] Wetland and Waterbirds</li> </ul>	Within Co. Cork
004030	Cork Harbour SPA	<ul style="list-style-type: none"> <li>- [A004] Little Grebe (<i>Tachybaptus ruficollis</i>)</li> <li>- [A005] Great Crested Grebe (<i>Podiceps cristatus</i>)</li> <li>- [A017] Cormorant (<i>Phalacrocorax carbo</i>)</li> <li>- [A028] Grey Heron (<i>Ardea cinerea</i>)</li> <li>- [A048] Shelduck (<i>Tadorna tadorna</i>)</li> <li>- [A050] Wigeon (<i>Anas penelope</i>)</li> <li>- [A052] Teal (<i>Anas crecca</i>)</li> <li>- [A054] Pintail (<i>Anas acuta</i>)</li> <li>- [A056] Shoveler (<i>Anas clypeata</i>)</li> <li>- [A069] Red-breasted Merganser (<i>Mergus serrator</i>)</li> <li>- [A130] Oystercatcher (<i>Haematopus ostralegus</i>)</li> <li>- [A140] Golden Plover (<i>Pluvialis apricaria</i>)</li> <li>- [A141] Grey Plover (<i>Pluvialis squatarola</i>)</li> <li>- [A142] Lapwing (<i>Vanellus vanellus</i>)</li> <li>- [A149] Dunlin (<i>Calidris alpina</i>)</li> <li>- [A156] Black-tailed Godwit (<i>Limosa limosa</i>)</li> <li>- [A157] Bar-tailed Godwit (<i>Limosa lapponica</i>)</li> <li>- [A160] Curlew (<i>Numenius arquata</i>)</li> <li>- [A162] Redshank (<i>Tringa totanus</i>)</li> <li>- [A179] Black-headed Gull (<i>Chroicocephalus ridibundus</i>)</li> <li>- [A182] Common Gull (<i>Larus canus</i>)</li> <li>- [A183] Lesser Black-backed Gull (<i>Larus fuscus</i>)</li> <li>- [A193] Common Tern (<i>Sterna hirundo</i>)</li> <li>- [A999] Wetland and Waterbirds</li> </ul>	Within Co. Cork
004156	Sheep's Head to Toe Head SPA	<ul style="list-style-type: none"> <li>- [A103] Peregrine (<i>Falco peregrinus</i>)</li> <li>- [A346] Chough (<i>Pyrrhocorax pyrrhocorax</i>)</li> </ul>	Within Co. Cork

004109	The Gearagh SPA	<ul style="list-style-type: none"> <li>- [A050] Wigeon (<i>Anas penelope</i>)</li> <li>- [A052] Teal (<i>Anas crecca</i>)</li> <li>- [A053] Mallard (<i>Anas platyrhynchos</i>)</li> <li>- [A125] Coot (<i>Fulica atra</i>)</li> <li>- [A999] Wetland and Waterbirds</li> </ul>	Within Co. Cork
004190	Galley Head to Duneen Point SPA	<ul style="list-style-type: none"> <li>- [A346] Chough (<i>Pyrrhocorax pyrrhocorax</i>)</li> </ul>	Within Co. Cork
004155	Beara Peninsula SPA	<ul style="list-style-type: none"> <li>- [A009] Fulmar (<i>Fulmarus glacialis</i>)</li> <li>- [A346] Chough (<i>Pyrrhocorax pyrrhocorax</i>)</li> </ul>	Within Co. Cork
004124	Sovereign Islands SPA	<ul style="list-style-type: none"> <li>- [A017] Cormorant (<i>Phalacrocorax carbo</i>)</li> </ul>	Within Co. Cork
004162	Mullaghanish to Musheramore Mountains SPA	<ul style="list-style-type: none"> <li>- [A082] Hen Harrier (<i>Circus cyaneus</i>)</li> </ul>	Within Co. Cork
004154	Iveragh Peninsula SPA	<ul style="list-style-type: none"> <li>- [A009] Fulmar (<i>Fulmarus glacialis</i>)</li> <li>- [A103] Peregrine (<i>Falco peregrinus</i>)</li> <li>- [A188] Kittiwake (<i>Rissa tridactyla</i>)</li> <li>- [A199] Guillemot (<i>Uria aalge</i>)</li> <li>- [A346] Chough (<i>Pyrrhocorax pyrrhocorax</i>)</li> </ul>	Within the 15km buffer
004192	Helvick Head to Ballyquin SPA	<ul style="list-style-type: none"> <li>- [A017] Cormorant (<i>Phalacrocorax carbo</i>)</li> <li>- [A103] Peregrine (<i>Falco peregrinus</i>)</li> <li>- [A184] Herring Gull (<i>Larus argentatus</i>)</li> <li>- [A188] Kittiwake (<i>Rissa tridactyla</i>)</li> <li>- [A346] Chough (<i>Pyrrhocorax pyrrhocorax</i>)</li> </ul>	Within the 15km buffer
004038	Killarney National Park SPA	<ul style="list-style-type: none"> <li>- [A098] Merlin (<i>Falco columbarius</i>)</li> <li>- [A395] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>)</li> </ul>	Within the 15km buffer
004175	Deenish Island and Scariff Island SPA	<ul style="list-style-type: none"> <li>- [A009] Fulmar (<i>Fulmarus glacialis</i>)</li> <li>- [A013] Manx Shearwater (<i>Puffinus puffinus</i>)</li> <li>- [A014] Storm Petrel (<i>Hydrobates pelagicus</i>)</li> <li>- [A183] Lesser Black-backed Gull (<i>Larus fuscus</i>)</li> <li>- [A194] Arctic Tern (<i>Sterna paradisaea</i>)</li> </ul>	Within the 15km buffer



**Legend**

- Special Protection Areas
- Special Area of Conservation
- County Cork
- County Cork 15km Buffer



**Project**

Appropriate Assessment Screening Report for Climate Adaptation Strategy for Cork Co Co

**Client**

Climate Action Regional Office (CARO)

**Title**

Figure 3: Natura 2000 sites within 15km of Strategy area



30 Core C, Block 71, The Plaza  
Park, West, Dublin 12 D12F5TH  
www.enviroguide.ie  
info@enviroguide.ie  
+353 (0)1 565 4730

Drawn by: ME	<b>Projection:</b>
Checked : JD	IRENET95 Irish Transverse Mercator
Date: 30/05/2019	Scale: 1:983,040 @A4

**Notes:**

Site boundaries shown are for illustration purposes only and do not represent legal or exact boundaries.

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

## 2.3 Assessment of Significance of Potential Impacts

The potential for significant impacts resulting from the Cork County Council Climate Adaptation Strategy has been assessed in relation to Natura 2000 sites within the precautionary zone of potential impact.

Impacts that require consideration are categorised under the following criteria, as outlined in *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2001).

- Habitat loss or alteration;
- Habitat / species fragmentation;
- Disturbance and / or displacement of species;
- Changes in population density; and
- Changes in water quality and resource.

Please find in Appendix 1, a detailed assessment of each Objective and Action against each of the criteria set out above.

Following this assessment, as outlined in Appendix 1, it is considered that the Climate Adaptation Strategy will not result in any significant effects on any Natura 2000 sites.

Cork County Council Climate Adaptation Strategy is designed to inform responses throughout the local authority to the effects of climate change and does not identify specific areas for development. Any future projects resulting from the objectives laid out in the Strategy will need to comply with the relative legislation in relation to Appropriate Assessment, where appropriate.

### 2.3.1 In-combination Effects

The following planning and policy documents were reviewed and considered for possible in-combination effects with the proposed Strategy:

- Cork County Development Plan 2014-2022;
- Cork City Heritage Plan 2015-2020; and
- County Cork Biodiversity Action Plan 2009-2014

Due to the nature of Corks County Council Climate Adaptation Strategy, and in particular its main objective of mainstreaming Climate Adaptation into all functions within Cork County Council, there is no in-combination affects identified to any Natura 2000 sites as a result of this Climate Adaptation Strategy.

Corks Climate Adaptation Strategy is designed to inform council policy documents and actions in relation to climate change adaptation. As such it is high level and the objectives and actions are high level and not area specific.

Other Local Authority documents such as County Development Plans will take their lead from the Climate Adaptation Strategy. These, as part of the plan preparation process will be subject to SEA and AA that ensures that objectives and actions that result will be adequately examined for ecological effects.

Should specific actions result from these plans these will be subjected to both AA and EIA processes when sufficient design details exist. The EIA and AA process will ensure that any possible environmental and ecological effects of any outcomes from the adaptation plans will be adequately assessed.

### 2.3.2 Screening Matrix

<b>Brief description of the plan:</b>
Preparation of the Cork County Council Climate Adaptation Strategy. This document is designed to inform the policy documents of Cork County Council in adapting to the effects of climate change.
<b>Brief description of the Natura 2000 sites Located in County Cork. Table 4 above details the exhausted list of SAC and SPAs and the qualifying interests of Natura 2000 sites inside and outside Cork County.</b>
<p>Cork county coastline supports a number of important coastal SPA's, the high cliffs of Seven Heads SPA (004191), Old Head of Kinsale (004021), The Bull and the Cow Rock SPA (004066), Sheet's Head to Toe Head SPA (004156), Galley Head to Duneen Point SPA (004190), Beara Peninsula SPA (004155), and Sovereign Islands SPA (004124), supporting important populations of breeding seabirds.</p> <p>The mudflats of Courtmachsherry Bay SPA (004219), Ballycotton Bay SPA (004022), Clonakilty Bay SPA (004081), Ballymacoda Bay SPA (004023), Blackwater Estuary SPA (004028) and Blackwater Callows SPA (004094) supports high numbers of feeding waders, and international and national population numbers of <i>wetlands and waterbirds</i>.</p> <p>Corks inland SPA's such as The Gearagh SPA (004156) and Kilcolman Bog SPA (004095) also support high number of waders, <i>wetlands and waterbirds</i>, in addition to supporting nationally important numbers of species listed on Annex I of the E.U Birds Directive, such as Whooper Swan (<i>Cygnus cygnus</i>).</p> <p>The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161) is a very large site centred on the borders between the counties of Cork, Kerry and Limerick. The site consists of a variety of upland habitats, though almost half is afforested and support an important population of breeding Hen Harrier (<i>Circus cyaneus</i>).</p> <p>Cork coastal stretch also supports a number of SACs, such as Ballymacoda (Clonpriest and Pillmore) SAC (000077), Clonakilty Bay SAC (000091), Barley Cove to Ballyrisode Point SAC (001040), Great Island Channel SAC (001058) and Courtmacsherry Estuary SAC (001230) which are designated for a range of coastal habitats such as estuarine habitats, tidal mudflats and sandflats, Salicornia mud, Atlantic salt meadows and Mediterranean salt meadows (<i>Juncetalia maritimi</i>).</p> <p>Carrigeenamronety Hill SAC (002037) on the Limerick / Cork boarder near Mitchelstown, Myross Wood SAC (001070) near Ballylinch, Cleanderry Wood SAC (001043) on the Beara peninsula and Castletownshend SAC (001547) supports the rare Killarney Fern (<i>Trichomanes speciosum</i>) and habitats such as Dry Heath which is listed on Annex I of the E.U Habitats Directive.</p> <p>There are a number of riverine SACs within county Cork, such as Bandon River SAC (002171), The Gearagh SAC (001040), Kenmare River SAC (002158), Blackwater River (Cork/Waterford) SAC (002170) and Lower River Shannon SAC (002165) which support important populations of Annex II species, such as Otter (<i>Lutra lutra</i>), Sea Lamprey (<i>Petromyzon marinus</i>), Brook Lamprey (<i>Lampetra planeri</i>), River Lamprey (<i>Lampetra fluviatilis</i>), Twaite Shad (<i>Alosa fallax</i>), Atlantic Salmon (<i>Salmo salar</i>) and the Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>).</p> <p>A number of the SACs contain important and rare habitat of Old Oak Woodlands, such as St. Gobnet's Wood SAC (000106), Glengarriff Harbour And Woodland SAC (000090) and Cleanderry Wood SAC (001043)</p> <p>County Cork supports a number of upland SACs, that contain active Blanket Bog, wet and dry heath and the rare Cork Slug (<i>Geomalacus maculosus</i>) and Killarney Fern (<i>Trichomanes speciosum</i>) such as Ballyhoura Mountains SAC (002036) and Caha Mountains SAC (000093).</p>

**Describe the individual elements of the plan (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site:**

The Climate Adaptation Strategy is designed to inform Council Policy documents and actions in relation to climate change adaptation. As such it is high level and the objectives and actions are high level and not area specific.

Other Local Authority documents such as County Development plans will take their lead from the Climate Adaptation Strategy. These, as part of the plan preparation process will be subject to SEA and AA that ensures that objectives and actions that result will be adequately examined for ecological effects.

Should specific actions result from these plans these will be subjected to both AA and EIA processes when sufficient design details exist. The above will ensure that any possible environmental and ecological effects of any outcomes from the adaptation plans will be adequately assessed.

**Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 site by virtue of:**

**• Size and scale;**

The adaptation strategy takes in all of county Cork- see Figure 2 above. Of the actions in the plan, it would also be worth mentioning that the effects of the implementation of the adaptation strategy would be expected to be beneficial as it reduces risk from climate change and actions exist in the strategy to use environmentally friendly adaptation measures, such as the objective *To protect and enhance the natural environment and support Biodiversity.*

**• Land-take;**

None envisaged at this stage of the process. Please note that any actions and projects, as yet unknown that may arise, will be subjected to both the AA and EIA process's as they arise.

**• Distance from Natura 2000 site or key features of the site;**

See Brief Description of Natura 2000 sites above and also Table 4

**• Resource requirements (water abstraction etc.);**

No policies within the Climate Adaptation Strategy indicate the need for abstraction of water from any designated site.

**• Emission (disposal to land, water or air);**

No uncontrolled emissions are envisaged as a result of the objectives and actions of the Climate Adaptation Strategy. Where these might arise, at project level and not strategy level, these will be subject to appropriate assessment in line with planning and wildlife legislation.

**• Excavation requirements;**

Cork's Climate Adaptation Strategy is chiefly designed to inform policy responses to climate adaptation. No excavation related activities have been mentioned in the strategy. Where this might arise at project level they will be subjected to assessment at that stage.

**• Transportation requirements;**

It is not considered that any of the policies put forward in the strategy call for the development of new routes and as such will not have any effect on any designated sites.



<p><b>• Duration of construction, operation, decommissioning, etc;</b></p> <p>The lifespan of the Climate Adaptation Strategy will be five years, i.e. from 2019 to 2024.</p>
<p><b>• Other</b></p> <p>None.</p>
<p><b>Describe any likely changes to the site arising as a result of:</b></p>
<p><b>• reduction of habitat area:</b></p> <p>None – the objectives and actions of the Climate Adaptation Strategy are high level and at this stage do not envisage habitat reduction in any of the Natura 2000 sites. As outlined above, where this might arise at project stage, it will be assessed at that level. It should be noted, that some of the actions of the plan promote ecological solutions to climate adaptation issues and these offer opportunities for habitat creation.</p>
<p><b>• disturbance to key species;</b></p> <p>None- the plan is about climate adaptation. The adoption of ecological solutions would have beneficial ecological effects and these might well allow additional buffer areas and areas that function as green infrastructure.</p>
<p><b>• habitat or species fragmentation;</b></p> <p>None- see comments immediately above.</p>
<p><b>• reduction in species density;</b></p> <p>None envisaged as the objectives and actions of the adaptation strategy are designed to inform council responses to climate adaptation issues and do not envisage interventions in designated sites. As outlined above the adaptation of ecologically based responses to climate adaptation could well offer an opportunity to create wildlife habitats that would make a positive contribution to species that are of conservation interest.</p>
<p><b>• changes in key indicators of conservation value</b></p> <p>No projects giving rise to significant adverse changes in key indicators of conservation value for Natura 2000 sites are likely given that policies are in place in the County Development Plans to control possible effects and to ensure that the potential for such effects is adequately assessed and taken into account in any projects.</p>
<p><b>• Climate change:</b></p> <p>This is a Climate Adaptation Strategy that is designed to inform responses to the effects of climate change. These include the promotion of ecologically based adaptation to climate change and also mentions the need to consider the issue of invasive alien species as part of this process.</p>
<p><b>Describe any likely impacts on the Natura 2000 site as a whole in terms of:</b></p>
<p><b>• interference with the key relationships that define the structure of the sites;</b></p> <p>None, see above in relation to promotion of ecologically based adaptation responses. Any projects that might result will also be assessed at design stage for possible ecological effects.</p>
<p><b>• interference with key relationships that define the function of the sites;</b></p> <p>None.</p>

<b>Provide indicators of significance as a result of the identification of effects set out above in terms of:</b>
<p><b>• loss;</b> Not applicable.</p>
<p><b>• Fragmentation;</b> Not applicable, see response above regarding the use of ecologically based responses which would allow for the development of buffers</p>
<p><b>• Disruption;</b> Not applicable.</p>
<p><b>• Disturbance;</b> Not applicable.</p>
<p><b>• Change to key elements of the site (e.g. water quality etc.);</b> Not applicable.</p>
<b>Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts are not known.</b>
<p>The objectives and actions are high level and are intended to serve as guidance for the inclusion of material in other council policy documents such as the County Development Plan. It is here through mechanisms such as zoning and planning policy that the Adaptation Strategy will be given effect. These plans will be subject to SEA and AA as they are prepared and as zoning and policy responses it will be easier to assess their impacts and allow them to be modified accordingly.</p>

### 2.3.3 Findings of No Significant Effects Matrix

Brief description of the plan:	Cork County Council Climate Adaptation Strategy 2019-2024.
<b>Natura 2000 sites within County Cork, see also Figure 3 and Table 4 for exhausted list:</b>	<p>Cork county coastline supports a number of important coastal SPA's, the high cliffs of Seven Heads SPA (004191), Old Head of Kinsale (004021), The Bull and the Cow Rock SPA (004066), Sheet's Head to Toe Head SPA (004156), Galley Head to Duneen Point SPA (004190), Beara Peninsula SPA (004155), and Sovereign Islands SPA (004124), supporting important populations of breeding seabirds.</p> <p>The mudflats of Courtmachsherry Bay SPA (004219), Ballycotton Bay SPA (004022), Clonakilty Bay SPA (004081), Ballymacoda Bay SPA (004023), Blackwater Estuary SPA (004028) and Blackwater Callows SPA (004094) supports high numbers of feeding waders, and international and national population numbers of <i>wetlands and waterbirds</i>.</p> <p>Corks inland SPA's such as The Gearagh SPA (004156) and Kilcolman Bog SPA (004095) also support high number of waders,</p>

	<p><i>wetlands and waterbirds</i>, in addition to supporting nationally important numbers of species listed on Annex I of the E.U Birds Directive, such as Whooper Swan (<i>Cygnus cygnus</i>).</p> <p>The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161) is a very large site centred on the borders between the counties of Cork, Kerry and Limerick. The site consists of a variety of upland habitats, though almost half is afforested and support an important population of breeding Hen Harrier (<i>Circus cyaneus</i>).</p> <p>Cork coastal stretch also supports a number of SACs, such as Ballymacoda (Clonpriest and Pillmore) SAC (000077), Clonakilly Bay SAC (000091), Barley Cove to Ballyrisode Point SAC (001040), Great Island Channel SAC (001058) and Courtmacsherry Estuary SAC (001230) which are designated for a range of coastal habitats such as estuarine habitats, tidal mudflats and sandflats, Salicornia mud, Atlantic salt meadows and Mediterranean salt meadows (<i>Juncetalia maritimi</i>).</p> <p>Carrigeenamronety Hill SAC (002037) on the Limerick / Cork boarder near Mitchelstown, Myross Wood SAC (001070) near Ballylinch, Cleanderry Wood SAC (001043) on the Beara peninsula and Castletownshend SAC (001547) supports the rare Killarney Fern (<i>Trichomanes speciosum</i>) and habitats such as Dry Heath which is listed on Annex I of the E.U Habitats Directive.</p> <p>There are a number of riverine SACs within county Cork, such as Bandon River SAC (002171), The Gearagh SAC (001040), Kenmare River SAC (002158), Blackwater River (Cork/Waterford) SAC (002170) and Lower River Shannon SAC (002165) which support important populations of Annex II species, such as Otter (<i>Lutra lutra</i>), Sea Lamprey (<i>Petromyzon marinus</i>), Brook Lamprey (<i>Lampetra planeri</i>), River Lamprey (<i>Lampetra fluviatilis</i>), Twaite Shad (<i>Alosa fallax</i>), Atlantic Salmon (<i>Salmo salar</i>) and the Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>).</p> <p>A number of the SACs contain important and rare habitat of Old Oak Woodlands, such as St. Gobnet's Wood SAC (000106), Glengarriff Harbour And Woodland SAC (000090) and Cleanderry Wood SAC (001043)</p> <p>County Cork supports a number of upland SACs, that contain active Blanket Bog, wet and dry heath and the rare Cork Slug (<i>Geomalacus maculosus</i>) and Killarney Fern (<i>Trichomanes speciosum</i>) such as Ballyhoura Mountains SAC (002036) and Caha Mountains SAC (000093).</p>
<p><b>Description of the Project or Plan</b></p>	<p><b>As given in Screening Matrix above.</b></p>
<p><b>Is the Project or Plan directly connected with or necessary to the management of the site (provide details)?</b></p>	<p>No.</p>

<p><b>Are there other projects or plans that together with the project or plan being assessed could affect the site (provide details)?</b></p>	<p>None.</p>
<p><b>The Assessment of Significance of Effects</b></p>	
<p><b>Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 sites:</b></p>	<p>None envisaged as the objectives and actions of the adaptation strategy are designed to inform council responses to climate adaptation issues and do not envisage interventions in designated sites. As outlined above the adaptation of ecologically based responses to climate adaptation could well offer an opportunity to create wildlife habitats that would make a positive contribution to species that are of conservation interest.</p>
<p><b>Explain why these effects are not considered significant:</b></p>	<p>The effects of the implementation of the adaptation strategy would be expected to be beneficial as it reduces risk from climate change and actions exist in the strategy to use environmentally friendly adaptation measures</p>
<p><b>List of Agencies Consulted: Provide contact name and telephone or email address:</b></p>	<p>Cork County Council on the 5<sup>th</sup> June 2019 sent the Draft Climate Change Adaptation Strategy, the SEA Screening Report and Appropriate Assessment (AA) Screening to the following Environmental Authorities:</p> <ul style="list-style-type: none"> <li>• Environmental Protection Agency;</li> <li>• Department of Communications, Climate Action and the Environment;</li> <li>• Department of Agriculture, Food and the Marine;</li> <li>• Department of Housing, Planning and Local Government; and</li> <li>• Department of Culture, Heritage and the Gaeltacht.</li> </ul> <p>Cork County Council also conducted a six-week period from 15<sup>th</sup> July 2019 to 26<sup>th</sup> August 2019, where the Draft Climate Adaptation Strategy, with the accompanying SEA Screening Report and AA Screening Report, were presented for public consultation.</p>
<p><b>Summary of Responses received for previous draft.</b></p>	<p>59 submissions were received. A number of submissions highlighted the need for SEA Screening and AA Screening to be undertaken for the Strategy.</p> <p>Some submissions commented on the AA process, in particular to ensure the AA was complete for the strategy. The Report on Submissions Received attached with Cork's Climate Adaptation Strategy provides a detailed summary of all the submissions and Cork County Councils response to each submission.</p>

		Post consultation additional actions were added, and other actions were edited within the Strategy. These actions were screened for AA requirements – see Appendix 1.	
Data Collected to Carry out the Assessment			
Who carried out the Assessment?	Sources of Data	Level of assessment Completed	Where can the full results of the assessment be accessed and viewed
Enviroguide Consulting	Existing NPWS - Site Synopses, Conservation Objectives and Natura2000 forms – see section 4 of this document	Desktop study	With the Climate Adaptation Strategy on request.

### 3 CONCLUSION

In conclusion, further to a screening of Cork County Council's Climate Adaptation Strategy for possible significant effects on Natura 2000 sites no significant effects were identified. The screening outlined in this report included an assessment of possible in-combination effects. Based on the objective information contained in this report and applying the precautionary principle, it is concluded that the Strategy will not have a significant effect on Natura 2000 sites.

Other Local Authority documents such as the County Development Plan will take their lead from the Climate Adaptation Strategy. These, as part of the plan preparation process will be subject to compliance with the SEA Directive and Article 6 of the Habitats Directive that ensures that objectives and actions that result will be adequately examined for ecological effects.

Furthermore, should specific actions result from these plans these will be subjected to compliance with the EIA Directive and Article 6 of the Habitats Directive when sufficient design details exist. The EIA and AA process will ensure that any possible environmental and ecological effects of any outcomes from the adaptation plans will be adequately assessed.

#### 3.1 Reason for Conclusion

The reasons for the above conclusion are detailed in this report but are summarised as follows:

due to the nature of Cork County Council Climate Adaptation Strategy, and in particular its main objective of mainstreaming Climate Adaptation into all functions within Cork County Council, there is no possible effects identified to any Natura 2000 sites as a result of the Climate Adaptation Strategy.

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## **APPENDIX 1 – CRITERIA ASSESSMENT OF OBJECTIVES AND ACTIONS**

Objectives	Impact Assessment on Natura 2000 Sites as per Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC					
	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required
<b>Local Adaptation Governance and Business Operations</b>						
To support the successful and practical implementation of adaptation planning	No	No	No	No	No	No – As this objective aim is to mainstream Climate Adaptation measures into future County Council plans
To ensure that climate adaptation is mainstreamed into all activities and operations of Cork County Council	No	No	No	No	No	No – As this objective aim is to mainstream Climate Adaptation measures into future County Council plans
To develop and maintain a resource and risk model for Cork County Council	No	No	No	No	No	No – As this objective aims to identify the risk to Cork County Council services and buildings
To build resilience within Cork County Council to support service delivery	No	No	No	No	No	No – As this objective aims to identify the risk to Cork County Council services and buildings
To build capacity within Cork County Council to respond effectively to extreme weather events	No	No	No	No	No	No – As this objective aims to identify the risk to Cork County Council services, buildings and infrastructure
To identify and support opportunities that may arise from pursuing adaptation efforts through the functions of Cork County Council	No	No	No	No	No	No – As this objective aims to identify the risk to Cork County Council services
<b>Infrastructure and Built Environment</b>						
To increase the resilience of roads and transport infrastructure	No	No	No	No	No	No – As this objective aims to identify the risk to Cork County Council services and transport infrastructure
To increase the resilience of Cork County Council buildings, housing stock , architectural heritage and other capital assets	No	No	No	No	No	No – As this objective aims to identify the risk to Cork County Council building and housing infrastructure, in addition to future capital assets
To increase the resilience of Cork County Council coastal infrastructure including harbours, piers, beaches	No	No	No	No	No	No – As this objective aims to identify the risk to Cork County Council piers, harbours and beaches
<b>Landuse and Development</b>						
To Integrate climate action considerations into landuse planning policy	No	No	No	No	No	No – As this objective aim is to mainstream Climate Adaptation measures into future County Council Policies
<b>Drainage and Flood Management</b>						
To adapt to the increased risk and impact of flooding	No	No	No	No	No	No – As this objective aim is to mainstream Climate Adaptation measures into flood plans
<b>Natural Environment, Built and Cultural Heritage</b>						
To protect and enhance the natural environment and support Bio-diversity	No	No	No	No	No	No – As this objective aim is to assess Climate Change adaptation factors, in combination with biodiversity issues and identify biodiversity risks



	Impact Assessment on Natura 2000 Sites as per Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC					
	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required
<b>Objectives</b>						
To protect Heritage and Cultural Infrastructure	No	No	No	No	No	No – As this objective aim is to evaluate Climate Change risk to heritage and cultural assets
<b>Community Health and Wellbeing</b>						
To build capacity and resilience within communities	No	No	No	No	No	No – As this objective aim is to promote awareness both in house and amount the public
<b>Other Sectors and Agencies</b>						
To collaborate with other Sectors and Agencies in programs relating to climate change	No	No	No	No	No	No – As this objective aim is to encourage collaboration with other departments and sectors

**ACTIONS**

Local Adaptation Governance and Business Operations	Actions	Impact Assessment on Natura 2000 Sites						NOTE
		Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
1	Establish a Climate Action Steering Group with senior representatives from the key functions of the Local Authority to ensure the successful implementation of the actions of this Climate Adaptation Strategy, to set strategic direction, to report on progress and encourage local innovation.	No	No	No	No	No	No	
2	Integrate Climate Action into the Service Delivery Programmes and provide for its translation to Team Development Plans and Personal Development Plans to enable actions to be directly pursued per business unit/section.	No	No	No	No	No	No	
3	Ensure that climate action is a standing item on the Agenda of all Management Team meetings.	No	No	No	No	No	No	
4	Appoint a Climate Action Officer with responsibility for climate related activity within Cork County Council.	No	No	No	No	No	No	
5	Liaise with the Climate Action Regional Office and provide progress and update reports when requested. Assist the CARO in its development as a centre of excellence in the Atlantic Seaboard South Region.	No	No	No	No	No	No	
6	<p>Manage and oversee the effective mainstreaming of Adaptation measures into all plans, programmes, strategies and policies* of Cork County Council:</p> <p>(a) Build and strengthen partnerships and promote inter-departmental communications and co-operation</p> <p>(b) Compile a list of all plans, strategies and policies including expected review/update timelines and ensure integration of climate action into all reviews</p> <p>(c) Monitor that climate change considerations are integrated into service delivery programmes</p> <p>(d) Report to Management team on progress</p> <p>*Such plans, programmes, strategies and policies include (but not confined to):</p> <ul style="list-style-type: none"> <li>• Corporate Plan</li> <li>• County Development Plan</li> <li>• Local Area Plans</li> <li>• Biodiversity Plan</li> <li>• Heritage Plan</li> <li>• Severe Weather Plan</li> <li>• Winter Maintenance Plan</li> <li>• Roads Programme</li> <li>• Housing Strategy</li> <li>• Local Economic and Community Plan</li> <li>• Economic Strategy</li> <li>• Tourism Strategy</li> <li>• Safety Management Systems</li> </ul>	No	No	No	No	No	No	<p>Specific actions and plans will be subjected to both AA and EIA processes when sufficient design details exist.</p> <p><b>OR</b></p> <p>As part of Strategy preparation an SEA and AA processes will be required to inform Strategy Development.</p>
7	<p>Risk assess Cork County Council activities in the context of climate change by:</p> <ul style="list-style-type: none"> <li>• Collection and collation of historic weather event data</li> <li>• Compilation of international and national data on projected climate patterns</li> </ul>	No	No	No	No	No	No	
8	Risk assess Cork County Council activities in the context of climate change by:	No	No	No	No	No	No	

Local Adaptation Governance and Business Operations	Actions	Impact Assessment on Natura 2000 Sites						NOTE
		Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
	<ul style="list-style-type: none"> <li>• Identification of vulnerabilities of Cork County Council in the context of emerging climate knowledge</li> </ul>							
9	<p>Develop a system to document, monitor and analyse data on the impact of extreme weather events on Cork County Council which shall take into account the following baselines:</p> <ul style="list-style-type: none"> <li>• Nature and extent of extreme weather events</li> <li>• Impact of extreme weather events on public service delivery</li> <li>• Impact of extreme weather events on Local Authority assets.</li> <li>• Actions taken to adapt to events and to restore services</li> <li>• Resources required to deal with the impact of extreme weather events</li> <li>• Resource deficits identified in dealing with extreme weather events, including the H&amp;S aspects of prolonged events on rest times</li> <li>• Financial implications of extreme weather events, including: <ul style="list-style-type: none"> <li>o clean up and repair costs</li> <li>o central government funding received</li> <li>o Opportunity costs of extreme weather events</li> </ul> </li> <li>• Number of days of closure of Local Authority buildings</li> <li>• Staff working days lost</li> <li>• Lost activities due to reassignment or loss of resources.</li> <li>• Number of activations of Severe Weather Assessment Team</li> <li>• Number of emergency road closures</li> <li>• Number of emergency call outs</li> <li>• Number (and dates) of call outs to deal with wild fires</li> <li>• Number of Health and Safety incidents</li> <li>• Number of kilometres of road treated in freezing and high temperature conditions</li> <li>• Number of representations and calls for assistance from elected representatives, customers, other sectors and members of the public</li> <li>• The nature, extent and cost of service provided to or obtained from other sectors</li> <li>• The proportion of the impacts that is deemed to derive from climate change</li> </ul>	No	No	No	No	No	No	
10	<p>Develop Business Continuity Plan to identify and address specifically, the impacts associated with extreme weather events on all functions/services of the Local Authority and explore potential opportunities to increase resilience. This will involve:</p> <ul style="list-style-type: none"> <li>• Prepare for and minimise the impact of service disruption</li> <li>• Assess the Local Authority's back-up system's infrastructure and review of power outage back-up procedures to ensure resilience</li> <li>• Develop a Contingency Plan for identified essential key staff to be able to access all essential Local Authority systems remotely due to a climate event to reduce or eliminate climate event impacts on statutory deadlines and backlog.</li> <li>• Assess impact of climate events on outdoor working/site visits and any impacts on deadlines and level of service provided</li> <li>• Assess staff working environments during extreme weather events, review potential ways to maintain safe working conditions and provision of alternative working locations</li> </ul>	No	No	No	No	No	No	<p>Specific actions and plans will be subjected to both AA and EIA process when sufficient design details exist.</p> <p><b>OR</b></p> <p>As part of Strategy preparation an SEA and AA process will be required to inform Strategy Development.</p>

		Impact Assessment on Natura 2000 Sites						NOTE
Local Adaptation Governance and Business Operations	Actions	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
	• Develop plans for staff deployment and availability in the event of travel restrictions during extreme weather events							
11	Maintain the internal communication protocol for extreme weather events to increase staff awareness of potential risk to safety and to ensure all staff travel only in safe conditions.	No	No	No	No	No	No	
12	Assess back-up communication systems to ensure communication for emergency responders is maintained in the event of disruption to main communication system.	No	No	No	No	No	No	
13	Develop a Climate Change and Adaptation Training Programme to educate staff and elected members on the implications of climate change on Local Authority operations and build capacity within the Local Authority.	No	No	No	No	No	No	
14	Build resilience and capacity within local communities to enhance the overall response to extreme weather events.	No	No	No	No	No	No	
15	Develop resource plans for the specific demands of climate change.	No	No	No	No	No	No	
16	Support existing extreme weather event response arrangements and investigate further deployment of early warning systems, along with reviewing and collating information on existing early warning systems.	No	No	No	No	No	No	
17	Identify, source and leverage funding streams for Cork County Council in the active implementation of adaptation actions and measures with an emphasis on capitalising on opportunities that will contribute both environmentally and economically to the area.	No	No	No	No	No	No	
18	Support, encourage and nurture new ideas seeking to capture opportunities associated with environmental and technological advances that support low climate adaptation.	No	No	No	No	No	No	

		Impact Assessment on Natura 2000 Sites detailed in Table 4.						NOTE
Infrastructure and Built Environment	Actions	Habitat Loss or Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
19	Develop an integrated system, in the context of climate vulnerabilities, for the management of transport infrastructure, including roads, bridges, walking & cycling facilities.	No	No	No	No	No	No	
20	Review information available from existing asset management systems such as the Pavement Management System, Eirspan Bridge Management System and Bridge Asset Management Programme (BAMP).	No	No	No	No	No	No	
21	Compile a vulnerable infrastructure inventory to aid works prioritisation and inform route prioritisation plans.	No	No	No	No	No	No	

Infrastructure and Built Environment	Actions	Impact Assessment on Natura 2000 Sites detailed in Table 4.						NOTE
		Habitat Loss or Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
22	Establish a procedure for structural integrity assessments of infrastructure after extreme weather events.	No	No	No	No	No	No	
23	Integrate climate considerations into the design, planning, tendering process and construction of all transport infrastructure.	No	No	No	No	No	No	Specific actions and plans will be subjected to both AA and EIA process when sufficient design details exist.  <b>OR</b> As part of Strategy preparation an SEA and AA process will be required to inform Strategy Development.
24	Develop actions plans for the adaptation of Local Authority roads and transport infrastructure to reduce the impacts of climate change.	No	No	No	No	No	No	Specific actions and plans will be subjected to both AA and EIA process when sufficient design details exist.  <b>OR</b> As part of Strategy preparation an SEA and AA process will be required to inform Strategy Development.
25	Evaluate the requirements of roadside tree and hedgerow maintenance in the context of extreme weather events.	No	No	No	No	No	No	
26	Integrate climate considerations into the design, planning and construction of all roads, footpaths, bridges, public realm, coastal and other construction projects and make provision to incorporate green infrastructure as a mechanism for carbon offset within projects as well as for wider environmental benefits such as providing shade to alleviate heat stress, supporting urban bio-diversity, water retention and flood alleviation.	No	No	No	No	No	No	
27	Develop an integrated system, in the context of climate vulnerabilities, for the management of capital assets, including buildings, housing stock, fleet, recreation areas and public amenities.	No	No	No	No	No	No	
28	Review information available from existing asset management systems such as the iHouse System and any other relevant documents.	No	No	No	No	No	No	
29	Compile a vulnerable infrastructure inventory to aid works prioritisation.	No	No	No	No	No	No	
30	Establish a procedure for structural integrity assessments of assets after extreme weather events.	No	No	No	No	No	No	
31	Integrate climate considerations into the design, planning and construction of all capital projects.	No	No	No	No	No	No	Specific actions and plans will be subjected to both AA and EIA process when sufficient design details exist.  <b>OR</b>

		Impact Assessment on Natura 2000 Sites detailed in Table 4.						NOTE
Infrastructure and Built Environment	Actions	Habitat Loss or Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
								As part of Strategy preparation an SEA and AA process will be required to inform Strategy Development.
32	Undertake a gap analysis of the Local Authority fleet in the response to extreme weather events.	No	No	No	No	No	No	
33	Develop actions plans for the adaptation of Local Authority buildings, housing and assets to reduce the impacts of climate change on occupants.	No	No	No	No	No	No	Specific actions and plans will be subjected to both AA and EIA process when sufficient design details exist.  <b>OR</b> As part of Strategy preparation an SEA and AA process will be required to inform Strategy Development.
34	Review the tenant's handbook to increase awareness of extreme weather events and provide climate change resilience information.	No	No	No	No	No	No	
35	Ensure that climate change is considered in locating and planning future developments.	No	No	No	No	No	No	As part of Strategy preparation an SEA and AA process will be required to inform Strategy Development.
36	Develop an integrated system, in the context of climate vulnerabilities, for the management of coastal infrastructure including harbours, piers and beaches	No	No	No	No	No	No	
37	Work with national and regional agencies to develop Coastal Zone Management Plans to identify at risk coast erosion and deposition zones, and, where appropriate, actions to manage climate risk and building resilience to climate change	No	No	No	No	No	No	

		Impact Assessment on Natura 2000 Sites						NOTE
Landuse and Development	Actions	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
38	During the Review of the Cork County Development Plan and Local Area Plans identify and integrate climate change as a critical consideration, guiding principle and strategic objective, and tailor planning policies to reduce the vulnerability of Co. Cork to the impacts of climate change, for example by: • Enhancing the role of the natural environment to promote climate	No	No	No	No	No	No	As part of Strategy preparation an SEA and AA process will be required to inform Strategy Development.

		Impact Assessment on Natura 2000 Sites						NOTE
Landuse and Development	Actions	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
	adaptation through promoting green infrastructure <ul style="list-style-type: none"> <li>Continuing to take a risk-based approach to development in areas at risk of all types of flooding (coastal, fluvial, pluvial and groundwater)</li> <li>Designing urban areas to incorporate shading/cooling areas and water features to provide for urban heat reduction.</li> <li>Promoting climate resilient designs and materials.</li> </ul>							
39	Evaluate and implement best practice in Sustainable Drainage Systems (SuDS) in the context of climate change.	No	No	No	No	No	No	

		Impact Assessment on Natura 2000 Sites						NOTE
Drainage and Flood Management	Actions	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
40	Work with the OPW and other organisations in information sharing in relation to flood risk and in the development of major and minor flood protection and flood proofing schemes throughout the county, encouraging a whole of catchment approach to the flood management and promote the requirements of our natural and cultural heritage in relation to flood relief works which may be carried out in the context of climate change.	No	No	No	No	No	No	Specific actions and plans will be subjected to both AA and EIA process when sufficient design details exist.
41	Ensure that flood event emergency response plans are reviewed on a regular basis to reflect the increase in flood risk due to climate change.	No	No	No	No	No	No	
42	Compile an inventory of existing drainage districts for which Cork County Council is responsible.	No	No	No	No	No	No	
43	Develop management plans for Cork County Council drainage districts taking into account impacts from climate change such as increased siltation and plant growth.	No	No	No	No	No	No	As part of Strategy preparation an SEA and AA process will be required to inform Strategy Development.
44	Work with Irish Water to identify combined sewers that are at risk of surcharging during extreme rainfall events and develop suitable solutions.	No	No	No	No	No	No	
45	Investigate the use of smart monitoring in the management of Cork County Council drainage systems.	No	No	No	No	No	No	
46	Explore opportunities to install systems similar to those currently operating in the County in areas subject to flooding with reference to CFRAMS.	No	No	No	No	No	No	

		Impact Assessment on Natura 2000 Sites						NOTE
Natural Environment, Built and Cultural Heritage	Actions	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
47	Support efforts to attain water quality standards set out in the Water Framework Directive.	No	No	No	No	No	No	
48	Evaluate the requirements of Bio-diversity in relation to roadside tree and hedgerow maintenance in the context of climate change.	No	No	No	No	No	No	
49	Identify invasive species whose spread is linked with climate change. Develop appropriate management techniques for their control.	No	No	No	No	No	No	
50	Develop a plan to support an active native tree planting programme in conjunction with an awareness campaign that informs of the benefits to communities in improving air quality, offsetting carbon emissions, promoting biodiversity, limiting flood risk, reducing urban heat, as well aesthetic value.	No	No	No	No	No	No	
51	Support provision for natural borders/buffers and include as integral component of the design of greenway/ blueway, tracks, trails, amenity and tourism areas to promote the natural enhancement and influence positive user experience. Consult with the NPWS to ensure appropriate buffer zones are provided, maintained and protected to avoid individual impacts on designated species area habitats, and to protect and enhance wider bio-diversity.	No	No	No	No	No	No	
52	Develop a system to document, monitor and assess the impact of climate change on Cork County Council owned heritage and cultural assets	No	No	No	No	No	No	

		Impact Assessment on Natura 2000 Sites						NOTE
Community Health and Wellbeing	Actions	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
53	Raise awareness of the impacts of climate change and ways for communities to increase response and resilience to these impacts. This should include: <ul style="list-style-type: none"> <li>• Information on Severe Weather Event preparedness</li> <li>• Property security and safety</li> <li>• Health issues related to extreme weather events</li> </ul>	No	No	No	No	No	No	



		Impact Assessment on Natura 2000 Sites						NOTE
Community Health and Wellbeing	Actions	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
	<ul style="list-style-type: none"> <li>Public safety awareness</li> <li>Water safety awareness for unsupervised watercourses in local areas</li> <li>Local resources to adapt to events e.g. road salting</li> </ul>							
54	<p>Develop a programme to enhance capacity to respond to and recover from extreme weather events with specific aims to:</p> <ul style="list-style-type: none"> <li>Help the vulnerable community to develop a stronger facilitating role for mitigating risks</li> <li>provide advice on the risk of extreme events affecting their locality</li> <li>Devise adaptation actions to enhance preparedness and reduce dependency on Local Authority emergency responses</li> <li>Provide support to develop appropriate resilience arrangements to enable response and recovery</li> </ul>	No	No	No	No	No	No	
55	Develop public awareness campaigns to increase knowledge of and encourage behavioural change around climate change and severe weather events.	No	No	No	No	No	No	

		Impact Assessment on Natura 2000 Sites						NOTE
Other Sectors and Agencies	Actions	Habitat Loss / Alteration	Habitat or Species Fragmentation	Disturbance and/or Displacement of Species	Changes in Population Density	Changes in Water Quality and/or Resource	Stage 2 AA Required	
56	<p>Liaise, collaborate and work in partnership with the Sectors identified in National Adaptation Framework in the delivery of the Sectoral adaptation actions, as approved by government, where they are relevant to the functions and activities of Cork County Council.</p>	No	No	No	No	No	No	<p>Specific actions and plans will be subjected to both AA and EIA process when sufficient design details exist.</p> <p><b>OR</b></p> <p>As part of Strategy preparation a SEA and AA process will be required to inform Strategy Development.</p>
57	<p>Work with the Government Departments to:</p> <ul style="list-style-type: none"> <li>Identify funding streams available to communities to enable local climate action resilience and adaptation projects</li> <li>Harness and enhance delivery methods for community funding for climate action.</li> </ul>	No	No	No	No	No	No	
58	Review and revise Emergency Management Plans and protocols to ensure that they provide for appropriate inter sectoral stakeholder engagement for Climate Change Impact response.	No	No	No	No	No	No	