

APPROPRIATE ASSESSMENT SCREENING REPORT

FOR

CLIMATE CHANGE ADAPTATION
STRATEGY FOR CAVAN COUNTY
COUNCIL

August 2019

ON BEHALF OF

CLIMATE ACTION REGIONAL
OFFICE (CARO)

Prepared by

Enviroguide Consulting

 *Dublin*


3D Core C, Block 71, The Plaza,
Park West, Dublin 12

 *Kerry*

19 Henry Street
Kenmare, Co. Kerry

 www.enviroguide.ie

 info@enviroguide.ie

 +353 1 565 4730



DOCUMENT CONTROL SHEET

Client	Climate Action Regional Office
Project Title	Climate Change Adaptation Strategy for Cavan County Council
Document Title	Appropriate Assessment Screening Report

Revision	Status	Author(s)	Reviewed	Approved	Issue Date
1.0	Internal Draft	Donnacha Woods, <i>Project Ecologist</i>	Jim Dowdall, <i>Director</i>	Muriel Ennis <i>Principal Consultant</i>	20/05/2019
2.0	Draft for Consultation	Mairead Foran <i>Environmental Consultant</i>	Muriel Ennis <i>Principal Consultant</i>	Muriel Ennis <i>Principal Consultant</i>	23/05/2019
3.0	Final	Muriel Ennis <i>Principal Consultant</i>	Mairead Foran <i>Environmental Consultant</i>	Muriel Ennis <i>Principal Consultant</i>	27/08/2019

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	BACKGROUND	1
1.2	LEGISLATIVE CONTEXT	1
1.3	STAGES OF AA	2
1.4	SCREENING STEPS	3
1.5	STAGE 1 SCREENING ASSESSMENT METHODOLOGIES	3
1.5.1	<i>Desk Study</i>	3
1.5.2	<i>Assessment of Impacts</i>	3
2	STAGE 1 SCREENING	5
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 Change Adaptation Strategy Objectives</i>	5
2.2.3	<i>Identification of Relevant Natura 2000 Sites</i>	8
2.3	ASSESSMENT OF SIGNIFICANCE OF POTENTIAL IMPACTS	12
2.3.1	<i>In-combination Effects</i>	12
3	CONCLUSION	12
3.1	REASON FOR CONCLUSION	13
4	REFERENCES	14

LIST OF TABLES

Table 1.	Definition of Durations (EPA, 2017)	4
Table 2.	Impact Significance Criteria (EPA, 2017)	4
Table 3.	Cavan County Council Climate Change Adaptation Strategy Objectives	6
Table 4.	Natura 2000 sites within a 15km radius of the Strategy area	8

LIST OF FIGURES

Figure 1.	The four stages of the Appropriate Assessment Process (DEHLG, 2010)	2
Figure 2.	Area encompassed by Strategy	7
Figure 3.	Natura 2000 sites located within 15km of the strategy's area	11

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 Stages of AA

This Appropriate Assessment Screening Report (the “**Screening Report**”) has been prepared by Enviroguide Consulting which considers whether the proposed Climate Change 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.

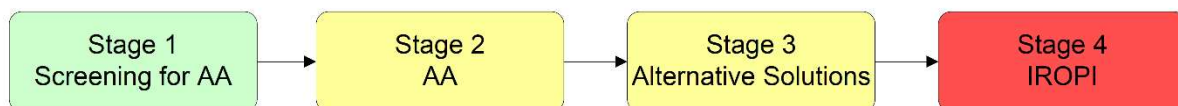


FIGURE 1. THE FOUR STAGES OF THE APPROPRIATE ASSESSMENT PROCESS (DEHLG, 2010).

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.

1.4 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 Plan is necessary for the management of a Natura 2000 site;
- Description of the Plan;
- Identification of Natura 2000 sites potentially affected;
- Identification and description of individual and cumulative impacts likely to result from the plan;
- 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 Plan alone and in combination with other developments in the area requires a Stage 2.

1.5 Stage 1 Screening Assessment Methodologies

1.5.1 Desk Study

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

- Draft Climate Change Adaptation Strategy – Cavan 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*.

1.5.2 Assessment of Impacts

Once the potential impacts that may arise from Cavan County Councils Climate Change Adaptation Strategy are identified, 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.

In line with the EPA Guidelines (EPA, 2017), the following terms are defined when quantifying duration:

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

Description of Duration	Corresponding Time Frame
Momentary Effects	Effects lasting from seconds to minutes
Brief Effects	Effects lasting less than a day
Temporary Effects	Effects lasting less than a year
Short-term Effects	Effects lasting one to seven years.
Medium-term Effects	Effects lasting seven to fifteen years.
Long-term Effects	Effects lasting fifteen to sixty years
Permanent Effects	Effects lasting over sixty years
Reversible Effects	Effects that can be undone, for example through remediation or restoration
Frequency of Effects	Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)

The criterion for confidence levels of the predicted likely impacts are given below in Table 2. The impact significance criteria follow EPA guidance (EPA, 2017).

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

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

2 STAGE 1 SCREENING

2.1 Management of Natura 2000 Site

Cavan County Council's Climate Change Adaptation is not directly connected with or necessary for the management of Natura 2000 sites in County Cavan 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 Change 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 2015.¹

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 Change Adaptation Strategy Objectives

The purpose of the Cavan County Council's Climate Change 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, Cavan County Council has set out a number of key objectives in their strategy, under six thematic principles. The six themes are listed below:

1. Local Adaptation Governance and Business Operations
2. Infrastructure and Built Environment
3. Land-use and Development
4. Drainage and Flood Management
5. Natural Resources and Cultural Infrastructure

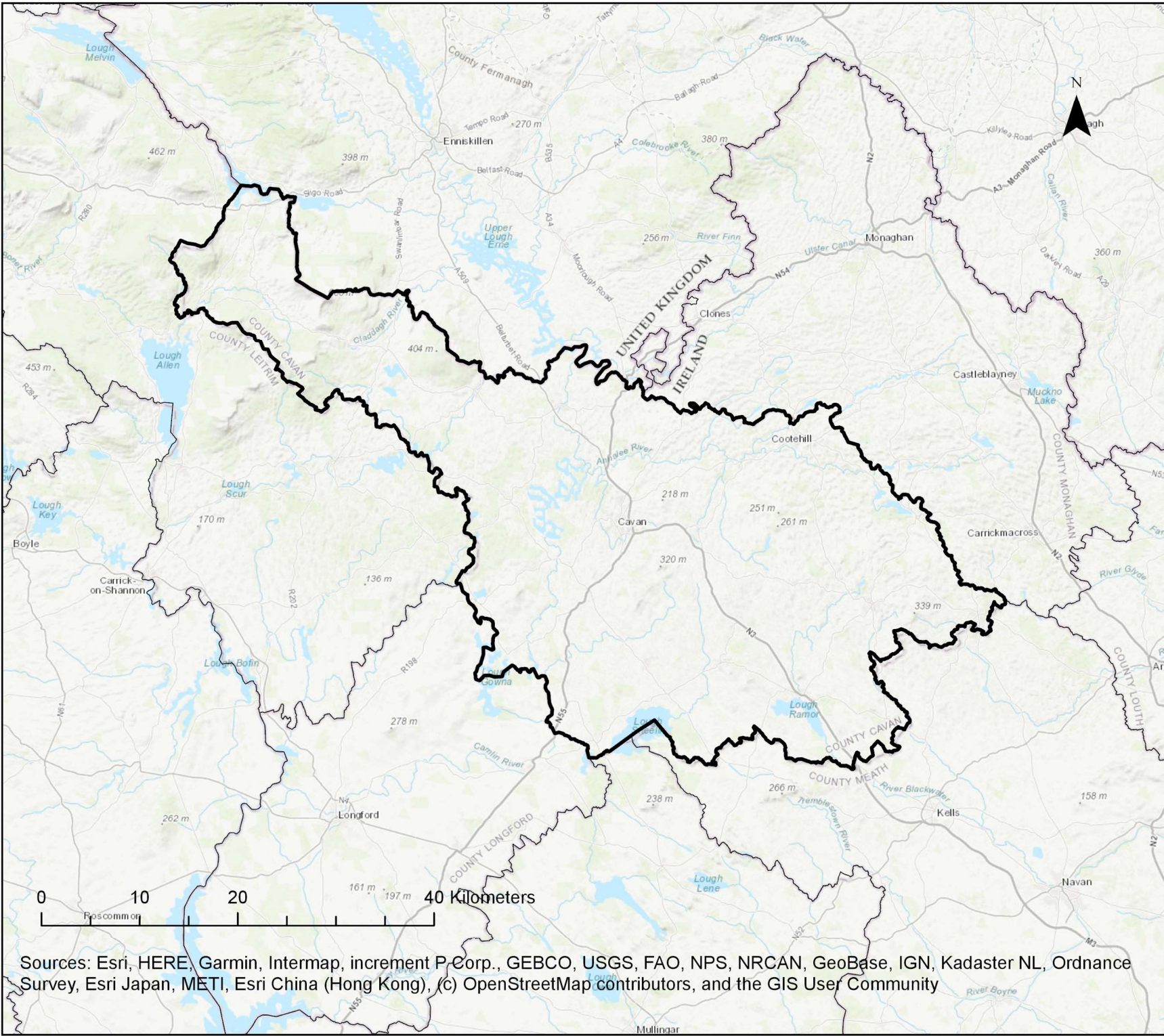
¹ *Climate Action and Low Carbon Development Act 2015* (S.I. No. 25/2016).

6. Community Health and Wellbeing

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

TABLE 3. CAVAN COUNTY COUNCIL CLIMATE CHANGE ADAPTATION STRATEGY OBJECTIVES

Theme 1: Local Adaptation Governance and business Operations	
1	To ensure the progression and implementation of local climate change adaptation actions in Cavan County Council.
2	To ensure that climate change adaptation actions are mainstreamed into all activities of Cavan County Council.
3	To build resilience in Cavan County Council to support service delivery.
4	To build capacity within Cavan County Council to respond effectively to extreme weather events.
5	To Identify and support opportunities that may arise from pursuing adaptation efforts through the functions of Cavan County Council.
Theme 2: Infrastructure and Built Environment	
1	To ensure and increase the resilience of infrastructural assets and inform investment decisions.
2	To work towards the objective for a low carbon society.
Theme 3: Landuse and Development	
1	To Integrate climate action considerations into landuse planning policy and influence positive behaviour
Theme 4: Drainage and Flood Management	
1	To promote flood risk mitigation measures and manage the risk of flooding through a variety of responses.
Theme 5: Natural Resources and Cultural Infrastructure	
1	To promote effective bio-diversity management and enhance protection of natural habitats and landscapes.
Theme 6: Community Health and Wellbeing	
1	To build capacity and resilience within communities.



Legend

□ County Cavan

Project

Appropriate Assessment Screening Report for Climate Change Adaptation Strategy for Cavan Co Co

Client

Climate Action Regional Office (CARO)

Title

Figure 2: Area encompassed by Strategy

enviroguide consulting
 3D 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	Projection: IRENET95 Irish Transverse Mercator
Checked: JD	
Date: 23/05/2019	Scale: 1:525,000 @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

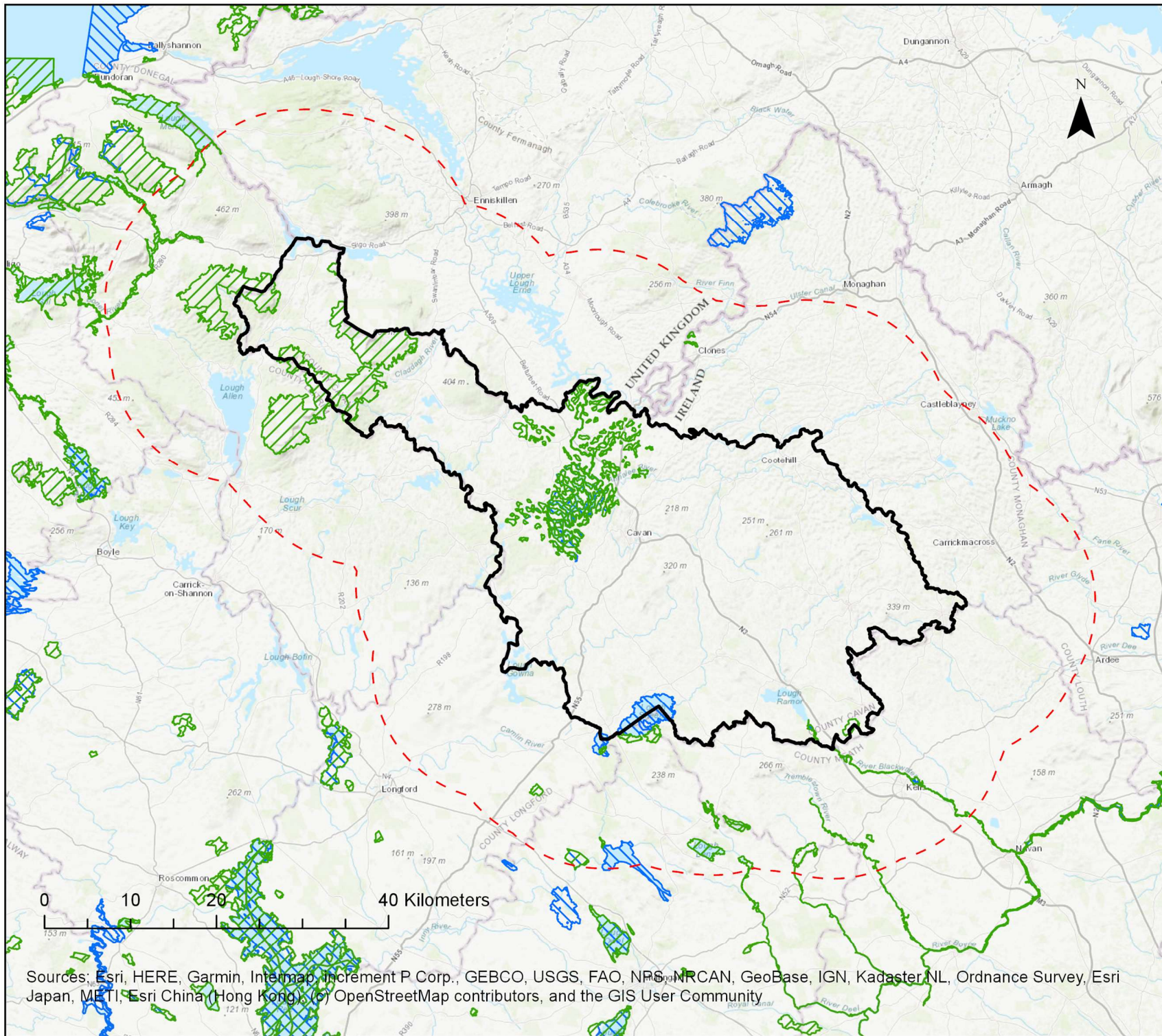
In identifying potentially affected Natura 2000 sites, it has been decided to adopt the precautionary principle and includes all SPAs and SACs within the Strategy area, including a surrounding 15km buffer zone. Within this overall area, a total of 19 SACs and 5 SPAs are found, each site name, corresponding 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
Special Areas of Conservation (SAC)			
000007	Lough Oughter And Associated Loughs SAC	<ul style="list-style-type: none"> - [3150] Natural Eutrophic Lakes - [91D0] Bog Woodland* - [1355] Otter (<i>Lutra lutra</i>) 	Within Co. Cavan
000584	Cuilcagh - Anierin Uplands SAC	<ul style="list-style-type: none"> - [3110] Oligotrophic Waters containing very few minerals - [3160] Dystrophic Lakes - [4010] Wet Heath - [4030] Dry Heath - [4060] Alpine and Subalpine Heaths - [6230] Species-rich Nardus Grassland* - [7130] Blanket Bogs (Active)* - [7140] Transition Mires - [7220] Petrifying Springs* - [8110] Siliceous Scree - [8220] Siliceous Rocky Slopes - [1393] Slender Green Feather-moss (<i>Drepanocladus vernicosus</i>) 	Within Co. Cavan
000979	Corratirrim SAC	<ul style="list-style-type: none"> - [8240] Limestone Pavement* 	Within Co. Cavan
002032	Boleybrack Mountain SAC	<ul style="list-style-type: none"> - [3160] Dystrophic Lakes - [4010] Wet Heath - [4030] Dry Heath - [6410] Molinia Meadows - [7130] Blanket Bogs (Active)* 	Within Co. Cavan
002299	River Boyne And River Blackwater SAC	<ul style="list-style-type: none"> - [7230] Alkaline Fens - [91E0] Alluvial Forests* - [1099] River Lamprey (<i>Lampetra fluviatilis</i>) - [1106] Atlantic Salmon (<i>Salmo salar</i>) - [1355] Otter (<i>Lutra lutra</i>) 	Within Co. Cavan
000006	Killyconny Bog (Cloghbally) SAC	<ul style="list-style-type: none"> - [7110] Raised Bog (Active)* - [7120] Degraded Raised Bog 	Within Co. Cavan
001403	Arroo Mountain SAC	<ul style="list-style-type: none"> - [4010] Wet Heath - [4030] Dry Heath - [4060] Alpine and Subalpine Heaths 	Within the 15km buffer

		<ul style="list-style-type: none"> - [7130] Blanket Bogs (Active)* - [7220] Petrifying Springs* - [8120] Calcareous Scree - [8210] Calcareous Rocky Slopes 	
001976	Lough Gill SAC	<ul style="list-style-type: none"> - [3150] Natural Eutrophic Lakes - [6210] Orchid-rich Calcareous Grassland* - [91A0] Old Oak Woodlands - [91E0] Alluvial Forests* - [1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>) - [1095] Sea Lamprey (<i>Petromyzon marinus</i>) - [1096] Brook Lamprey (<i>Lampetra planeri</i>) - [1099] River Lamprey (<i>Lampetra fluviatilis</i>) - [1106] Atlantic Salmon (<i>Salmo salar</i>) - [1355] Otter (<i>Lutra lutra</i>) 	Within the 15km buffer
000428	Lough Melvin SAC	<ul style="list-style-type: none"> - [3130] Oligotrophic to Mesotrophic Standing Waters - [6410] Molinia Meadows - [1106] Atlantic Salmon (<i>Salmo salar</i>) - [1355] Otter (<i>Lutra lutra</i>) 	Within the 15km buffer
002341	Ardagullion Bog SAC	<ul style="list-style-type: none"> - [7110] Raised Bog (Active)* - [7120] Degraded Raised Bog - [7150] Rhynchosporion Vegetation 	Within the 15km buffer
002201	Derragh Bog SAC	<ul style="list-style-type: none"> - [7120] Degraded Raised Bog - [91D0] Bog Woodland* 	Within the 15km buffer
000679	Garriskil Bog SAC	<ul style="list-style-type: none"> - [7110] Raised Bog (Active)* - [7120] Degraded Raised Bog - [7150] Rhynchosporion Vegetation 	Within the 15km buffer
002340	Moneybeg And Clareisland Bogs SAC	<ul style="list-style-type: none"> - [7110] Raised Bog (Active)* - [7120] Degraded Raised Bog - [7150] Rhynchosporion Vegetation 	Within the 15km buffer
002121	Lough Lene SAC	<ul style="list-style-type: none"> - [3140] Hard Water Lakes - [1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>) 	Within the 15km buffer
001810	White Lough, Ben Loughs And Lough Doo SAC	<ul style="list-style-type: none"> - [[3140] Hard Water Lakes - [1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>) 	Within the 15km buffer
002120	Lough Bane And Lough Glass SAC	<ul style="list-style-type: none"> - [3140] Hard Water Lakes - [1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>) 	Within the 15km buffer
002299	River Boyne And River Blackwater SAC	<ul style="list-style-type: none"> - [7230] Alkaline Fens - [91E0] Alluvial Forests* - [1099] River Lamprey (<i>Lampetra fluviatilis</i>) - [1106] Atlantic Salmon (<i>Salmo salar</i>) - [1355] Otter (<i>Lutra lutra</i>) 	Within the 15km buffer

002203	Girley (Drewstown) Bog SAC	- [7120] Degraded Raised Bog	Within the 15km buffer
001786	Kilroosky Lough Cluster SAC	- [3140] Hard Water Lakes - [7210] Cladium Fens* - [7230] Alkaline Fens - [1092] White-clawed Crayfish (<i>Austropotamobius pallipes</i>)	Within the 15km buffer
Special Protection Areas (SPA)			
004049	Lough Oughter SPA	- [A005] Great Crested Grebe (<i>Podiceps cristatus</i>) - [A038] Whooper Swan (<i>Cygnus cygnus</i>) - [A050] Wigeon (<i>Anas penelope</i>) - [A000] Wetland and Waterbirds	Within Co. Cavan
004065	Lough Sheelin SPA	- [A005] Great Crested Grebe (<i>Podiceps cristatus</i>) - [A059] Pochard (<i>Aythya farina</i>) - [A061] Tufted Duck (<i>Aythya fuligula</i>) - [A067] Goldeneye (<i>Bucephala clangula</i>)	Within Co. Cavan
004061	Lough Kinale and Der- ragh Lough SPA	- A059 Pochard (<i>Aythya farina</i>) - A061 Tufted Duck (<i>Aythya fuligula</i>)	Within Co. Cavan
004102	Garriskil Bog SPA	- [A395] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>)	Within the 15km buffer
004043	Lough Derravaragh SPA	- [A038] Whooper Swan (<i>Cygnus cygnus</i>) - [A059] Pochard (<i>Aythya farina</i>) - [A061] Tufted Duck (<i>Aythya fuligula</i>) - [A125] Coot (<i>Fulica atra</i>)	Within the 15km buffer



Legend

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

Project

Appropriate Assessment Screening Report for Climate Change Adaptation Strategy for Cavan Co Co

Client

Climate Action Regional Office (CARO)

Title

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

a 3D Core C, Block 71, The Plaza Park West, Dublin 12 D12 F9TN
w www.enviroguide.ie
e info@enviroguide.ie
t +353 (0)1 565 4730

Drawn by: ME	Projection:
Checked : JD	IRENET95 Irish Transverse Mercator
Date: 23/05/2019	Scale: 1:600,000 @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 Cavan County Council Climate Change 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 headings, 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.

Following assessment, it is considered that the Climate Change Adaptation Strategy will not result in any significant effects on any Natura 2000 sites.

Cavan County Council Climate Change 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 Plan:

- Cavan County Development Plan 2014 - 2020
- Cavan Tourism Development Plan 2017-2022
- Cavan County Local Biodiversity Action Plan

3 CONCLUSION

In conclusion, further to a screening of Cavan County Council's Climate Change 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 Climate Change Adaptation Strategy will not have a significant effect on Natura 2000 sites.

Other Local Authority documents such as Cavan's Development Plan will take their lead from the Climate Change 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.

Furthermore, should specific actions from Cavan's strategy or plan arise, they will be subjected to both AA and EIA process when sufficient design details exist. The AA and EIA process will ensure that any possible environmental and ecological effects of any outcomes from resulting actions will be adequately assessed.

3.1 Reason for Conclusion

The reasons for the above conclusion are summarised as follows:

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

4 REFERENCES

- DEHLG. (2010). Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. Department of Environment, Heritage and Local Government.
- DHPLG. (2018). River Basin Management Plan for Ireland 2018-2021. Department of Housing, Planning and Local Government.
- Environmental Protection Agency. (2002). Guidelines on information to be contained in Environmental Impact Statements. Environmental Protection Agency, Ireland.
- Environmental Protection Agency. (2017). Guidelines on information to be contained in Environmental Impact Assessment Reports (Draft). Environmental Protection Agency, Ireland.
- European Commission. (2001). 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 Communities, Luxembourg.
- Fossitt, J. A. (2000). A Guide to Habitats in Ireland. Kilkenny: The Heritage Council.
- Franklin, A. N. (2002). What is Habitat Fragmentation? *Studies in Avian Biology*, 20-29.
- Kuikena, T., Bennetta, P., Allchinb, R., Kirkwood, J., Baker, J., Lockyer, C., Walton, M., Sheldrick, M. (1994). PCBs, cause of death and body condition in harbour porpoises (*Phocoena phocoena*) from British waters. *Aquatic Toxicology*, Vol: 28, Issue: 1, Page: 13-28.
- NBDC (2018). National Biodiversity Data Centre online mapping [ONLINE] Available at: <http://maps.biodiversityireland.ie/Map.aspx>. [Accessed April 2019].
- NPWS (2010). Circular NPW 1/10 & PSSP 2/10. Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Department of Environment, Heritage and Local Government.
- NPWS (2018). Generic Conservation Objectives. Version 6.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- Parnell, J; Curtis, T; and Cullen, E. (2012). *Webb's an Irish Flora*. Hardback, 8th Ed. (March 2012), Trinity College Dublin.
- Reid, N., Hayden, B., Lundy, M.G., Pietravalle, S., McDonald, R.A. & Montgomery, W.I. (2013) National Otter Survey of Ireland 2010/12. Irish Wildlife Manuals No. 76. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.
- Smith, G.F., O'Donoghue, P, O'Hora K., and Delaney, E. (2010). Best Practice Guidance for Habitat Survey and Mapping. Published by the Heritage Council.