



CLARE COUNTY COUNCIL
CLIFFS OF MOHER
2040 STRATEGY

Appropriate Assessment
Natura Impact Statement

June 2024

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Glossary

Appropriate Assessment

An appropriate assessment (AA) is an assessment of the potential adverse effects of a plan or project (in combination with other plans or projects) on the integrity of Special Areas of Conservation and Special Protection Areas, in view of their conservation objectives. These sites are protected by National and European Law.

Appropriate Assessment Screening

Screening is an iterative process that involves consideration of the plan or project and its likely effects, and of the Natura 2000 sites and their ecological sensitivities, and the likely interaction between these. Screening determines whether appropriate assessment is necessary by examining:

1.

Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of the site; and
2.

The potential effects of a project or plan, either alone or in combination with other projects or plans, on a Natura 2000 site in view of its conservation objectives, and considering whether these effects will be significant.

Biodiversity

In simple terms “biodiversity” includes all life on Earth. As defined by the United Nations Convention on Biological Diversity (CBD), “biological diversity” means the variability among living organisms from all sources including, *inter alia* , terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part, including genetic diversity within species, between species and of ecosystems.

Environmental Impact Assessment

“Environmental Impact Assessment” (EIA) is the process of examining the anticipated environmental effects of a proposed project - from consideration of environmental aspects at design stage, through consultation and preparation of an Environmental Impact Assessment Report (EIAR), evaluation of the EIAR by a competent authority, the subsequent decision as to whether the project should be permitted to proceed, encompassing public response to that decision.

Environmental Impact Assessment Report

An “Environmental Impact Assessment Report” (EIAR) is a report or statement of the effects, if any, which the proposed project, if carried out, would have on the environment. It is prepared by the developer to inform the EIA process.

Mitigation Measure

Mitigation measures are means envisaged to prevent, reduce or control adverse environmental probability and/or severity of effects of a plan or project, and include restitution/repair effects of any damage to the environment caused by those effects through replacement, restoration, compensation or any other means balancing out negative impacts with other positive ones.

Natura 2000

Natura 2000 is a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. It stretches across all 27 EU countries, both on land and at sea. The aim of the network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats, listed under both the European Birds Directive and the European Habitats Directive.

Natura Impact Statement

A Natura Impact Statement is a scientific examination that identifies and characterises any possible impact the plan or project may have (either individually or in combination with other plans and projects) on the conservation objectives of any 'screened-in' Natura 2000 site, taking into account the full scope of these objectives, whether generic or site specific. It must also identify and detail any proposed mitigation measures needed to avoid, reduce or eliminate the risk of such impact and present the necessary analysis to demonstrate how any proposed mitigation measures will avoid or remove the risks of those adverse effects identified, so that the final analysis is undertaken in the context of the predicted residual effects.

Strategic Environmental Assessment

Strategic Environmental Assessment (SEA) is the process by which environmental considerations are required to be fully integrated into the preparation of plans and programmes prior to their final adoption. The objectives of SEA are to provide for a high level of protection of the environment and to promote sustainable development.

Strategic Environmental Assessment Screening

The stage which establishes whether proposed plans or programmes must undergo a SEA. It comprises of firstly, a consideration of the overall characteristics of the proposed plans or programmes to establish whether it falls within the requirements of the SEA Directive (2001/42/EC), and secondly, an assessment of the potential environmental significance of implementing the proposed plan or programme according to a series of significance criteria.

List of Abbreviations

AA	Appropriate Assessment
EC	European Commission
EEC	European Economic Community
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
GEOPARK	Burren and Cliffs of Moher UNESCO Global Geopark
NHA	Natural Heritage Area
NIS	Natura Impact Statement
NPWS	National Parks and Wildlife Service
pNHA	Proposed Natural Heritage Area
RMP	Record of Monuments and Places
RPA	Register of Protected Areas
RPS	Record of Protected Structures
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
S.I. No.	Statutory Instrument Number
SPA	Special Protection Area
TIA	Transport Infrastructure Ireland
UNESCO	United Nations Educational, Scientific and Cultural Organisation

1.0 INTRODUCTION

1.1 Background

This Natura Impact Statement has been prepared in support of the Appropriate Assessment (AA) of the Cliffs of Moher 2040 Strategy in accordance with the requirements of Article 6(3) of Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (hereafter referred to as the “Habitats Directive”). The Cliffs of Moher 2040 Strategy sets out a long-term vision for the Cliffs of Moher Experience, focusing on sustainable development of a world-class visitor attraction over the next 20 years. It will inform and drive the delivery of a phased programme of strategic projects at the Cliffs of Moher and across the wider county, providing transformational environmental and economic benefits.

The Cliffs of Moher is a Special Protection Area (SPA 4005) designated under the EU Bird’s Directive (S.I. No. 269/2010 - European Communities (Conservation of Wild Birds (Cliffs of Moher Special Protection Area 004005)). The SPA extends a distance of some 9.5 km along the north Clare coast from Faunmore in the north to just south of Cancregga Point in the south (NPWS, 2015a). The Cliffs of Moher is one of the most important seabird colonies in Ireland and has been designated as a SPA because it supports nationally important populations of five breeding seabird species namely Northern Fulmar (*Fulmarus glacialis*), Black-legged Kittiwake (*Rissa tridactyla*), Common Guillemot (*Uria aalge*), Razorbill (*Alca torda*) and Puffin (*Fratercula arctica*). The Chough (*Pyrrhocorax pyrrhocora*) is an additional Special Conservation Interest. Furthermore, the site is of special conservation interest for holding an assemblage of over 20,000 breeding seabirds making it of international importance.



1.2 Statement of Authority

Dr. Lesley Lewis BSc PhD MCIEEM prepared this Natura Impact Statement and has over 20 years professional Consultant Ecologist experience working as Limosa Environmental.

Lesley has gained significant experience working on a range of contracts including Environmental Impact Assessments (EIA), Ecological Impact Assessments (EcIA), Stage I Screening for Appropriate Assessment and Natura Impact Statements (NIS). In addition, Lesley has recently been engaged as a consultant ecologist by planning authorities including Dublin City Council and Cork City Council. Lesley is also on a panel of expert ecological consultants contracted by An Bord Pleanála. In this work Lesley reviews ecological reporting (AA/EIAR) and advises on planning opinions and decisions.

A *Certificate of Competence* for **Dr. Lesley Lewis BSc PhD MCIEEM**, author of this report, is provided in Appendix 3.

1.3 Background to the Cliffs of Moher Visitor Experience

The Cliffs of Moher are located on the west coast of Ireland, close to Liscannor village in County Clare (Figure 1). Located at the south-western edge of The Burren region in County Clare, the Cliffs of Moher stretch for over 8 km (5 miles) along Ireland’s Wild Atlantic Way and reach 214 m (702 ft) at their highest point at Knockardakin just north of O’Brien’s Tower and comprise of a geology of Upper Carboniferous shales and flagstones.

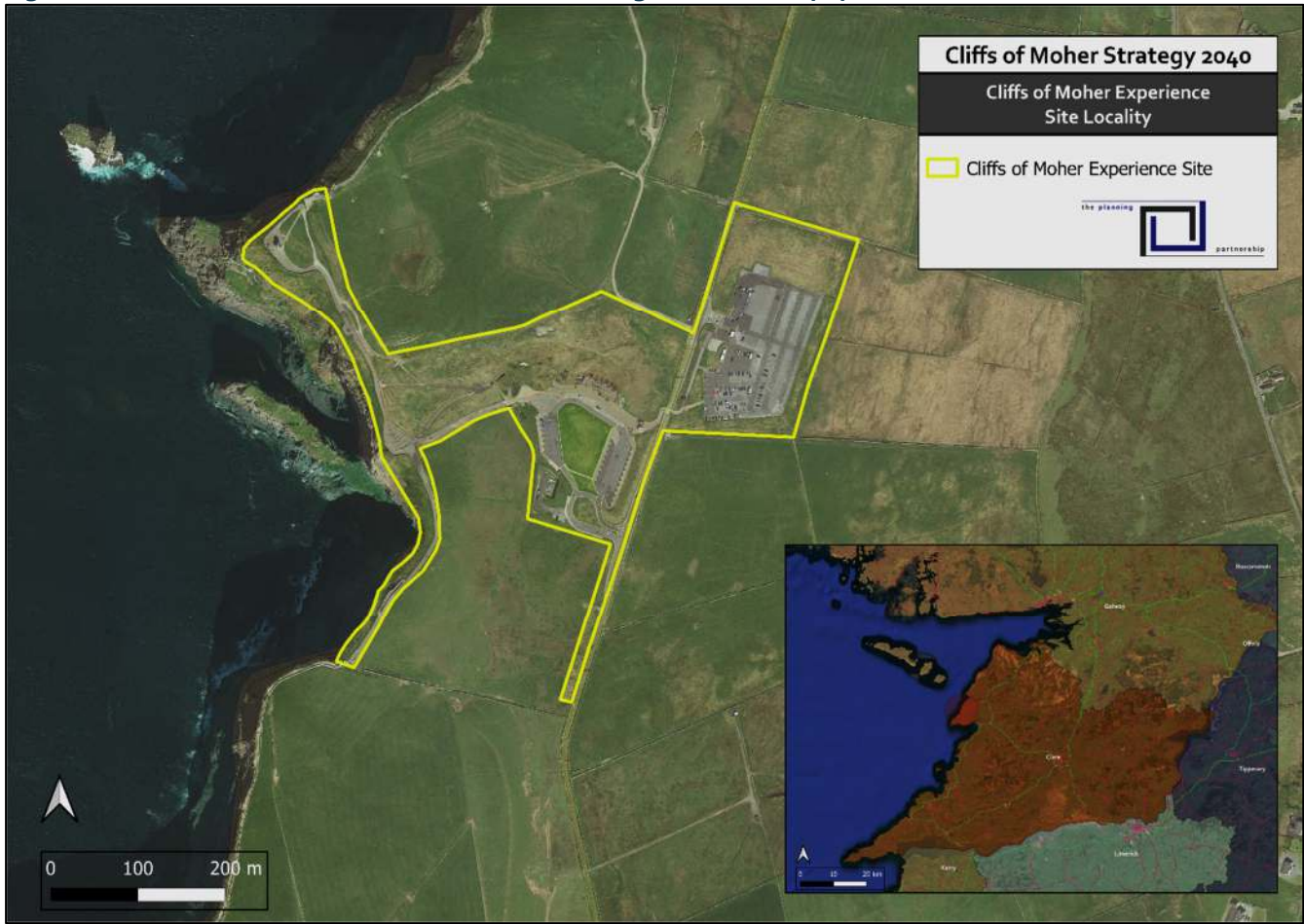
The landscape of the Cliffs of Moher is an outstanding example of the glacial karst landscapes of western Ireland. The landscape is a prominent and dramatic, open and sparsely vegetated coastal headland with rugged vertical sea cliffs. Since 2011, the cliffs have formed part of the *Burren and Cliffs of Moher UNESCO Global Geopark* - an internationally designated area, 530 km² in size, of geological interest, and the third Geopark to be designated in Ireland.

The Cliffs of Moher Visitor Experience is located almost midway along the cliffs and is the current location of a Visitor Centre built in 2007 that is set into the hillside, O’Brien’s Tower (a 19th century viewing tower) and 800 m of pathways and viewing areas and steps, all owned by Clare County Council.

Beyond the site of the Cliffs of Moher Visitor Experience, is the Cliffs of Moher Coastal Trail which is a moderate to strenuous 18 km walking route along a coastal path from Liscannor in the south, to Hags Head and the Cliffs of Moher Visitor Centre, finishing in the village of Doolin in the north (Figure 2).



Figure 1: Location of the Cliffs of Moher and existing site boundary (yellow outline)



Source: Esri ArcGIS, NPWS; reproduced and annotated under licence by The Planning Partnership including Licence No.: CYAL50365403 © Tailte Éireann – Surveying

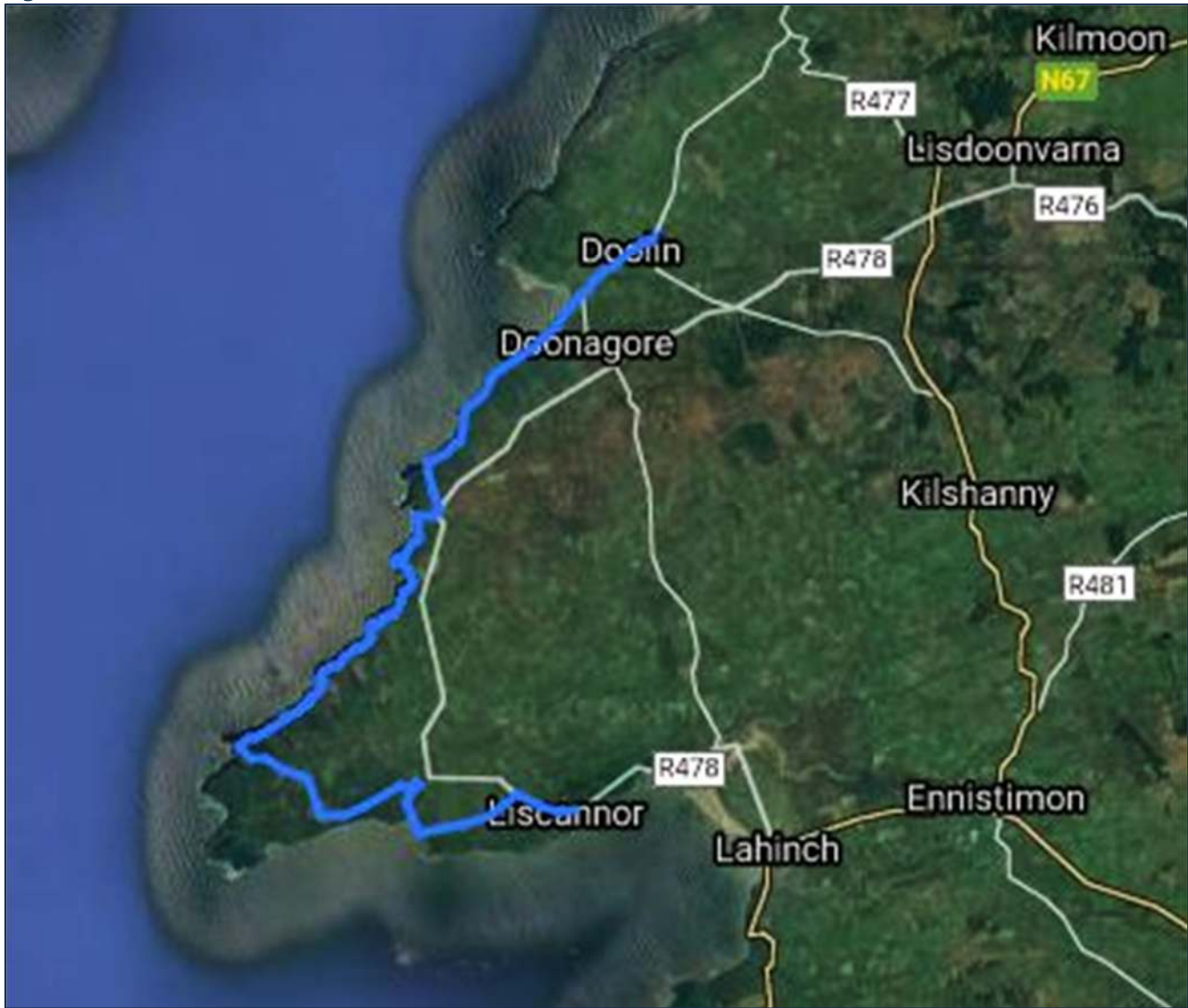
1.4 Legislative background

Natura 2000 sites are Special Areas of Conservation (SACs) designated under the EU Habitats Directive,¹ and Special Protection Areas (SPAs), designated under the EU Birds Directive.² As signatories to these Directives, Ireland, like other EU Member states, has designated prime areas of ecological importance as SACs and SPAs, and these are part of a network of European sites of ‘community importance’ for biodiversity across the EU called the ‘Natura 2000’ network.

The obligation to undertake Appropriate Assessment arises from Articles 6 (3) and (4) of European Union (EU) Council Directive 92/43/EEC (Habitats Directive) and transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations S.I. No 477 of 2011; further amended by the European Communities (Birds and Natural Habitats) Regulations 2011-2021.

¹ Council Directive 92/43/EEC on the conservation of natural habitats and wild flora and fauna, as amended by Council Directive 97/62/EC. The Directive was transposed into Irish law by the European Communities (Natural Habitats) Regulations 2011, amended and later consolidated by the European Communities (Birds and Natural Habitats) Regulations 2011 – 2021.

Figure 2: Coastal trail from Doolin in the north to Liscannor in the south



Source: Dr. Lesley Lewis BSc PhD MCIEEM – Google maps

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European Sites (EU Commission, 2021). Article 6(3) establishes the requirement for Appropriate Assessment (AA) - *Any plan or project not directly connected with or necessary to the management of the (European) 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 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.*

² Directive 2009/147/EC (Birds Directive) on the conservation of wild birds (the codified version of Council Directive 79/409/EEC as amended).

Article 6(4) states: *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 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.*

1.5 Appropriate Assessment Methodology

There are 4 stages in an Appropriate Assessment as outlined in the European Commission Guidance document (EU Commission, 2001) (Table 1, Figure 3). The following is a brief summary of these steps.

Stage 1 - Screening: This stage examines the likely effects of a project/plan either alone or in combination with other projects/plans, upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant. The assessment of significance is carried out in consultation with the relevant nature conservation agencies.

Stage 2 - Appropriate Assessment: In this stage, the impact of the project on the integrity of the Natura 2000 site is considered with respect to the conservation objectives in place for the site.

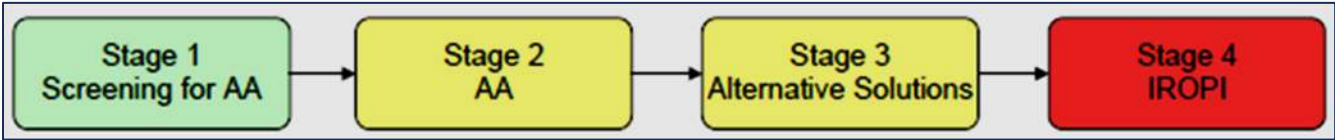
Stage 3 - Assessment of Alternative Solutions: Should the Appropriate Assessment determine that adverse impacts are likely upon a Natura 2000 site, this stage examines alternative ways of implementing the project or plan that, where possible, avoid these adverse impacts. In the absence of any reasonable alternatives for a project/plan that would be less damaging to the integrity of a Natura 2000 site, it is then necessary to proceed to Stage 4.

Stage 4 - Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the Natura site will be necessary.

Table 1: Steps for Undertaking AA Screening

Step One	Determination of whether the plan or project is directly connected with the necessary management of the Natura 2000 site.
Step Two	Description of the proposed project/plan and the description of other plans/projects that in combination have the potential to have significant effects on a Natura 2000 site.
Step Three	Characteristics of the site. Identification of relevant Natura 2000 sites, and compilation of information on their qualifying interests and conservation objectives. Identification of the potential effects upon a Natura 2000 site and characterisation of the site as a whole to identify where impacts are most likely to fall.
Step Four	Assessment of the significance of effects on the Natura 2000 site. If the effects are deemed to be significant then the process must pass to Stage 2 – Appropriate Assessment.

Figure 3: Summary of AA process



Source: DoEHLG, 2009

The statutory agency responsible for designated areas in Ireland is the National Parks & Wildlife Service of the Department of Housing, Local Government and Heritage.

1.6 How this report is set out

This report is set out in the following sections:

- Section 2 – Overarching description of the Cliffs of Moher 2040 Strategy.
- Section 3 – The determination of ‘relevant’ Natura 2000 sites (European sites) that were under assessment.
- Section 4 – A description of the existing baseline ecological conditions of the Cliffs of Moher site.
- Section 5 – Summary of the conclusions from AA screening.
- Section 6 – Appropriate Assessment.
- Section 7 – Assessment of potential for cumulative (in-combination) effects.
- Section 8 – Provision of mitigation.

Ecological Impact assessment was carried out following the methodology detailed in Appendix 1 and aided using the following standard texts, while impact terminology follows EPA (2022). The assessment was undertaken with regard to the following documents:

- Assessment of plans and projects significantly in relation to Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EU Commission, Brussels (2021),
- Appropriate Assessment of plans and projects in Ireland: Guidance for planning authorities (DoEHLG, 2009),
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat’s Directive 92/43/EEC (Commission Notice C (2018) 7621 final Brussels 21.11.2018),
- Appropriate Assessment Screening for Development Management (Office of the Planning Regulator, 2021),
- Guidelines on the information to be contained in Environmental Impact Statements (EPA, 2022),
- Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland (Chartered Institute of Ecology and Environmental Assessment (CIEEM, 2018).

Where mentioned in this report, habitat classification follows ‘A Guide to Habitats within Ireland’ (Fossitt, 2000). Species’ Latin names are provided at first mention in the text, or the reader is directed to tables for this information. A statement of the competency of the author of this report is provided in Appendix 3.

2.0 DESCRIPTION OF THE CLIFFS OF MOHER 2040 STRATEGY

2.1 Introduction

The Cliffs of Moher 2040 Strategy sets out a long-term vision for the Cliffs of Moher Experience, focusing on sustainable development of a world-class visitor attraction over the next 20 years. It will inform and drive the delivery of a phased programme of strategic projects at the Cliffs of Moher and across the wider county, providing transformational environmental and economic benefits. The overall mission of the Cliffs of Moher 2024 Strategy is as follows:

Our vision is to bring the magic of the Cliffs of Moher Experience alive, inspiring our people while caring and safeguarding the future of our natural environment. Our mission is to deliver world-class experiences in a safe, accessible, authentic, and welcoming environment. We will champion best practice in managing for sustainability and conservation of the Cliffs of Moher, our environment and our culture and heritage, while protecting the status of The Burren and Cliffs of Moher UNESCO Global Geopark. We will collaborate with stakeholders to contribute to the development of a prosperous, vibrant local community and economy for future generations.

The aim of the strategy is to enhance significantly, the visitor experience within a rewilded natural landscape, create sustainable access to the site and to encourage managed dispersal of visitors across the area in order to deliver widespread economic benefits for local communities. These are covered in four main themes as follows:

- **Enhancing economic benefits across the region** - The priority of the wider strategic economic model for the Cliffs of Moher is to encourage visitors to stay longer in the area, especially overnight, spend more and facilitate greater benefits and investment into local towns and villages. The key to realising economic benefits for the area in the future will be enhanced partnerships and greater coordination between the Cliffs of Moher Experience and local businesses and communities.
- **Optimising the world-class experience** - The Cliffs of Moher must offer excellent value for money via diverse visitor offers and added value, delivering a world-class tourism model in which audience needs and satisfaction are central. The strategy will develop a sequence of memorable experiences that prioritise exhilarating encounters with the cliffs and immersion in untamed nature through a network of safe graded walks, enhanced landscape interpretation, and targeted event and activity packages.
- **Transforming the natural landscape** - The need to conserve and highlight the beautifully rugged and ecologically rich habitats of the cliffs is a key driver for the strategy. Rewilding and recovery of the natural environment will significantly enhance the biodiversity value as well as increase its aesthetic appeal for a wide range of audiences. Proactive habitat and visitor management will reinforce commitments to protect designated habitats and protected species (and associated ecological corridors / linkages) within the site and wider area. This approach will also strengthen opportunities for conservation research, monitoring and education through strategic partnerships.
- **Providing sustainable access** - A new park and ride hub and shuttle service for visitors to the Cliffs of Moher, developed as part of an integrated transport system for the wider area, will provide sustainable access to the site and beyond. The Cliffs of Moher Coastal Walk and the developing greenways present major opportunities for sustainable access links with the Cliffs of Moher site and for managing visitors across the wider area. These assets provide valuable community amenities and can also deliver in terms of attracting visitors, increasing visitor revenue and transforming the economic and social future of the towns, villages and rural areas around the region.

2.2 The current situation and need for the Cliffs of Moher 2040 Strategy

2.2.1 Existing challenges

A comprehensive appraisal of the existing Cliffs of Moher Visitor Centre, and surrounding environs was undertaken to inform the development of the Cliffs of Moher 2040 strategy. The key existing challenges can be summarised under various headings as follows:

- **Limited capacity of visitor facilities**

During 2019, more than 1.6 million people visited the Cliffs of Moher, making it the most visited natural attraction in Ireland. In 2007, when the visitor centre opened, the number of visitors was 927,000. Over the past 10 years, visitor numbers have far exceeded that which the site was originally designed to cater for. This has had significant negative effects on the quality of the visitor experience. Furthermore, the increase in visitor numbers may have had adverse impacts on the conservation status of the species of qualifying interest ('special conservation interests'(SCIs)) of the Cliffs of Moher SPA, and the habitats upon which these species rely. The site now accommodates up to 1.6 million visitors each year (Table 2) and the limited capacity of the site's infrastructure and facilities can result in severe overcrowding at peak times. The peak season (May - August) accounts for 55% of total visits and the site is extremely busy on many days between 11am and 4pm during this period.

Table 2: Visitor numbers in 2019

Month (2019)	Total visitors inc c/w	% Total Visitors (%o
January	39,888	2
February	43,698	3
March	102,171	6
April	141,708	9
May	186,191	12
June	211,496	13
July	237,286	15
August	248,589	15
September	17,968	11
October	125,967	8
November	53,362	3
December	41,675	3
Total	1,605,000	100

- **Arrivals and admissions**

The current site configuration can lead to traffic congestion. During the peak visitor season, traffic can sometimes back up on the R478 local road, with queues forming. While this creates a poor first impression for arriving visitors, queuing traffic inherently leads to noise and air pollution – not in line with the site's environmental objectives.

- **Congestion on access routes**

While the Cliffs of Moher is very well served by coaches, which helps ensure that the number of vehicles per visitor is reduced, compared to a pure car-based attraction, a number of coach tours use unsuitable routes such as the Wild Atlantic Way through North Clare and other local roads. Large coaches choosing to travel and park on these narrower roads results in congestion at pinch points on local access routes. These issues have been addressed by:

- The cessation of new route licences which has resulted in a reduction in the number of day trip coaches.
- Clare County Council’s commitment to carry out a traffic and transport study for West Clare. This will provide sustainable proposals for resolving current issues for residents and business. It will explore solutions for the towns, villages and attractions (including Cliffs of Moher) in the area and consider the opportunities for integration with wider County transport initiatives.
- Clare County Council is progressing the COM 2040 Strategy proposal for a Park and Ride Hub and shuttle service to provide access to the Cliffs of Moher and links to other town, villages and attractions in the area. Following Expressions of Interest a Masterplan is now being prepared for a Park and Ride Hub in Lisdoonvarna.

- **Crowded linear route at the cliff edge**

High levels of visitors in outdoor areas, particularly at the cliff-edge, significantly detracts from the quality of the core experience at viewing points. Paved pathways, flagstone walls and designated observation areas are well maintained, however the current direct routing to the edge and the presence of large crowds means that the cliff viewing journey lacks drama and a sense of wildness. As a result, the current experience can feel linear and disconnected from the wild and untamed atmosphere of the cliffs.

- **Crowding and safety issues at the cliff edge**

The restricted cliff edge paths create health and safety issues. Cliff top paths can be a major safety issue especially as visitors rarely heed safety warnings and try to get close to the cliff edge for photographic opportunities.

- **Conservation issues resulting from high visitor numbers at the cliff edge**

High levels of visitors close to the cliff edge has caused erosion of natural cliff-top habitats and has the potential to cause disturbance to the conservation interest of the Cliffs of Moher SPA.

- **Current built infrastructure**

The design of the current visitor centre, retail and catering spaces does little to mitigate the impact of crowds and are undersized for the current needs and expectations of visitors at a world-class experience. In general, the size and capacity of the visitor centre facilities are not equipped to deal with the volume of visitors at peak time, which leads to long queues and crowded spaces that are difficult to navigate. The location of coach parking and large paved concourses on the approach to the cliff-edge detracts from the experiential concept of ‘standing at the edge of the world’.

- **Vulnerable habitats**

Much of the coastal headland is grassland habitats which have been regularly fertilised, grazed by cattle or cut for silage. The biodiversity in these habitats is diminished, reducing the attraction for ground nesting birds and small mammals. The most important habitat is the rocky sea cliff vegetation and coastal grassland community that provides foraging areas for the Chough. This habitat has been subject to considerable erosion along the pathway and there is now large areas of bare ground along the clifftop.

2.2.2 The opportunities

The strategy aims to develop a world-class visitor experience with far reaching benefits for visitors, the environment and local communities These benefits include:

- Better management and physical improvements to the walkways and wider coastal path which will deliver a safer and more expansive cliff-edge experience.
- Through its UNESCO designation, the Cliffs of Moher is internationally recognised as a unique landscape of outstanding natural beauty and geological importance. Natural and physical improvements at the Cliffs of Moher will provide an opportunity to conserve and enhance the precious assets of this unique site.
- Through a range of habitat recovery measures, the strategy will allow the Cliff of Moher’s unique ecology to re-establish itself from the impact of tourism, particularly high footfall at the cliff edge. Significant extension of the Cliffs of Moher landholdings and rewilding of the landscape can help to achieve targets set out in the EU Nature Restoration Law, namely the continuous, long-term and sustained recovery of biodiverse land and sea areas, resulting in increased climate mitigation and adaptation through restoration.
- The Cliffs of Moher has an important connection to the cultural traditions, built heritage and social history of the region. A visit to the cliffs can provide tangible insights into ancient monuments, local folklore, and quarrying and tourism during the 19th and 20th centuries. High-quality interpretation that is more evenly distributed throughout the visitor experience will highlight stories that are currently understated.
- Create a popular and resilient tourism product.
- Create potential for connection to local towns and villages within County Clare resulting in increased length of stay, visitor spend, and dispersal of visitors across the region.
- The Cliffs of Moher are a major economic engine for County Clare. It is estimated that 90% of staff live within 20 miles of the cliffs and 70% of Cliffs of Moher expenditure on food, drink, art, craft design, operational and maintenance services goes to local businesses. All of these existing economic benefits can be significantly increased as the 2040 strategy is implemented.

2.3 The strategy

The strategy is focussed on the future development of the site to:

- A. Create world-class visitor experiences.
- B. Enhance the special qualities of the cliffs.
- C. Grow the tourism and economic contribution to the county in a sustainable way.

- D. Achieve a sustainable balance of the relationships and links between the different ecosystem services.
- E. Promoting earlier and later arrivals throughout the day.
- F. Flattening the season peak curve.
- G. Extending Fully Independent Traveller (FIT) visits.
- H. Managing and re-distributing coach arrival times.

2.4 Reporting

Enhancing Economic Benefits Across the Region

- Encourage visitors to stay longer in the area and facilitate greater benefits and investment into local towns and villages.
- Develop enhanced partnerships and greater coordination between the Cliffs of Moher Experience and Local Businesses and Communities.
- Align with the Local, Regional and National policy priorities to create high quality visitor experiences within the county.
- Minimise adverse impacts on local communities.
- Sustainably increase tourism revenue across the season.

Optimising the World-Class Experience

- Deliver a world-class tourism model in which audience needs and satisfaction are central.
- Offer excellent value for money in delivering a sequence of memorable experiences that prioritise exhilarating encounters with the cliffs and immersion in untamed nature.
- Provide an enhanced landscape interpretation through a network of safe graded walks and enhanced landscape interpretation.
- Develop targeted event and activity packages.

Transforming the Natural Landscape

- Conserve and highlight the beautifully rugged and ecologically rich habitats of the cliffs.
- Rewilding and recovery of the natural environment will enhance the biodiversity value as well as increase its aesthetic appeal for a wide range of audiences.
- Proactive habitat and visitor management will reinforce commitments to protect designated habitats and protected species and associated ecological corridors/linkages at the Cliffs of Moher site and wider area.
- Strengthen opportunities for conservation research, monitoring and education through strategic partnerships.
- Protect the cultural authenticity and wildness of the natural assets.

Providing Sustainable Access

- New Park and Ride hub and shuttle service for visitors to the Cliffs of Moher as part of an integrated transport system for the wider area.
- At the Cliffs of Moher site, the provision of new and enhanced facilities, services and network of walkways and features, will facilitate sustainable and enhanced universal access for all visitors.
- Cliffs of Moher Coastal Walk and the developing greenways present opportunities for sustainable access links with the Cliffs of Moher site.
- Manage visitors across the wider area.
- Provide valuable community amenities.
- Attract visitors, increase visitor revenue, and transform the economic and social future of the towns, villages and rural areas around the region.

2.5 ‘Journey to the edge’

The Cliffs of Moher 2040 Strategy has identified that the current arrangement of how a visitor reaches the cliffs is underwhelming. The masterplan sets out a spatial arrangement to create an increased sense of anticipation with a slower reveal of the primary attraction. This is achieved in several steps:

Step 1: The new reception building creates a critical threshold between the visitor arriving at the site and entering the site. The building itself screens the visual impact of parked cars and buses.

Step 2: On leaving the new reception building, the visitor emerges from the bermed landscape to enjoy a panoramic view of the southern cliffs and the landscape through to Liscannor, and the northern plateau. Further on, the visitors continue to enjoy this broad view as they are lifted over the R478 by a footbridge connecting to the landscape north of the current visitor centre.

Step 3: Where the footbridge lands on the northern plateau, the visitor arrives at a three-way fork in the pathway. At this point, the masterplan foresees interpretative signage inviting visitors to disperse into the landscape.

Step 4: From this dispersal point, the primary route is to climb the steps facing you and rise over the back of the plateau. On this path, the visitor remains in the wind shadow of the hill and the cliff views for now are obscured. As visitors crest over the top of the hill, the wide expanse of the Cliffs of Moher Experience is slowly revealed. This theatrical reveal is a critical moment for the visitor.

Step 4a: From the dispersal point, a pathway to the right will take you up the hill for the same experience. This route has been designed for the less able visitor to avoid the steps. The rise here is never more than 4%.

Step 4b: From the dispersal point, a route to the left gives visitors access to the southern landscape, the skywalk and the interpretation hub. This will be the return route for many visitors.

Step 5: Having crested the hill, the visitor arrives at a second dispersal point which will offer several alternative routes.

Step 6: For most visitors, the initial arrival sequence onto the site will end at a new cantilever point with panoramic views in all directions. At this point, the visitor has the first “edge of the world” experiences. However, there is more to be revealed and explored as the visitor has still not reached the edge.

Step 7: The visitor can now enjoy a 360-degree overview of the site and see the various options that they may wish to explore. For example, they may travel over the wetland habitat to O'Brien's Tower, hook left for the skywalk and return by the interpretation hub, or head north to explore the plateau landscape that is demarcated by the landmarks in the distance.

3.0 DESIGNATED SITES FOR NATURE CONSERVATION

3.1 Determining relevant European (Natura 2000) sites

AA screening focuses upon impacts on Natura 2000 sites (European sites) and their qualifying habitats and species. Of importance therefore is the assessment as to whether predicted impacts will be significant. Significance should be established in light of, amongst other things, the characteristics and specific environmental conditions of the site concerned, and the likely effects of the plan or project. If a plan or project is likely to undermine any of the site's conservation objectives it must be considered likely to have a **significant effect** on that site (EC, 2018). Conversely, if a plan or project will have impacts on a site, but these impacts will clearly not affect or undermine those conservation objectives, then it is considered that the project/plan will not have a significant effect on the site concerned (DoEHLG, 2009).

An essential first step in the assessment process is the determination of whether there is an overlap or coincidence between the qualifying interest habitats and species of Natura 2000 sites and the 'zone of influence' of a proposed development or plan. The zone of influence (ZOI) can be defined as the geographical area over which a proposed project or plan could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. This should be established on a case-by-case basis using the Source-Pathway-Receptor framework (OPR, 2021). Natura 2000 sites are considered 'relevant' where a source-pathway-receptor link exists between the proposed project or plan and the Natura 2000 site.

EC guidance highlights how the likelihood of significant effects may arise not only from plans or projects located within a protected site but also from plans or projects located outside a protected site. For example, a wetland may be damaged by a drainage project located some distance outside the wetland's boundaries, or a site may be impacted by an emission of pollutants from an external source. For this reason, it is important that Member States, both in their legislation and in their practice, allow for the Article 6(3) safeguards to be applied to any development pressures – including those which are external to Natura 2000 sites, but which are likely to have significant effects on any of them (EC, 2018).

During the process of preparation of the *Cliffs of Moher 2040 Strategy*, it is required that consideration also been given to the potential for indirect links to sites within the Cliffs of Moher hinterland on a precautionary basis.

For the current assessment, locations and boundaries of all Natura 2000 sites within 15 km of the Cliffs of Moher were identified and reviewed using downloadable boundary datasets from the National Parks and Wildlife Service (NPWS). This confirmed that there are eight Natura 2000 sites within a 15 km radius of the Cliffs of Moher Visitor Centre (Figure 4), comprising two SPAs, and six SACs, as follows:

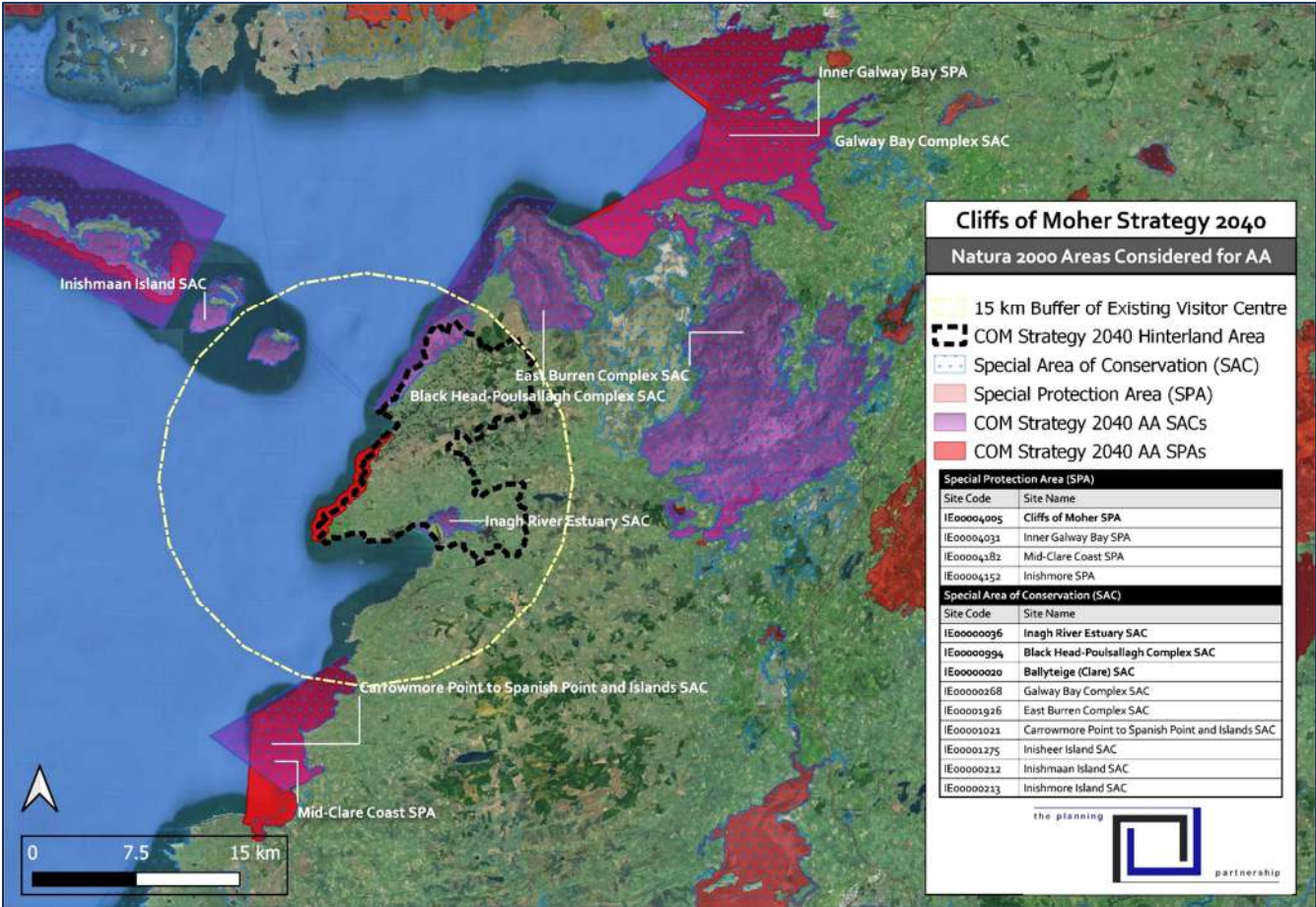
- Cliffs of Moher Special Protection Area (SPA 4005) – c.0 km distance.
- Mid Clare Coast Special Protection Area (SPA 4182) – c.14.2 km distance.
- Carrowmore Point to Spanish Point and Islands Special Area of Conservation (SAC 1021) - c.14.2 km distance.

- Inagh River Estuary Special Area of Conservation (SAC 0036) - c.6 km distance.
- Black Head-Poulsallagh Complex Special Area of Conservation (SAC 0020) - c.3.4 km distance.
- Ballyteigue (Clare) Special Area of Conservation (SAC 0994) - c.9.5 km distance.
- Inisheer Island Special Area of Conservation (SAC 1275) - c.8.5 km distance (offshore).
- Inishmaan Island Special Area of Conservation (SAC 00212) - c.13.5 km distance (offshore).

Consideration was also given to the potential for indirect links to sites within the Cliffs of Moher hinterland, and further afield. These five sites are listed below:

- Inishmore Island Special Area of Conservation (SAC 00213) - c.17 km distance (offshore).
- Inishmore Special Protection Area (SPA 4152) – c. 17.5 km distance.
- East Burren Complex Special Area of Conservation (SAC 1926) - c. 17 km distance.
- Galway Bay Complex Special Area of Conservation (SAC 00268) – c. 24 km distance.
- Galway Bay Special Protection Area (SPA 4031) – c. 24 km distance.

Figure 4: The Cliffs of Moher SPA, Natura 2000 sites within a 15 km radius of the Cliffs of Moher Visitor Centre, and other further afield Natura 2000 sites included in the assessment



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3.2 Designation details of Natura 2000 (European) sites - *Special Conservation Interests (SPAs) and Qualifying Interests (SACs)*

Special Conservation Interests (SCIs) of the two SPA sites and qualifying interests (QIs) of the six SAC sites within 15 km of the Cliffs of Moher are shown in Tables 3 and 4 respectively. The NPWS site synopses for these sites are shown in Appendix 2. Qualifying interests and Special Conservation Interests of Natura 2000 sites that are located at a distance greater than 15 km from the Cliffs of Moher are shown in Table 5.

Table 3: Special conservation interests of the Cliffs of Moher SPA and Mid Clare Coast SPA

Cliffs of Moher SPA (4005)	
Special Conservation Interests	Site Description
(A009) Northern Fulmar Fulmarus glacialis	This site extends a distance of some 9.5 km along the north Clare coast from Faunmore in the north to just south of Cancregga Point in the south. The cliffs, which rise to 203 m in height, are formed of horizontal beds of coal measure sandstones and shales.
(A188) Black-legged Kittiwake Rissa tridactyla	
(A199) Common Guillemot Uria aalge	
(A200) Razorbill Alca torda	
(A204) Atlantic Puffin Fratercula arctica	
(A346) Red-billed Chough Pyrrhocorax pyrrhocorax	
Mid Clare Coast SPA (4182)	
Special Conservation Interests	Site Description
(A396) Barnacle Goose Branta leucopsis	The Mid-Clare Coast SPA site extends along the Co. Clare coastline in a south-southwesterly direction from Spanish Point (3 km west of Milltown Malbay) to just west of Doonbeg Bay, a distance of some 14 km. It comprises the mainland shoreline, Mutton Island and Mattle Island, a series of rocky reefs and the open marine water of Mal Bay between the islands and the mainland.
(A017) Cormorant Phalacrocorax carbo	
(A137) Ringed Plover Charadrius hiaticula	
(A144) Sanderling Calidris alba	
(A148) Purple Sandpiper Calidris maritima	
(A149) Dunlin Calidris alpina	
(A169) Turnstone Arenaria interpres	
(A999) Wetlands & Waterbirds	

3.3 Conservation objectives

Many Natura sites across the Republic of Ireland now have site-specific conservation objectives. A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site (NPWS, 2014e). The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- Its natural range, and area it covers within that range, are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Conservation objectives are available freely on the NPWS website and these documents (listed below), together with their 'supporting documents' were considered as part of this assessment.

- NPWS (2020) Conservation objectives for Cliffs of Moher SPA [004005]. Generic Version 7.0. Department of Culture, Heritage and the Gaeltacht.
- NPWS (2014e) Mid Clare Coast SPA 4182 - Conservation Objectives. Version 1.0. September 2014. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2014g) Carrowmore Point to Spanish Point and Islands SAC 001021. Conservation Objectives. Version 1. April 2014. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2017a) Conservation Objectives: Inagh River Estuary SAC 000036. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
- NPWS (2014a) Conservation Objectives: Black Head-Poulsallagh Complex SAC 000020. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2022) Conservation Objectives: East Burren Complex SAC 001926. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
- NPWS (2013b) Conservation Objectives: Galway Bay Complex SAC 000268. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2013a) Conservation Objectives: Inner Galway Bay SPA 004031. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2021) Conservation Objectives: Ballyteige (Clare) SAC 000994. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage.
- NPWS (2014h) Conservation Objectives: Inisheer Island SAC 001275. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2014i) Conservation Objectives: Inishmaan Island SAC 000212. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2015d) Conservation Objectives: Inishmore Island SAC 000213. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.
- NPWS (2022b) Conservation objectives for Inishmore SPA [004152]. First Order Site-specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage.

Table 4: Qualifying interests of SAC sites that lie within 15 km of the Cliffs of Moher

Site Code	Site name	Distance	Qualifying Interests	Site description
1021	Carrowmore Point to Spanish Point and Islands SAC	14.2 km	[1150] Coastal lagoons [1170] Reefs [1220] Perennial vegetation of stony banks [7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>)	This site extends along the Co. Clare coastline from Spanish Point (3 km west of Milltown Malbay) in a south-westerly direction to Carrowmore Point. It comprises a strip of coastline, several offshore islands and rocks (notably Mutton Island), and the open marine water of Mal Bay between the islands and the mainland.
0036	Inagh River Estuary SAC	6 km	[1310] <i>Salicornia</i> and other annuals colonizing mud and sand [1330] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes)	The Inagh River Estuary is an estuarine channel that flows westwards to the sea from Ennistimon, in the south-west of Co. Clare. The site includes the estuaries of both the Inagh and Dealagh Rivers. These channels meander through a wide, flat valley, which is sheltered from the sea by an extensive sand dune system to the west. Low undulating hills surround the valley, giving it a secluded nature. The soils vary from gleys to peats.
0020	Black Head-Poulsallagh Complex SAC	3.4 km	[1170] Reefs [1220] Perennial vegetation of stony banks [1395] Petalwort (<i>Petalophyllum ralfsii</i>) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [3260] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [4060] Alpine and Boreal heaths [5130] <i>Juniperus communis</i> formations on heaths or calcareous grasslands [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco Brometalia</i>) (important orchid sites) [6510] Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) [7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>) [8240] Limestone pavements [8330] Submerged or partly submerged sea caves	The Black Head-Poulsallagh complex encompasses a complete range of rocky Burren habitats from coastal, glacially planed limestone pavements to high level heaths. The Caher River, the only river found in the high Burren, and Fanore dunes, one of the best dune systems in Clare, are included in the site. The shoreline, littoral and sublittoral areas are also interesting because of the rock type, physical exposure, and flora and fauna communities
0994	Ballyteigue (Clare) SAC	9.0 km	[6410] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>).	<p>This site is located 2 km west of Lisdoonvarna, Co. Clare. It lies over shales of Upper Carboniferous age and adjoins the boundary of these geological strata with the Lower Carboniferous limestone series which constitute the bulk of the Burren region. The soils are of the gley type and are poor-draining.</p> <p>The site consists of wet meadow and heath which have been managed in a traditional way for hay-making. Molinia meadows, a habitat listed on Annex I of the E.U. Habitats Directive, is well represented at the site. The lands along the eastern perimeter contain associations of plants typical of wet meadows and are very rich in species. The heath is confined to the western edge of the site.</p>
1275	Inisheer Island SAC	9.5 km	[1150] Coastal lagoons [1170] Reefs [4030] European dry heaths [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco Brometalia</i>) (important orchid sites) [6510] Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) [8240] Limestone pavements	Inisheer is the smallest of the three Aran Islands, situated approximately 10 km off the west coast of Co. Clare. The island is a geological extension of the karstic Carboniferous region of the Burren. Upper Carboniferous limestone strata, interleaved with layers of shale and clay, form these exposed islands, which rise to a maximum height of 64 m on Inisheer.

Site Code	Site name	Distance	Qualifying Interests	Site description
00212	Inishmaan Island SAC	13.5 km	[1170] Reefs [1220] Perennial vegetation of stony banks [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts [2110] Embryonic shifting dunes [2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [21A0] Machair [4030] European dry heaths [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (important orchid sites) [6510] Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) [8240] Limestone pavements	Inishmaan is the middle of the three Aran Islands, situated approximately 15 km off the west coast of Co. Clare (although the Aran Islands are part of Co. Galway). Geologically, the island is an extension of the Burren. The shallow soil is, in many places, a man-made combination of sand and seaweed built up over the centuries. This site is of major scientific importance owing to the range of outstanding karstic Carboniferous limestone and coastal habitats, many of which are listed as priority and Annex I habitats under the E.U. Habitats Directive. The site is dominated by limestone pavement and its associated calcareous grasslands. Other Annex I habitats which occur include dry heath, lowland hay meadows and orchid-rich calcareous grassland.

Table 5: Qualifying interests and Special Conservation Interests of Natura 2000 sites that are located at a distance greater than 15 km from the Cliffs of Moher but for which consideration was given during assessment

Site Code	Site name	Distance	Qualifying Interests (SACs) / Special Conservation Interests (SPAs)	Site description
1926	East Burren Complex SAC	c.17 km	[3140] Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3180] Turloughs [3260] Water courses of plain to montane levels with the Ranunculus fluitantis and Callitriche-Batrachion vegetation [4060] Alpine and Boreal heaths [5130] Juniperus communis formations on heaths or calcareous grasslands [6130] Calaminarian grasslands of the Violetalia calaminariae [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (important orchid sites) [6510] Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis) [7210] Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7220] Petrifying springs with tufa formation (Cratoneurion) [7230] Alkaline fens [8240] Limestone pavements [8310] Caves not open to the public [91E0] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [1065] Euphydryas aurinia (Marsh Fritillary) [1303] Rhinolophus hipposideros (Lesser Horseshoe Bat) [1355] Lutra lutra (Otter)	This large site incorporates all of the high ground in the east Burren in Counties Clare and Galway and extends south-eastwards to include a complex of calcareous wetlands. The area encompasses a range of limestone habitats that include limestone pavement and associated calcareous grasslands and heath, scrub and woodland together with a network of calcareous lakes and turloughs. The site exhibits some of the best and most extensive areas of oligotrophic limestone wetlands to be found in the Burren and in Europe (NPWS, 2016).
00268	Galway Bay Complex SAC	24 km	[1140] Mudflats and sandflats not covered by seawater at low tide [1150] Coastal lagoons [1160] Large shallow inlets and bays [1170] Reefs [1220] Perennial vegetation of stony banks [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts [1310] Salicornia and other annuals colonising mud and sand [1330] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1410] Mediterranean salt meadows (Juncetalia maritimi) [3180] Turloughs [5130] Juniperus communis formations on heaths or calcareous grasslands [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (important orchid sites) [7210] Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7230] Alkaline fens [8240] Limestone pavements [1355] Lutra lutra (Otter) [1365] Phoca vitulina (Harbour Seal)	Situated on the west coast of Ireland, this site comprises the inner, shallow part of a large bay which is partially sheltered by the Aran Islands. The Burren karstic limestone fringes the southern sides and extends into the sublittoral. West of Galway City the bedrock geology is granite. There are numerous shallow and intertidal inlets on the eastern and southern sides, notably Muckinish, Aughinish and Kinvarra Bays. A number of small islands composed of glacial deposits are located along the eastern side. These include Eddy Island, Deer Island and Tawin Island. A diverse range of marine, coastal and terrestrial habitats, including several listed on Annex I of the E.U. Habitats Directive, occur within the site, making the area of high scientific importance (NPWS, 2015c).

Site Code	Site name	Distance	Qualifying Interests (SACs) / Special Conservation Interests (SPAs)	Site description
4031	Galway Bay SPA	24 km	Black-throated Diver (<i>Gavia arctica</i>) [A002] Great Northern Diver (<i>Gavia immer</i>) [A003] Cormorant (<i>Phalacrocorax carbo</i>) [A017] Grey Heron (<i>Ardea cinerea</i>) [A028] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Wigeon (<i>Anas penelope</i>) [A050] Teal (<i>Anas crecca</i>) [A052] Red-breasted Merganser (<i>Mergus serrator</i>) [A069] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Lapwing (<i>Vanellus vanellus</i>) [A142] Dunlin (<i>Calidris alpina</i>) [A149] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160] Redshank (<i>Tringa totanus</i>) [A162] Turnstone (<i>Arenaria interpres</i>) [A169] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Common Gull (<i>Larus canus</i>) [A182] Sandwich Tern (<i>Sterna sandvicensis</i>) [A191] Common Tern (<i>Sterna hirundo</i>) [A193] Wetland and Waterbirds [A999]	Inner Galway Bay SPA is a very large, marine-dominated site situated on the west coast of Ireland. The inner bay is protected from exposure to Atlantic swells by the Aran Islands and Black Head. Subsidiary bays and inlets (e.g. Poul-na-clough, Aughinish and Kinvarra Bays) add texture to the patterns of water movement and sediment deposition, which lends variety to the marine habitats and communities. The terraced Carboniferous (Viséan) limestone platform of the Burren sweeps down to the shore and into the sublittoral. The long shoreline is noted for its diversity, and comprises complex mixtures of bedrock shore, shingle beach, sandy beach and fringing salt marshes. Intertidal sand and mud flats occur around much of the shoreline, with the largest areas being found on the sheltered eastern coast between Oranmore Bay and Kinvarra Bay. A number of small islands and rocky islets in the Bay are included within the site (NPWS, 2019b).
00213	Inishmore Island SAC	17 km	[1150] Coastal lagoons [1170] Reefs [1220] Perennial vegetation of stony banks [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts [2110] Embryonic shifting dunes [2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2170] Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) [2190] Humid dune slacks [21A0] Machairs (in Ireland) [4030] European dry heaths [[4060] Alpine and Boreal heaths [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (important orchid sites) [6510] Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) [8240] Limestone pavements [8330] Submerged or partially submerged sea caves [1014] <i>Vertigo angustior</i> (Narrow-mouthed Whorl Snail) [1351] <i>Phocoena phocoena</i> (Harbour Porpoise)	Inishmore Island is the largest of the three Aran Islands, situated approximately 8 km off the south coast of Co. Galway. Geologically an extension of the Burren, Co. Clare, the island is formed of Upper Carboniferous limestone strata, interleaved with layers of shale and clay. In places along the coast, spectacular cliffs rise to 90 m. A thin cover of rendzina occurs in pockets between blocks of bare limestone. This soil is combined with a mixture of sand and seaweed to form a partially man-made soil cover, built up over the centuries. The site also includes a large area of marine waters surrounding the island.
4152	Inishmore Island SPA	17.5 km	Black-legged Kittiwake (<i>Rissa tridactyla</i>) [A188] Arctic Tern (<i>Sterna paradisaea</i>) [A194] Little Tern (<i>Sterna albifrons</i>) [A195] Guillemot (<i>Uria aalge</i>) [A199]	Situated approximately 8 km off the south coast of County Galway, Inishmore (Árainn) is the largest of the three Aran Islands. Geologically an extension of the Burren, County Clare, the island is formed of Upper Carboniferous limestone strata, interleaved with layers of shale and clay. The site comprises all of the cliffs and rocky shore along the entire southern side of the island, part of the low cliffs/rocky shore at the west end, and the low cliffs/rocky shore at the east end - a distance of over 17 km of coastline. Also included are the two islands west of

Site Code	Site name	Distance	Qualifying Interests (SACs) / Special Conservation Interests (SPAs)	Site description
				Inishmore (Brannock Island and Rock Island), Straw Island at the east end of Inishmore, the dune system at Barr na Coise, and the adjacent seas out to 500 m from the shoreline. The cliffs vary in height, being often less than 20 m but rising to over 80 m near Dún Aonghasa where they are notably sheer. Littoral and sublittoral reef communities are well-developed within the site.

3.4 Conservation status

There are no published conservation status documents pertaining to the Cliffs of Moher SPA. However, reporting on the status of Ireland’s seabirds based on monitoring data, is an obligation under Article 12 of the EU Bird’s Directive. The latest status of breeding seabird populations was published in 2019 as an Irish Wildlife Manual (Cummins et al. 2019) and this report provides data for the Cliffs of Moher, with the exception of Puffin.

For coastal SPA sites that support wintering waterbirds, the conservation status of non-breeding waterbird species is provided in the Conservation Objectives supporting documents (e.g. NPWS, 2014f). However, this site-level data would now be considered out of date. Information is therefore provided in Table 6 below on the national status (conservation condition) of SCIs and QIs of the relevant Natura 2000 sites as follows:

- For wintering waterbirds, we show the current long-term national trend based on the Irish Wetland Bird Survey (Kennedy et al. 2022), with the exception of Barnacle Goose (Lewis et al. 2019),
- For seabirds (including terns and gulls), we show the current long-term national trend based on Cummins et al. 2019,
- For QIs of SACs, we show the current national status of Annexed habitats and species as published in NPWS (2019).

4.0 EXISTING ENVIRONMENT – CLIFFS OF MOHER SPA

The landscape of the Cliffs of Moher is an outstanding example of the glacial karst landscapes of western Ireland. The landscape is one of a prominent and dramatic, open and sparsely vegetated coastal headland and rugged vertical sea cliffs. Since 2011, the cliffs have formed part of the *Burren and Cliffs of Moher UNESCO Global Geopark* - an internationally designated area, 530 km² in size, of geological interest, and the third Geopark to be designated in Ireland. Owing to the importance of the bird populations, the site was designated as a Refuge for Fauna in 1988 (Code IEo4).

4.1 Habitats

Terrestrial habitat and botanical surveys were carried out in July 2020 and May 2023 by Paul Murphy of EirEco Environmental Consultants. The survey followed standard habitat survey and mapping guidelines (*Best practice guidance for habitat survey and mapping*, Smith et al. 2011) with habitat classification following the Heritage Council system (*A Guide to Habitats in Ireland*, Fossitt, 2000). Characteristic botanical species for each habitat type were identified and their relative abundance recorded using the DAFOR scale (dominant, abundant, frequent, occasional or rare). Rare or sensitive habitats and species were identified, and the condition of each habitat was noted, along with any visible pressures or threats upon them.

A species list was compiled for each habitat type in order to classify the habitat and to determine its conformity or otherwise to habitats listed under Annex I of the EU Habitats Directive. A habitat map for the study area was prepared using the field survey data in combination with aerial imagery to define habitat boundaries. Results of the habitat and botanical survey are reported in EirEco (2023) and summarised in Table 7 below, while the habitat map is shown in Figure 5.

The predominant habitat types within the study area at the Cliffs of Moher are grasslands, which vary from an ungrazed fringe along the cliff top (conforming to Rocky Sea Cliff habitat), to improved agricultural grasslands on the landward side of the fence line bordering the cliff pathway (EirEco, 2023).

The most important habitat within the study area is considered to be Rocky Sea Cliff (CS1) which conforms to the Annex I habitat ‘Vegetated sea cliffs of the Atlantic and Baltic coasts’. This habitat however, has been subject to considerable erosion along the cliff top pathway with the result that there are now large areas of bare ground/recolonising bare ground (ED1/2) along the entire cliff top.

Detailed results of the habitat and botanical study are presented in EirEco (2023) but key points raised included the need for sensitive habitat restoration/rehabilitation in terms of the existing eroded cliff top walk, and sensitive and considered management of grassland habitats to improve suitability for foraging Chough. The rehabilitation and subsequent management of the habitats within the site will require specialist ecological input and oversight.

Figure 5: Habitat map of the Cliffs of Moher study area, July 2020

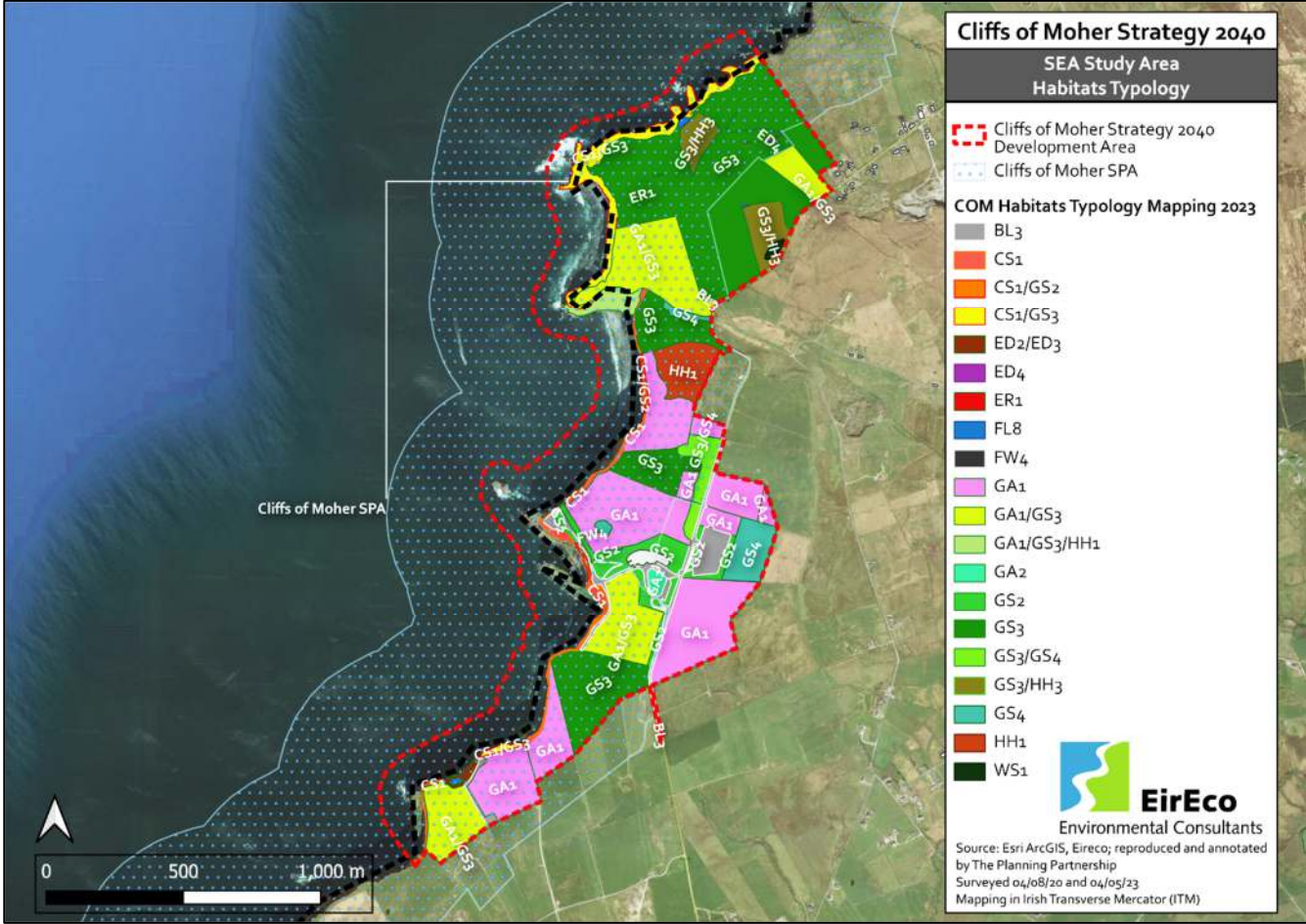


Table 6: National conservation status (condition) of SCIs and QIs of the relevant Natura 2000 sites where known (refer to text for details)

Site Code	Site name	Special Conservation Interests (SCIs) and Qualifying Interests (QIs) and in brackets – the known conservation status at National level (see text for details)
4005	Cliffs of Moher SPA	(A009) Northern Fulmar <i>Fulmarus glacialis</i> (National trend +68%) (A188) Black-legged Kittiwake <i>Rissa tridactyla</i> (National trend -35%) (A199) Common Guillemot <i>Uria aalge</i> (National trend +72%) (A200) Razorbill <i>Alca torda</i> (National trend +45%) (A204) Atlantic Puffin <i>Fratercula arctica</i> (Unknown) (A346) Red-billed Chough <i>Pyrrhocorax pyrrhocorax</i> (Unkown)
4182	Mid Clare Coast SPA	(A396) Barnacle Goose <i>Branta leucopsis</i> (+101% (Lewis et al. 2019)) (A017) Cormorant <i>Phalacrocorax carbo</i> (National long-term trend = Stable/Increasing) (A137) Ringed Plover <i>Charadrius hiaticula</i> (National long-term trend = Intermediate decline) (A144) Sanderling <i>Calidris alba</i> (National long-term trend = Stable/Increasing) (A148) Purple Sandpiper <i>Calidris maritima</i> (National long-term trend = Stable/Increasing) (A149) Dunlin <i>Calidris alpina</i> National long-term trend = Moderate decline) (A169) Turnstone <i>Arenaria interpres</i> (National long-term trend = Stable/Increasing)
1021	Carrowmore Point to Spanish Point and Islands SAC	[1150] Coastal lagoons (National Status = Bad and deteriorating) [1170] Reefs (National Status = Inadequate and stable) [1220] Perennial vegetation of stony banks (National Status = Inadequate and stable) [7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>) (National Status = Inadequate and deteriorating)
0036	Inagh River Estuary SAC	[1310] <i>Salicornia</i> and other annuals colonizing mud and sand (National Status = Favourable and stable) [1330] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) (National Status = Inadequate and deteriorating) [1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) (National Status = Inadequate and deteriorating) [2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) (National Status = Inadequate and stable) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) (National Status = Bad and deteriorating)
0020	Black Head-Poulsallagh Complex SAC	[1170] Reefs (National Status = Inadequate and stable) [1220] Perennial vegetation of stony banks (National Status = Inadequate and stable) [1395] Petalwort (<i>Petalophyllum ralfsii</i>) (National Status = Favourable) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) (National Status = Bad and deteriorating) [3260] Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation (National Status = Inadequate and deteriorating) [4060] Alpine and Boreal heaths (National Status = Bad and improving) [5130] <i>Juniperus communis</i> formations on heaths or calcareous grasslands (National Status = Favourable and stable) [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco Brometalia</i>) (important orchid sites) (National Status = Bad and deteriorating) [6510] Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) (National Status = Bad and deteriorating) [7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>) (National Status = Inadequate and deteriorating) [8240] Limestone pavements (National Status = Inadequate and stable) [8330] Submerged or partly submerged sea caves (National Status = Favourable)
994	Ballyteigue (Clare) SAC	[6410] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) (National status = Bad and deteriorating)

Site Code	Site name	Special Conservation Interests (SCIs) and Qualifying Interests (QIs) and in brackets – the known conservation status at National level (see text for details)
1926	East Burren Complex SAC	<p>[3140] Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. (National Status = Bad and deteriorating)</p> <p>[3180] Turloughs (National Status = Inadequate and stable)</p> <p>[3260] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation (National Status = Inadequate and deteriorating)</p> <p>[4060] Alpine and Boreal heaths (National Status = Bad and improving)</p> <p>[5130] Juniperus communis formations on heaths or calcareous grasslands (National Status = Favourable and stable)</p> <p>[6130] Calaminarian grasslands of the Violetalia calaminariae (National Status = Inadequate and declining)</p> <p>[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (important orchid sites) (National Status = Bad and deteriorating)</p> <p>[6510] Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis) (National Status = Bad and deteriorating)</p> <p>[7210] Calcareous fens with Cladium mariscus and species of the Caricion davallianae (National Status = Inadequate and stable)</p> <p>[7220] Petrifying springs with tufa formation (Cratoneurion) (National Status = Inadequate and deteriorating)</p> <p>[7230] Alkaline fens (National Status = Bad and deteriorating)</p> <p>[8240] Limestone pavements (National Status = Inadequate and stable)</p> <p>[8310] Caves not open to the public (National Status = Favourable and stable)</p> <p>[91E0] Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) (National Status = Bad and declining)</p> <p>[1065] Euphydrias aurinia (Marsh Fritillary) (National Status = Inadequate and improving)</p> <p>[1303] <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat) (National Status = Inadequate and declining)</p> <p>[1355] <i>Lutra lutra</i> (Otter) (National Status = Favourable)</p>
0268	Galway Bay Complex SAC	<p>[1140] Mudflats and sandflats not covered by seawater at low tide (National Status = Inadequate and deteriorating)</p> <p>[1150] Coastal lagoons (National Status = Bad and deteriorating)</p> <p>[1160] Large shallow inlets and bays (National Status = Bad and deteriorating)</p> <p>[1170] Reefs (National Status = Inadequate and stable)</p> <p>[1220] Perennial vegetation of stony banks (National Status = Inadequate and stable)</p> <p>[1230] Vegetated sea cliffs of the Atlantic and Baltic coasts (National Status = Inadequate and stable)</p> <p>[1310] Salicornia and other annuals colonising mud and sand (National Status = Favourable and stable)</p> <p>[1330] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) (National Status = Inadequate and deteriorating)</p> <p>[1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) (National Status = Inadequate and deteriorating)</p> <p>[3180] Turloughs (National Status = Inadequate and stable)</p> <p>[5130] Juniperus communis formations on heaths or calcareous grasslands (National Status = Favourable and stable)</p> <p>[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) (National Status = Bad and deteriorating)</p> <p>[7210] Calcareous fens with Cladium mariscus and species of the Caricion davallianae (National Status = Inadequate and stable)</p> <p>[7230] Alkaline fens (National Status = Bad and deteriorating)</p> <p>[8240] Limestone pavements (National Status = Inadequate and stable)</p> <p>[1355] <i>Lutra lutra</i> (Otter) (National Status = Favourable)</p> <p>[1365] <i>Phoca vitulina</i> (Harbour Seal) (National Status = Favourable)</p>
4031	Galway Bay SPA	<p>(A002) Black-throated Diver (<i>Gavia arctica</i>) (Unavailable)</p> <p>(A003) Great Northern Diver (<i>Gavia immer</i>) (Unavailable)</p> <p>(A017) Cormorant (<i>Phalacrocorax carbo</i>) (Long-term trend = +18% (Cummins et al. 2019) +42.9% (I-WeBS))</p> <p>(A028) Grey Heron (<i>Ardea cinerea</i>) (Long-term trend = +6.6% (I-WeBS))</p> <p>(A046) Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) (Long-term trend = +93.3% (I-WeBS))</p> <p>(A050) Wigeon (<i>Anas penelope</i>) (Long-term trend = -18.2% (I-WeBS))</p> <p>(A052) Teal (<i>Anas crecca</i>) (Long-term trend = +19.4% (I-WeBS))</p> <p>(A069) Red-breasted Merganser (<i>Mergus serrator</i>) (Long-term trend = -14.7% (I-WeBS))</p> <p>(A137) Ringed Plover (<i>Charadrius hiaticula</i>) (Long-term trend = -1.1% (I-WeBS))</p>

Site Code	Site name	Special Conservation Interests (SCIs) and Qualifying Interests (QIs) and in brackets – the known conservation status at National level (see text for details)
		(A140) Golden Plover (<i>Pluvialis apricaria</i>) (Long-term trend = -54.1% (I-WeBS)) (A142) Lapwing (<i>Vanellus vanellus</i>) (Long-term trend = -63.9% (I-WeBS)) (A149) Dunlin (<i>Calidris alpina</i>) (Long-term trend = -45.2% (I-WeBS)) (A157) Bar-tailed Godwit (<i>Limosa lapponica</i>) (Long-term trend = -5.1% (I-WeBS)) (A160) Curlew (<i>Numenius arquata</i>) (Long-term trend = -43.1% (I-WeBS)) (A162) Redshank (<i>Tringa totanus</i>) (Long-term trend = +6.7% (I-WeBS)) (A169) Turnstone (<i>Arenaria interpres</i>) (Long-term trend = -23.7% (I-WeBS)) (A179) Black-headed Gull (<i>Chroicocephalus ridibundus</i>) (-11% (Cummins et al. 2019)) (A182) Common Gull (<i>Larus canus</i>) (Long-term trend = -25% (Cummins et al. 2019)) (A191) Sandwich Tern (<i>Sterna sandvicensis</i>) (<i>Thalasseus sandvicensis</i>) (Long-term trend = +97% (Cummins et al. 2019)) (A193) Common Tern (<i>Sterna hirundo</i>) (Long-term trend = +201% (Cummins et al. 2019))
1275	Inisheer Island SAC	[1150] Coastal lagoons (National Status = Bad and deteriorating) [1170] Reefs (National Status = Inadequate and stable) [4030] European dry heaths (National Status = Bad and stable) [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco Brometalia</i>) (important orchid sites) (National Status = Bad and deteriorating) [6510] Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) (National Status = Bad and deteriorating) [8240] Limestone pavements (National Status = Inadequate and stable)
212	Inishmaan Island SAC	[1170] Reefs (National Status = Inadequate and stable) [1220] Perennial vegetation of stony banks (National Status = Inadequate and stable) [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts (National Status = Inadequate and stable) [2110] Embryonic shifting dunes (National status = Inadequate and stable) [2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) (National status = Inadequate and stable) [21A0] Machair (National status = Inadequate and stable) [4030] European dry heaths (National Status = Bad and stable) [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) (National Status = Bad and deteriorating) [6510] Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) (National Status = Bad and deteriorating) [8240] Limestone pavements (National Status = Inadequate and stable)
213	Inishmore Island SAC	[1150] Coastal lagoons (National Status = Bad and deteriorating) [1170] Reefs (National Status = Inadequate and stable) [1220] Perennial vegetation of stony banks (National Status = Inadequate and stable) [1230] Vegetated sea cliffs of the Atlantic and Baltic coasts (National Status = Inadequate and stable) [2110] Embryonic shifting dunes (National status = Inadequate and stable) [2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) (National status = Inadequate and stable) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) (National status = bad and deteriorating) [2170] Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) (National status = bad and deteriorating) [2190] Humid dune slacks (National status = inadequate and deteriorating) [21A0] Machair (National status = Inadequate and stable) [4030] European dry heaths (National Status = bad and stable) [4060] Alpine and Boreal heaths (National status = bad and stable) [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites) (National Status = Bad and deteriorating) [6510] Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>) (National Status = Bad and deteriorating)

Site Code	Site name	Special Conservation Interests (SCIs) and Qualifying Interests (QIs) and in brackets – the known conservation status at National level (see text for details)
		[8240] Limestone pavements (National Status = Inadequate and stable) [8330] Submerged or partially submerged sea caves (National status = inadequate and stable) [1014] <i>Vertigo angustior</i> (Narrow-mouthed Whorl Snail) (National status = bad and deteriorating) [1351] <i>Phocoena phocoena</i> (Harbour Porpoise) (National status = Favourable)
4152	Inishmore SPA	(A188) Kittiwake <i>Rissa tridactyla</i> (National trend -35%) (Cummins et al. 2019)) [A195] Arctic Tern (<i>Sterna paradisaea</i>) (National trend = +40%) (Cummins et al. 2019)) [A194] Little Tern (<i>Sterna albifrons</i>) (National trend = +51%) (Cummins et al. 2019)) (A199) Common Guillemot <i>Uria aalge</i> (National trend +72%) (Cummins et al. 2019))

Table 7: Habitats recorded within the Cliffs of Moher Study Area (data from EirEco, 2023)

Habitat Classification (after Fossitt, 2000)	Habitat Code	Affinities to Annex I Habitats under the EU Habitats Directive	Natura 2000 Code
Improved agricultural grassland	GA1	None	-
Amenity grassland	GA2	None	-
Dry meadows and grassy verges	GS2	Lowland hay meadows (<i>Alopecurus pratensis</i> , <i>Sanguisorba officinalis</i>)	6510
Dry-humid acid grassland	GS3	Species rich Nardus grasslands on siliceous substrates in mountain areas	6230
Wet grassland	GS4	Mollinia meadows on calcareous, peaty or clayey-silt laden soils	6410
Dry siliceous heath	HH1	European dry heaths	4030
Exposed siliceous rock	ER1	Siliceous rocky slopes with chasmophytic vegetation	8220
Drainage ditches	FW4	None	-
Artificial lakes and ponds	FL8	None	-
Rocky sea cliffs	CS1	Vegetated sea cliffs of the Atlantic and Baltic coasts	1230
Stone walls	BL1	None	-
Buildings and artificial surfaces	BL3	None	-
Spoil and bare ground	ED2	None	-
Recolonizing bare ground	ED3	None	-

4.2 Seabirds

To many, the Cliffs of Moher are best known for their seabird colonies, indeed this area supports one of the most important seabird colonies in the country. With nationally important populations of five breeding seabird species at the time of designation, the Cliffs of Moher was designated as a Special Protection Area (SPA 4005) under the EU Bird’s Directive (2009/147/EEC) and extends a distance of some 9.5 km along the north Clare coast from Faunmore in the north to just south of Cancregga Point in the south (NPWS, 2015a).

The Cliffs of Moher was designated as a SPA because it supports nationally important populations of five breeding seabird species namely Northern Fulmar (*Fulmarus glacialis*), Black-legged Kittiwake (*Rissa tridactyla*), Common Guillemot (*Uria aalge*), Razorbill (*Alca torda*) and Puffin (*Fratercula arctica*). In addition, the site is of special conservation interest for holding an assemblage of over 20,000 breeding seabirds making it of international importance for breeding seabirds.

Reporting on the status of Ireland’s seabirds, based on monitoring data, is an obligation under Article 12 of the EU Bird’s Directive. Fulmar, Kittiwake and Guillemot (listed for the Cliffs of Moher SPA) are all cliff-nesting seabird species. The National Parks & Wildlife Service undertook a national survey of cliff-nesting seabirds during 2015 (Newton et al. 2015) with the latest status of breeding seabird populations published in 2019 as an Irish Wildlife Manual (Cummins et al. 2019). However, at the time this manual was published, there was insufficient data to produce breeding assessments for burrow-nesting seabirds such as Puffin, hence a current data gap exists for this species for the Cliffs of Moher. This status report (Cummins et al. 2019) provides species trends for long-term (1985/87-2015/18) and short-term (1998/2002-2015/2018) periods as well as site-specific trends for the Special Conservation Interests (SCIs) of the Cliffs of Moher SPA, with the exception of Puffin (Table 8 below).

Table 8: Habitats recorded within the Cliffs of Moher Study Area (data from EirEco, 2023)

SCI Species	National Short-term trend (1998/2002-2015/18)	National Long-term trend (1985/87- 2015/18)	Site-specific trend Cliffs of Moher ^a
Northern Fulmar	0	+68	+36 (Increase)
Black-legged Kittiwake	-32	-35	-48.3 (Decline)
Common Guillemot	+28	+72	+75 (Increase)
Razorbill	+23	+45	-48 (Decline)
Puffin	Unknown	Unknown	Unknown

^aPercentage change in population estimate since Seabird 2000 (Mitchell et al. 2004)

Seabird monitoring has been undertaken at the Cliffs of Moher for many years, the most recent available report being for the 2022 seabird breeding season (Kavanagh et al. 2022b). Comparisons of seabird populations for four of the most abundant seabird species within the survey blocks between the years 2020 and 2022 indicate a slight decrease of -23% of Fulmar, a strong increase of 57% of Kittiwake, the Guillemot breeding population appears stable at -4% and the Razorbill population indicate a slight increase of 24% (Table 9). These most recent trends are opposite, for each species, to those published in 2019.

Kavanagh et al. (2022b) also monitored productivity, defined as a measure of how successful the seabird breeding season has been. At the Cliffs of Moher it was measured as the number of young fledged per breeding pair of four species of cliff-nesting seabird. Compared to the productivity results of 2021, the productivity of Fulmar decreased by 47%, Kittiwake by -78%, Guillemot by -54% and Razorbill by -43%. It is strongly suspected that an outbreak of the highly pathogenic avian influenza (HPAI) HN51 occurred at the Cliffs of Moher seabird colony during the breeding season of 2022. This is the most likely contributing factor to the low breeding success recorded during 2022, sadly, the lowest recorded to-date.

Table 9: The breeding population of seabird species recorded during the 2022 census and recent previous censuses in the corresponding survey blocks, indicating the percentage change in breeding population between the years 2020 and 2022

Species	Focus Area Counts Cliffs of Moher (2022) - Count blocks CM5 to 7	Focus Area Counts Cliffs of Moher (2021) - Count blocks CM5 (partial) to 7 ¹	Focus Area Counts Cliffs of Moher (2020) - Count blocks CM5 to 7	Population change (%) Between 2022 – 2020
Fulmar ^{AOS}	1,342	1,113	1,757	-23
Shag ^{AON}	14	14	12	+17
Herring Gull ^{AOT}	1	2	1	0
Great Black-backed Gull ^{AOT}	3	2	3	0
Kittiwake ^{AON}	2,559	2,579	1,627	+57
Puffin ^{Ind.}	1,141	1,644	1,791	-36
Guillemot ^{Ind.}	19,293	21,132	20,130	-4
Razorbill ^{Ind.}	4,477	5,089	3,602	+24

Count units: AOS = apparently occupied site; AON = apparently occupied nest; AOT = apparently occupied territory; Ind. = individuals.
¹Census count blocks used in 2021 corresponded exactly to the focus study area boundary.
Source: Kavanagh et al. (2022b)

4.3 Chough

The Chough is a scarce coastal bird, occurring along coastal grasslands from Donegal to Wexford. Ireland holds 65% of the north-western European population, with a preliminary estimate of 899 breeding pairs recorded during the national Chough survey carried out in 2021, with 57% of these occurring in Cork and Kerry (Cummins, 2023). Preliminary results of the 2021 national survey (final report is not yet published) suggest that County Clare has seen a decline in numbers (Cummins, 2023) since the previous national Chough survey of 2002/03 (Gray et al. 2003)

Choughs are considered prone to local extinctions due to their sedentary nature, and the availability of nest sites and extent and quality of foraging habitat are considered two of the main limiting factors (Trewby et al. 2006; Carroll et al. 2010). At a local scale, conditions around nest sites and connectivity between breeding sites and surrounding foraging areas have a long-term impact on fledging success and lifetime reproductive success (Reid et al. 2003, 2004).

Since 2021, the Cliffs of Moher Chough population has been monitored (e.g. Kavanagh et al. 2022, 2023). These surveys have aimed to update data collected by the *County Clare SPA Chough Report 2010* (Carroll et al. 2010) and form the baseline from which future monitoring data can be compared.

Overall, the number of breeding pairs of Chough in the Cliffs of Moher SPA has declined. Between 2002/03 and 2009, the number of breeding pairs within the SPA decreased from 12 to seven pairs, representing a 42% decline. Between 2009 and 2022, the numbers of breeding pairs have fallen from seven to two pairs within the SPA, a 71% decline between surveys. Just two pairs were recorded within the SPA during the 2022 breeding season (Kavanagh et al. 2023). This represents a decline of 83% since the peak of 12 breeding pairs recorded in 2002/03. Two pairs were also confirmed to be breeding within the SPA in 2021 (Kavanagh et al. 2023).

During the 2022 breeding season, two nest sites were confirmed within the SPA boundary. Both were located within natural habitat (as opposed to buildings) and the nests were located on cliff faces. Of note is that one nest site is located close to the Cliffs of Moher Visitor Centre (Figure 6).

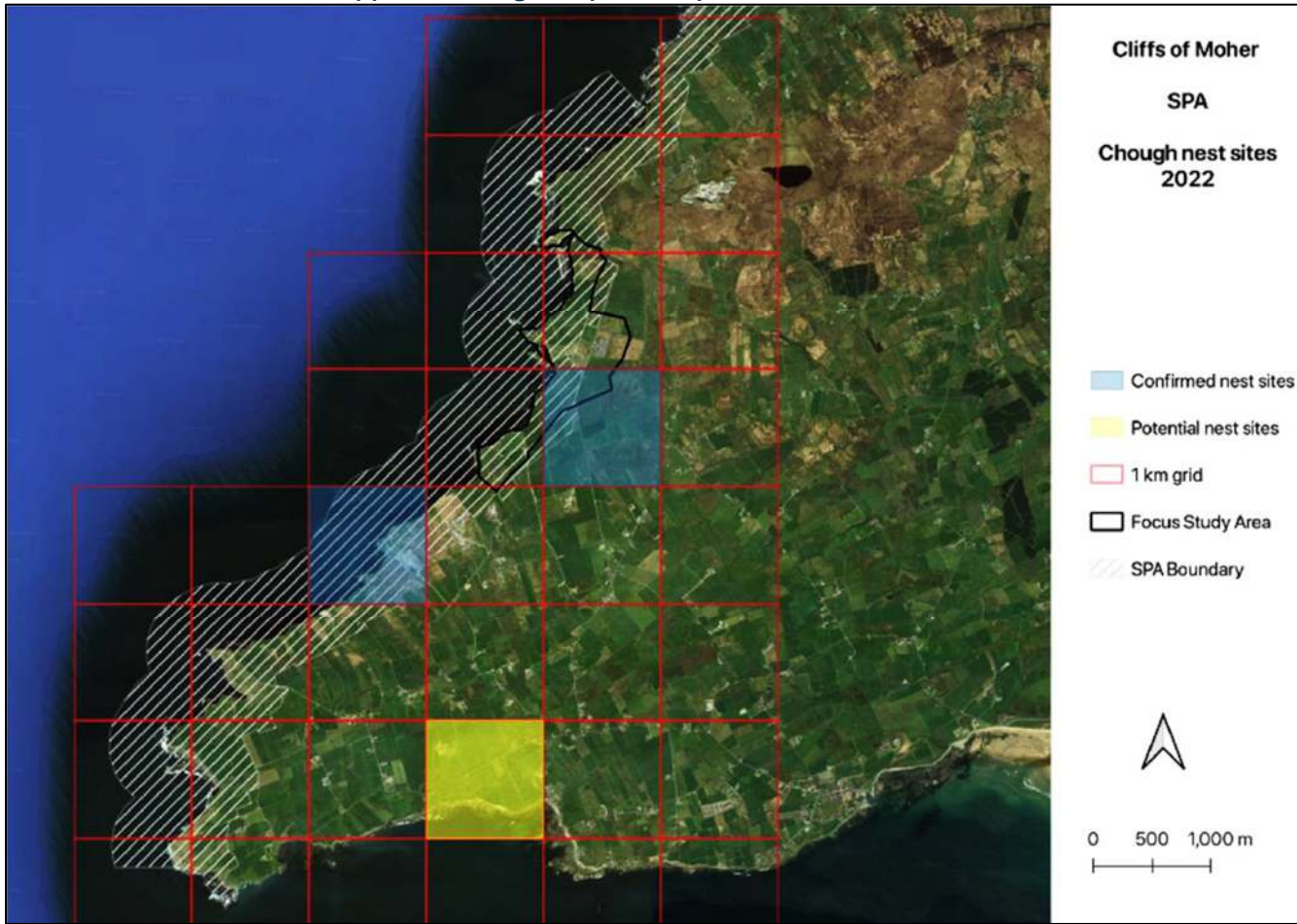
4.4 Peregrine

A national survey for the Annex I species Peregrine took place in 2017. The results of this survey are not yet available publicly. Since 2021, monitoring of the Cliffs of Moher Peregrine population has been on-going (e.g. Kavanagh et al. 2022, 2023). These surveys have aimed to collect baseline data from which future monitoring data can be compared.

A single Peregrine nest site was confirmed within the SPA during the 2022 breeding season. The adult pair hatched three chicks and successfully fledged two chicks, but only one immature bird was observed after the end of June 2022 (Kavanagh et al. 2023). In the same location, a pair of Peregrine successfully fledged three chicks during 2020 (L. Kavanagh pers. comm).

Given that two pairs of Peregrine were confirmed breeding within the Cliffs of Moher SPA during 2009, the 2022 results represent a 50% decline in the numbers of pairs. A single Peregrine nest site was also confirmed during the 2021 breeding season (Caffrey & Adcock 2021).

Figure 6: Distribution of Chough nests recorded during 2022. The nest locations are considered sensitive data therefore location is mapped at 1km grid square only



Source: Kavanagh et al. 2023

4.5 Other bird species

A breeding bird survey was carried out at the Cliffs of Moher during 2023. The survey area covered lands to the north and south of the Visitor Centre (Figure 7) and within this area, three line transect routes were identified, mapped and used for survey. These transects aimed to cover a large and representative proportion of the habitats present within the site. In addition to the line transects, the survey also covered lands to the north, east and south of the carpark, in the eastern extent of the site (Figure 7). Results of the survey were reported by Limosa Environmental (2023).

The breeding bird survey aimed to provide baseline data for the terrestrial breeding bird assemblage of the Cliffs of Moher site. Overall, a total of 19 bird species was recorded, with the assemblage dominated by Skylark *Alauda arvensis* and Meadow Pipit *Anthus pratensis* throughout. These species are amber and red-listed respectively on the latest list of birds of conservation concern in Ireland (Gilbert et al. 2021), meaning they are of moderate and high conservation concern. Upland habitats are their stronghold with both species having declined in lowland habitats. They prefer open, vegetated habitats and both species require grasslands that are not intensively managed because they nest on the ground. Results are given in Table 10 below.

Table 10: Species recorded during the 2023 breeding season. Presence in a given survey is indicated by ✓. The table also provides the species’ status (Resident, Feral (released), Summer migrant), an indication of conservation concern in Ireland (BoCCI-4, Red or Amber-listed) after Gilbert et al (2021), and species national trends (where available) after Lewis et al. (2019)

Species Code	Common name	Latin name	Status	BoCCI-4	10-yr trend	18-yr trend	Early ¹	Late ²
PH	Pheasant	<i>Phasianus colchicus</i>	R		+17.1	+32.8	✓	
HG	Herring Gull	<i>Larus argentatus</i>	R	Amber			✓	✓
DV	Rock Dove	<i>Columba livia</i>	R					✓
CK	Cuckoo	<i>Cuculus canorus</i>	S		+10	+18.8	✓	
S.	Skylark	<i>Alauda arvensis</i>	R	Amber	-10.7	-18.4	✓	✓
SL	Swallow	<i>Hirundo rustica</i>	S	Amber	-0.8	-1.4	✓	✓
MP	Meadow Pipit	<i>Anthus pratensis</i>	R	Red	-12.4	-21.1	✓	✓
RC	Rock Pipit	<i>Anthus petrosus</i>	R					✓
PW	Pied Wagtail	<i>Motacilla alba</i>	R		+23.1	+45.4	✓	✓
WR	Wren	<i>Troglodytes troglodytes</i>	R		+6.2	+11.1	✓	✓
SC	Stonechat	<i>Saxicola torquatus</i>	R		-24	-39	✓	✓
CF	Chough	<i>Pyrrhocorax pyrrhocorax</i>	R	Amber			✓	✓
JD	Jackdaw	<i>Corvus monedula</i>	R		+19.2	+37.1	✓	
RO	Rook	<i>Corvus frugilegus</i>	R		+4.2	+7.6	✓	✓
HC	Hooded Crow	<i>Corvus cornix</i>	R		+21.5	+42.1		✓
RN	Raven	<i>Corvus corax</i>	R		-7.3	-12.7	✓	✓
SG	Starling	<i>Sturnus vulgaris</i>	R	Amber	-4	-7.1	✓	✓
GO	Goldfinch	<i>Carduelis carduelis</i>	R		+89	+214.4		✓
LI	Linnet	<i>Carduelis cannabina</i>	R	Amber	+3.1	+5.7	✓	✓

¹12th May 2023, ²28th June 2023

4.6 Mammals

The following text is taken from EirEco (2023).

The lands at and around the Cliffs of Moher Visitor Centre support a limited mammalian fauna due to the open nature of terrain. Most mammals present will be nocturnal in habit, although activity may be observed in the early morning or late evening. The most obvious mammal is the Irish hare (*Lepus timidus hibernicus*) which benefits from the extent of open grassland habitat available. Less obvious are the smaller mammals that occur including Pygmy shrews (*Sorex minutus*), Field mouse (*Apodemus sylvaticus*) and the non-native Bank vole (*Myodes glareolus*). The recent spread of the non-native Greater white-toothed shrew (*Crocidura rusula*) is likely to have resulted in a reduction and possible local extinction of the smaller Pygmy shrew.

Smaller mammals provide potential prey for a range of carnivores including Foxes (*Vulpes vulpes*), Irish stoat (*Mustela erminia hibernica*) and potentially Pine marten (*Martes martes*). The Pine marten, which is more typically associated with woody vegetation, has maintained a stronghold in the Burren during decades of persecution, from which it has made a remarkable comeback at a national level in recent years. Badger (*Meles meles*) activity at the cliffs is limited but evidence of foraging has been recorded at a few locations indicating it is within the territorial range of some clans.

Figure 7: Transect routes. Blue line = Transect 1, Red line = Transect 2, Pink line = Transect 3, Yellow star = point count



Source: Limosa Environmental (2023) The Cliffs of Moher Breeding Bird Survey, 2023

Sites suitable for sett locations are in short supply due to the current intensive management of the grasslands around the site. Otter (*Lutra lutra*), a species listed under Annex I of the EU habitats Directive, occurs along the shoreline of the cliffs although mainly at the southern end (south of Hags Head) where access to freshwater and easy access to land is available. The habitats along the cliff top in the study area are unsuited for them due to the lack of surface water.

Although not strictly a wild animal, the Feral goat (*Capra hircus*) was present in small numbers along the length of the cliffs where they would graze the steep but accessible grasslands along the upper cliffs. It appears that this local population may however have been extirpated in recent years. The open and wind-swept habitats at the Cliffs of Moher are considered not to provide suitable habitat for bats.

5.0 AA SCREENING – SUMMARY OF CONCLUSIONS

The Cliffs of Moher 2040 Strategy is not directly connected with or necessary to the conservation management of any European site. The *Cliffs of Moher Strategy 2040 Appropriate Assessment Screening Assessment Report* (January 2021) prepared by Dr. Lesley Lewis BSc PhD MCIEEM, screened in the potential for significant negative effects on the following Natura 2000 (European) sites occurring:

- Cliffs of Moher Special Protection Area (SPA 4005) – c.0 km distance.
- Mid Clare Coast Special Protection Area (SPA 4182) – c.14.2 km distance.
- Carrowmore Point to Spanish Point and Islands Special Area of Conservation (SAC 1021) - c.14.2 km distance.
- Inagh River Estuary Special Area of Conservation (SAC 0036) - c.6 km distance.
- Black Head-Poulsallagh Complex Special Area of Conservation (SAC 0020) - c.3.4 km distance.
- Inisheer Island Special Area of Conservation (SAC 1275) - c.8.5 km distance (offshore).
- East Burren Complex Special Area of Conservation (SAC 1926) - c. 17 km distance.
- Galway Bay Complex Special Area of Conservation (SAC 00268) – c. 24 km distance.
- Galway Bay Special Protection Area (SPA 4031) – c. 24 km distance.

Clare County Council as Competent Authority determined under PART 5 APPROPRIATE ASSESSMENT *Screening for Appropriate Assessment and Appropriate Assessment of implications for European Sites* Article 42(6) of the *European Communities (Birds and Natural Habitats) Regulations 2011*, as amended by the *European Union (Birds and Natural Habitats) (Amendment) Regulations 2021*, that:

"An Appropriate Assessment of the Cliffs of Moher Strategy 2040 is required in terms of Articles 6(3) and 6(4) of the Habitats Directive (92/43/EEC) and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011, as amended by the European Union (Birds and Natural Habitats) (Amendment) Regulations 2021."

A copy of Clare County Council’s Appropriate Assessment (AA) Screening Determination as Competent Authority for *Cliffs of Moher Strategy 2040* is enclosed under Appendix 5. Therefore a Stage 2 Appropriate Assessment is being carried out per Article 42(6) of the *European Communities (Birds and Natural Habitats) Regulations 2011, as amended by the European Union (Birds and Natural Habitats) (Amendment) Regulations 2021*, and *Articles 6(3) and 6(4) of the Habitats Directive (92/43/EEC)*, in relation to the *Cliffs of Moher 2040 Strategy*.

During the process of preparation of the *Cliffs of Moher 2040 Strategy*, it is required that consideration also been given to the potential for indirect links to sites within the Cliffs of Moher hinterland on a precautionary basis.

- Ballyteigue (Clare) Special Area of Conservation (SAC 0994) - c.9.5 km distance.
- Inishmaan Island Special Area of Conservation (SAC 00212) - c.13.5 km distance (offshore).
- Inishmore Island Special Area of Conservation (SAC 00213) - c.17 km distance (offshore).
- Inishmore Special Protection Area (SPA 4152) – c. 17.5 km distance.

These 13 aforementioned Natura 2000 (European) sites are therefore assessed within this Natura Impact Assessment.

6.0 APPROPRIATE ASSESSMENT

6.1 Introduction

The Stage 2 AA assesses whether the Cliffs of Moher 2040 Strategy alone, or in-combination with other plans, programmes, and/or projects, could result in adverse impacts on the integrity of the Natura 2000 (European) Sites identified during screening.

6.2 Potential impacts arising from the Cliffs of Moher 2040 Strategy

Table 11 below characterises the potential impacts that may occur to the 13 aforementioned Natura 2000 (European) sites that are assessed within this Natura Impact Assessment.

6.3 Identification of potential significant effects

The Stage 2 AA assesses whether the Cliffs of Moher 2040 Strategy alone, or in-combination with other plans, programmes, and/or projects, could result in adverse impacts on the integrity of the ten ‘relevant’ Natura 2000 (European) Sites. The identification of impacts, either positive or negative, is a result of the process called ‘ecological impact assessment’ (EclA). This process and the standard guidance upon which this process is based, is described in Appendix 1 of this document.

Appropriate Assessment focuses upon impacts on Natura 2000 sites and their qualifying habitats and species. Of importance therefore is the assessment as to whether predicted impacts will be significant. Significance should be established in light of, amongst other things, the characteristics and specific environmental conditions of the site concerned, and the likely effects of the plan or project (Table 11).

If a plan or project is likely to undermine any of the site’s conservation objectives it must be considered likely to have a **significant effect** on that site (EC, 2001). Conversely, if a plan or project will have impacts on a site, but these impacts will clearly not affect or undermine those conservation objectives, then it is considered that the project/plan will not have a significant effect on the site concerned (DoEHLG, 2009).

Table 11: Potential impacts upon the relevant Natura 2000 sites under assessment. The table also shows known pressures and threats (data from Natura 2000 Standard Data Forms).

Site Code	Site name	Distance	Qualifying Interests	Potential Effects	Pressure Codes	Known Pressures and Treats
4005	Cliffs of Moher SPA	0 km	(A009) Northern Fulmar <i>Fulmarus glacialis</i> (A188) Black-legged Kittiwake <i>Rissa tridactyla</i> (A199) Common Guillemot <i>Uria aalge</i> (A200) Razorbill <i>Alca torda</i> (A204) Atlantic Puffin <i>Fratercula arctica</i> (A346) Red-billed Chough <i>Pyrrhocorax pyrrhocorax</i>	<p>The seabird SCIs for this SPA are sensitive to potential effects such as direct disturbance to cliff nest sites during the breeding season. Disturbance could result from human presence (visitors) or through aspects of development of the site, if unmitigated. Chough are sensitive to disturbance impacts upon both breeding sites and grassland foraging sites.</p> <p>The presence of people in a natural landscape can be in itself a form of disturbance to species, but other human effects such as anti-social behaviour, littering, throwing of rubbish/rocks of the cliff edges etc need to be considered in more detail and managed carefully.</p> <p>Beyond the site itself, increased levels of tourism in the area could lead to a rise in tourist boat activities e.g. cruise boats to the Cliffs of Moher. This may pose threats to the marine environment and, if not managed sensitively, could impact upon seabird foraging behaviour which could be especially detrimental when birds are provisioning chicks.</p> <p>Increased levels of tourism in the area could lead to the requirement for upgrades to local road networks. Such projects could impact watercourses that discharge to the marine environment and lead to indirect impacts upon marine water quality and upon species (e.g. fish/seabirds) that rely on a good standard of water quality.</p>	Go3, Ho6.01, Go1.02	Interpretative centres, noise nuisance, noise pollution, walking, horse riding and non-motorised vehicles.
4182	Mid Clare Coast SPA	14.2 km	(A396) Barnacle Goose <i>Branta leucopsis</i> (A017) Cormorant <i>Phalacrocorax carbo</i> (A137) Ringed Plover <i>Charadrius hiaticula</i> (A144) Sanderling <i>Calidris alba</i> (A148) Purple Sandpiper <i>Calidris maritima</i> (A149) Dunlin <i>Calidris alpina</i> (A169) Turnstone <i>Arenaria interpres</i>	<p>Despite the distance from the Cliffs of Moher to this SPA, increased visitor numbers to the Cliffs of Moher and a knock-on general increase in the number of tourists along the Clare coast, could affect bird species listed for this SPA. The SCI species are migratory waterbirds that winter in Ireland, and although human recreational activities may be at higher levels during spring and summer months, recreational disturbance is also a key pressure during winter months.</p> <p>Recreational disturbance is widespread and increasing and well recognised as a threat to wild bird populations (e.g. Redpath et al. 2013). In the Republic of Ireland, it is known that we have lost 40% of our wintering waterbirds in the past 20 years; with the majority of wading bird species in decline over both the short-and long-term periods (Burke et al. 2018, Lewis et al. 2019).</p> <p>Note - Barnacle Goose occurs on offshore islands only (largely Mutton Island plus Mattle Island) and are therefore unlikely to be affected by human disturbance as discussed above. Barnacle Goose are screened out. Other impacts resulting from increased visitor numbers that could affect wintering waterbirds include inadequate wastewater treatment and subsequent pollution of marine waters. Overall increased levels of tourism in the area will lead to the need for infrastructure upgrades or new infrastructure, both with the potential for impacts upon Natura 2000 sites if unmitigated.</p>	Go1.01, Ao4, Fo2.03, Go1.02	Nautical sports, grazing, leisure fishing, walking, horse riding and non-motorised vehicles.

Site Code	Site name	Distance	Qualifying Interests	Potential Effects	Pressure Codes	Known Pressures and Treats
1021	Carrowmore Point to Spanish Point and Islands SAC	14.2 km	[1150] Coastal lagoons [1170] Reefs [1220] Perennial vegetation of stony banks [7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>)	<p>The QIs for this SAC are sensitive to various factors that may result from an increased number of tourists/visitors to the coastal zone as a knock-on (indirect) consequence of the proposed improvements in visitor attractions at the Cliffs of Moher and increased tourist numbers, and/or increased durations of stay in the area. These may include:</p> <ul style="list-style-type: none"> Increased pressures from pollution as a result of inadequate wastewater treatment, The mismanagement of visitors, Destruction/trampling of vegetation or fauna, Disturbance of wildlife, Littering or dumping of waste. <p>Increased levels of tourism in the area will also lead to the need for infrastructure upgrades or new infrastructure, both with the potential for impacts upon Natura 2000 sites if unmitigated.</p>	Ao8, Fo2.03, Go1.01, Ko1.02, Go1.02, Ao4, Jo2.12.01, Co1.01, Fo6	Fertilisation, leisure fishing, nautical sports, silting up, walking, horse riding and non-motorised vehicles, grazing, sea defence or coast protection works, tidal barrages, sand and gravel extraction, hunting, fishing or collecting activities.
0036	Inagh River Estuary SAC	6 km	[1310] <i>Salicornia</i> and other annuals colonizing mud and sand [1330] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1410] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes)	<p>The QIs for this SAC are sensitive to various factors that may result from an increased number of tourists/visitors to the coastal zone as a knock-on (indirect) consequence of the proposed improvements in visitor attractions at the Cliffs of Moher and increased tourist numbers, and/or increased durations of stay in the area. These may include:</p> <ul style="list-style-type: none"> Increased pressures from pollution as a result of inadequate wastewater treatment, Inappropriate development and/or the mismanagement of visitors, Destruction/trampling of vegetation or fauna, Disturbance to wildlife, Littering or dumping of waste, Pressures and impacts associated with increased tourist boat activities from Liscannor e.g. cruise boats to the Cliffs of Moher may pose threats to the marine environment of the SAC. <p>Increased levels of tourism in the area will also lead to the need for infrastructure upgrades or new infrastructure, both with the potential for impacts upon Natura 2000 sites if unmitigated.</p>	Io1, Mo1.05, Jo2.05.02, Jo2.12.01, Ao2.01, Jo2.01.02, Jo2.11.02	Invasive non-native species, water flow changes (limnic, tidal and oceanic), modifying structures of inland water courses, sea defence or coast protection works, tidal barrages, agricultural intensification, reclamation of land from sea, estuary or marsh, other siltation rate changes.
0020	Black Head-Poulsallagh Complex SAC	3.4 km	[1170] Reefs [1220] Perennial vegetation of stony banks [1395] Petalwort (<i>Petalophyllum ralfsii</i>) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [3260] Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [4060] Alpine and Boreal heaths	<p>The QIs for this SAC are sensitive to various factors that may result from an increased number of tourists/visitors to the coastal zone as a knock-on (indirect) consequence of the proposed improvements in visitor attractions at the Cliffs of Moher and increased tourist numbers, and/or increased durations of stay in the area. These may include:</p> <ul style="list-style-type: none"> Increased pressures from pollution as a result of inadequate wastewater treatment, inappropriate development and/or the mismanagement of visitors, 	Ko4.01, Co1.07, Eo4.01, Go1, Ao5.02, Go5.01, Ao4.02.01, Do1.01, Ko2.02, Ko2.01, Co1.03.02, Go2.08, Bo7,	Competition (flora), mining and extraction activities not referred to above, agricultural structures, buildings in the landscape, outdoor sports and leisure activities, recreational activities, stock feeding, trampling, overuse, non-intensive cattle grazing, paths, tracks, cycling

Site Code	Site name	Distance	Qualifying Interests	Potential Effects	Pressure Codes	Known Pressures and Treats
			<p>[5130] <i>Juniperus communis</i> formations on heaths or calcareous grasslands</p> <p>[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco Brometalia</i>) (*important orchid sites)</p> <p>[6510] Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>)</p> <p>[7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>)</p> <p>[8240] Limestone pavements</p> <p>[8330] Submerged or partly submerged sea caves</p>	<ul style="list-style-type: none"> • Destruction/trampling of vegetation or fauna, • Disturbance of wildlife, • Littering or dumping of waste, • Pressures and impacts associated with increased tourist boat activities from Doolin e.g. cruise boats to the Cliffs of Moher may pose threats to the marine environment of the SAC. <p>Increased levels of tourism in the area will also lead to the need for infrastructure upgrades or new infrastructure, both with the potential for impacts upon Natura 2000 sites.</p>	Ao8, A10.01, Ao4.03	tracks, accumulation of organic material, species composition change (succession), mechanical removal of peat, camping and caravans, forestry activities not referred to above, fertilisation, removal of hedges and coppice or scrub, abandonment of pastoral systems/lack of grazing.
1275	Inisheer Island SAC,	9.5 km	<p>[1150] Coastal lagoons</p> <p>[1170] Reefs</p> <p>[4030] European dry heaths</p> <p>[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco Brometalia</i>) (*important orchid sites)</p> <p>[6510] Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>)</p> <p>[8240] Limestone pavements</p>	<p>Inisheer (or Inis Oírr) is the smallest and most eastern of the three Aran Islands in Galway Bay, Ireland. The island can be accessed by daily ferries from Doolin and Galway. An increased number of tourists/visitors to the Clare coast as a knock-on (indirect) consequence of the proposed improvements in visitor attractions at the Cliffs of Moher could lead to (a) increased tourist numbers on this island if transport infrastructure allows, or (b) an increase in transport infrastructure (increased number of ferries) <u>and</u> an increase in the number of visitors into the future. Increased levels of tourism in the area will also lead to the need for infrastructure upgrades or new infrastructure, both with the potential for impacts upon the Natura 2000 site if unmitigated. Overall, the QIs for this SAC are sensitive to various factors that may result from an increased number of tourists/visitors to the island.</p>	Do1.01, Io2, Ao4.02.01, Eo4.01, A10.01, Ao2.01, Ao4.03, Co1.07	Paths, tracks, cycling tracks, problematic native species, non-intensive cattle grazing, agricultural structures, buildings in the landscape, removal of hedges and coppice or scrub, agricultural intensification, abandonment of pastoral systems/lack of grazing, mining and extraction activities not referred to above.
0994	Ballyteigue (Clare) SAC	9.0 km	<p>[6410] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>).</p>	<p>The QI for this SAC is sensitive to various factors that may result from an increased number of tourists/visitors to the Nature Reserve as a knock-on (indirect) consequence of the proposed improvements in visitor attractions at the Cliffs of Moher, or an increase in the duration of stay of visitors in the area. These may include:</p> <ul style="list-style-type: none"> • Increased pressures from pollution as a result of inadequate wastewater treatment, • Inappropriate development and/or the mismanagement of visitors, • Destruction/trampling of vegetation or fauna, • Disturbance of wildlife, • Littering or dumping of waste. <p>Increased levels of tourism in the area will lead to the need for infrastructure upgrades or new infrastructure, both with the potential for impacts upon Natura 2000 sites if unmitigated.</p>	-	The site is a state-owned nature reserve. The current conservation condition (status) of the site is unknown, however nationally, this Annex I habitat is in bad (deteriorating) status (NPWS, 2019) – the main pressures on the habitat are associated with agricultural intensification (e.g. land drainage, fertiliser application), undergrazing and forestry.

Site Code	Site name	Distance	Qualifying Interests	Potential Effects	Pressure Codes	Known Pressures and Treats
1926	East Burren Complex SAC	c.17 km	<p>[3140] Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.</p> <p>[3180] Turloughs</p> <p>[3260] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation</p> <p>[4060] Alpine and Boreal heaths</p> <p>[5130] Juniperus communis formations on heaths or calcareous grasslands</p> <p>[6130] Calaminarian grasslands of the Violetalia calaminariae</p> <p>[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)</p> <p>[6510] Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)</p> <p>[7210] Calcareous fens with Cladium mariscus and species of the Caricion davallianae</p> <p>[7220] Petrifying springs with tufa formation (Cratoneurion)</p> <p>[7230] Alkaline fens</p> <p>[8240] Limestone pavements</p> <p>[8310] Caves not open to the public</p> <p>[91E0] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)</p> <p>[1065] Euphydryas aurinia (Marsh Fritillary)</p> <p>[1303] <i>Rhinolophus hipposideros</i> (Lesser Horseshoe Bat)</p> <p>[1355] <i>Lutra lutra</i> (Otter)</p>	<p>The QIs for this SAC are sensitive to various factors that may result from an increased number of tourists/visitors to the coastal zone as a knock-on (indirect) consequence of the proposed improvements in visitor attractions at the Cliffs of Moher and increased tourist numbers, and/or increased durations of stay in the area. These may include:</p> <ul style="list-style-type: none"> Increased pressures from pollution as a result of inadequate wastewater treatment, Inappropriate development and/or the mismanagement of visitors, Destruction/trampling of vegetation or fauna, Disturbance of wildlife, Littering or dumping of waste. <p>Increased levels of tourism in the area will lead to the need for infrastructure upgrades or new infrastructure, both with the potential for impacts upon Natura 2000 sites if unmitigated.</p>	Ho2.07, Ao4.01, Ho1.08, A10, Do5, Do1.01, Go1, Ao2, Ao5.02, Ko2.01, Io2, Ho2.06, Do1.02, A10.01, Eo3.01, A11, Ao4.03, Ao8, Ho1.05, Ao4.02	Diffuse groundwater pollution due to non-sewered population, intensive grazing, diffuse pollution to surface waters due to household sewage and waste waters, restructuring agricultural land holding, improved access to site, paths, tracks, cycling tracks, outdoor sports and leisure activities, recreational activities, modification of cultivation practices, stock feeding, species composition change (succession), problematic native species, diffuse groundwater pollution due to agricultural and forestry activities, roads, motorways, removal of hedges and coppice or scrub, disposal of household or recreational facility waste, agriculture activities not referred to above, abandonment of pastoral systems/lack of grazing, fertilisation, diffuse pollution to surface waters due to agricultural and forestry activities, non-intensive grazing.
0268	Galway Bay Complex SAC	24 km	<p>[1140] Mudflats and sandflats not covered by seawater at low tide</p> <p>[1150] Coastal lagoons</p> <p>[1160] Large shallow inlets and bays</p> <p>[1170] Reefs</p> <p>[1220] Perennial vegetation of stony banks</p> <p>[1230] Vegetated sea cliffs of the Atlantic and Baltic coasts</p> <p>[1310] Salicornia and other annuals colonising mud and sand</p> <p>[1330] Atlantic salt meadows (Glauco-Puccinellietalia maritimae)</p> <p>[1410] Mediterranean salt meadows (Juncetalia maritimi)</p> <p>[3180] Turloughs</p>	<p>The QIs for this SAC are sensitive to various factors that may result from an increased number of tourists/visitors to the coastal zone as a knock-on (indirect) consequence of the proposed improvements in visitor attractions at the Cliffs of Moher and increased tourist numbers, and/or increased durations of stay in the area. These may include:</p> <ul style="list-style-type: none"> Increased pressures from pollution as a result of inadequate wastewater treatment, Inappropriate development and/or the mismanagement of visitors, Destruction/trampling of vegetation or fauna, Disturbance of wildlife, Littering or dumping of waste. <p>Increased levels of tourism in the area will also lead to the need for infrastructure upgrades or new infrastructure, both with the potential for impacts upon Natura 2000 sites if unmitigated.</p>	Do3.01.01, Go2.01, Do2.02, Ho1.05, Fo1, Ao2.01, Ao4.02.02, Ao4.02.01, Jo2.01.02, Jo2.02.02, Jo2.05.01, Fo6, Jo2.12.01, Eo3.03, Go1.01.02, Co1.01.02, Fo2.03.01, Ho1.08,	Slipways, golf course, pipe lines, diffuse pollution to surface waters due to agricultural and forestry activities, marine and freshwater aquaculture, agricultural intensification, non-intensive sheep grazing, non-intensive cattle grazing, reclamation of land from sea, estuary or marsh, estuarine and coastal dredging, modification of water flow (tidal & marine currents), hunting, fishing or collecting activities not referred to above, sea defence or coast protection works, tidal barrages,

Site Code	Site name	Distance	Qualifying Interests	Potential Effects	Pressure Codes	Known Pressures and Treats
			<p>[5130] Juniperus communis formations on heaths or calcareous grasslands</p> <p>[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)</p> <p>[7210] Calcareous fens with Cladium mariscus and species of the Caricion davallianae</p> <p>[7230] Alkaline fens</p> <p>[8240] Limestone pavements</p> <p>[1355] <i>Lutra lutra</i> (Otter)</p> <p>[1365] <i>Phoca vitulina</i> (Harbour Seal)</p>		<p>Do3, Do1.01, Co1.01, Do3.01.04, Io1</p>	<p>disposal of inert materials, non-motorized nautical sports, removal of beach materials, bait digging or collection, diffuse pollution to surface waters due to household sewage and waste waters, shipping lanes, ports, marine constructions, paths, tracks, cycling tracks, sand and gravel extraction, industrial ports, invasive non-native species.</p>
4031	Galway Bay SPA	24 km	<p>Black-throated Diver (<i>Gavia arctica</i>) [A002]</p> <p>Great Northern Diver (<i>Gavia immer</i>) [A003]</p> <p>Cormorant (<i>Phalacrocorax carbo</i>) [A017]</p> <p>Grey Heron (<i>Ardea cinerea</i>) [A028]</p> <p>Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]</p> <p>Wigeon (<i>Anas penelope</i>) [A050]</p> <p>Teal (<i>Anas crecca</i>) [A052]</p> <p>Red-breasted Merganser (<i>Mergus serrator</i>) [A069]</p> <p>Ringed Plover (<i>Charadrius hiaticula</i>) [A137]</p> <p>Golden Plover (<i>Pluvialis apricaria</i>) [A140]</p> <p>Lapwing (<i>Vanellus vanellus</i>) [A142]</p> <p>Dunlin (<i>Calidris alpina</i>) [A149]</p> <p>Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</p> <p>Curlew (<i>Numenius arquata</i>) [A160]</p> <p>Redshank (<i>Tringa totanus</i>) [A162]</p> <p>Turnstone (<i>Arenaria interpres</i>) [A169]</p> <p>Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]</p> <p>Common Gull (<i>Larus canus</i>) [A182]</p> <p>Sandwich Tern (<i>Sterna sandvicensis</i>) [A191]</p> <p>Common Tern (<i>Sterna hirundo</i>) [A193]</p> <p>Wetland and Waterbirds [A999]</p>	<p>Despite the distance from the Cliffs of Moher to this SPA, increased visitor numbers to the Cliffs of Moher and a general increase in the number of tourists along the Clare and Galway coast, could affect bird species listed for this SPA. The SCI species are migratory waterbirds that winter in Ireland, and although human recreational activities may be at higher levels during spring and summer months, recreational disturbance is a known pressure during winter months.</p> <p>Recreational disturbance is widespread and increasing and well recognised as a threat to wild bird populations (e.g. Redpath et al. 2013). In the Republic of Ireland, we know that we have lost 40% of our wintering waterbirds in the past 20 years; with the majority of wading bird species in decline over both the short-and long-term periods (Burke et al. 2018, Lewis et al. 2019).</p> <p>Other impacts resulting from increased visitor numbers that could affect wintering waterbirds includes inadequate wastewater treatment and subsequent pollution of marine waterbodies. Overall, increased levels of tourism in the area will also lead to the need for infrastructure upgrades or new infrastructure, both with the potential for impacts upon Natura 2000 sites if unmitigated.</p>	<p>Fo2.03, Ao4, Jo2.12, Jo2.01.02, Go1.01, Do1.02, Go1.02, Eo2, Ao8, Eo3, Fo3.01, Fo1, Eo1</p>	<p>Leisure fishing, grazing, dykes, embankments, artificial beaches, reclamation of land from sea, estuary or marsh, nautical sports, roads, motorways, walking, horse riding and non-motorised vehicles, industrial or commercial areas, fertilisation, discharges, hunting, marine and freshwater aquaculture, urbanised areas, human habitation.</p>
0212	Inishmaan Island SAC	c. 13.5 km	<p>[1170] Reefs</p> <p>[1220] Perennial vegetation of stony banks</p> <p>[1230] Vegetated sea cliffs of the Atlantic and Baltic coasts</p> <p>[2110] Embryonic shifting dunes</p> <p>[2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)</p> <p>[21A0] Machair</p> <p>[4030] European dry heaths</p>	<p>The island can be accessed by daily ferries from Doolin and Galway.</p> <p>An increased number of tourists/visitors to the Clare/Galway coast as a knock-on (indirect) consequence of the proposed improvements in visitor attractions at the Cliffs of Moher could lead to (a) increased tourist numbers on this island if transport infrastructure allows, or (b) an increase in transport infrastructure (increased number of ferries) <u>and</u> an increase in the number of visitors into the future.</p>	<p>Ao4.03, Eo4.01, Fo4, Jo1.01, Ao8, Eo5, Io2, Ao4.02.01, Co1.01, Do1.01, Jo2.01.02, A10.01, Jo2.12.01, Go1</p>	<p>Outdoor sports and leisure activities, recreational activities, sea defence or coast protection works, tidal barrages, removal of hedges and coppice or scrub, burning down, reclamation of land from sea, estuary or marsh, fertilisation, non-intensive cattle grazing, paths, tracks, cycling tracks, problematic native</p>

Site Code	Site name	Distance	Qualifying Interests	Potential Effects	Pressure Codes	Known Pressures and Treats
			<p>[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)</p> <p>[6510] Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>)</p> <p>[8240] Limestone pavements</p>	Increased levels of tourism in the area will also lead to the need for infrastructure upgrades or new infrastructure, both with the potential for impacts upon the Natura 2000 site if unmitigated. Overall, the QIs for this SAC are sensitive to various factors that may result from an increased number of tourists/visitors to the island.		species, storage of materials, agricultural structures, buildings in the landscape, abandonment of pastoral systems/lack of grazing, taking or removal of terrestrial plants, sand and gravel extraction.
0213	Inishmore Island SAC	c. 17 km	<p>[1150] Coastal lagoons</p> <p>[1170] Reefs</p> <p>[1220] Perennial vegetation of stony banks</p> <p>[1230] Vegetated sea cliffs of the Atlantic and Baltic coasts</p> <p>[2110] Embryonic shifting dunes</p> <p>[2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)</p> <p>[2130] Fixed coastal dunes with herbaceous vegetation (grey dunes)</p> <p>[2170] Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>)</p> <p>[2190] Humid dune slacks</p> <p>[21A0] Machair</p> <p>[4030] European dry heaths</p> <p>[4060] Alpine and Boreal heaths</p> <p>[6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia)</p> <p>[6510] Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>)</p> <p>[8240] Limestone pavements</p> <p>[8330] Submerged or partially submerged sea caves</p> <p>[1014] <i>Vertigo angustior</i> (Narrow-mouthed Whorl Snail)</p> <p>[1351] <i>Phocoena phocoena</i> (Harbour Porpoise)</p>	<p>The island can be accessed by daily ferries from Doolin and Galway.</p> <p>An increased number of tourists/visitors to the Clare/Galway coast as a knock-on (indirect) consequence of the proposed improvements in visitor attractions at the Cliffs of Moher could lead to (a) increased tourist numbers on this island if transport infrastructure allows, or (b) an increase in transport infrastructure (increased number of ferries) <u>and</u> an increase in the number of visitors into the future.</p> <p>Increased levels of tourism in the area will also lead to the need for infrastructure upgrades or new infrastructure, both with the potential for impacts upon the Natura 2000 site if unmitigated. Overall, the QIs for this SAC are sensitive to various factors that may result from an increased number of tourists/visitors to the island.</p>	K04.05, J01.01, A04.02.01, E04.01, A08, I02, C01.07, D03, A02.01, A10.01, J02.01.02, D01.01, H02.07, F02.02.02, A04.03	Non-intensive cattle grazing, removal of hedges and coppice or scrub, agricultural structures, buildings in the landscape, agricultural intensification, reclamation of land from sea, estuary or marsh, paths, tracks, cycling tracks, shipping lanes, ports, marine constructions, pelagic trawling, problematic native species, burning down, abandonment of pastoral systems/lack of grazing, fertilisation, damage by herbivores (including game species), diffuse groundwater pollution due to non-sewered population, mining and extraction activities.
4152	Inishmore Island SPA		<p>(A188) Kittiwake <i>Rissa tridactyla</i></p> <p>[A195] Arctic Tern (<i>Sterna paradisaea</i>)</p> <p>[A194] Little Tern (<i>Sterna albifrons</i>)</p> <p>(A199) Common Guillemot <i>Uria aalge</i></p>	<p>The seabird SCIs for this SPA are sensitive to potential effects such as direct disturbance to cliff nest sites during the breeding season. Disturbance could result from human presence (visitors), both land and sea-based, or through aspects of development of the site, if unmitigated.</p> <p>The presence of people in a natural landscape can be in itself a form of disturbance to species, but other human effects such as anti-social behaviour, littering, throwing of rubbish/rocks of the cliff edges etc need to be considered in more detail and managed carefully.</p>	G01.02, A01, E01.02, A08, A04	Walking, horse riding and non-motorised vehicles, cultivation, discontinuous urbanisation, fertilisation, grazing.

Note that conservation objectives of the relevant Natura 2000 sites are considered in Section 3.3 of this report. The following further explanation is taken from EC, 2021:

'In carrying out the necessary assessments, it is important to apply the precautionary principle and the focus of the assessment should be on objectively demonstrating, with supporting evidence, that there will be no adverse effects on the integrity of the Natura 2000 site. Where this is not the case, adverse effects must be assumed. The integrity of a site can be defined as the coherent sum of the site's ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and/or populations of species for which the site is designated. The 'integrity of a site' thus relates to the site's conservation objectives, its key natural features, ecological structure and function. If the site's conservation objectives are not undermined by the proposed plan or project (alone and in-combination with other plans and projects) then the site's integrity is not considered to be adversely affected'.

The following checklist of effects on site integrity is useful (after EC, 2021) - Does the plan have the potential to:

- Hamper or cause delays in progress towards achieving the site's conservation objectives?
- Reduce the area, or quality, of protected habitat types or habitats of protected species present on the site?
- Reduce the population of the protected species significantly present on the site?
- Result in disturbance that could affect the population size or density or the balance between species?
- Cause the displacement of protected species significantly present on the site and thus reduce the distribution area of those species in the site?
- Result in a fragmentation of Annex I habitats or habitats of species?
- Result in a loss or reduction of key features, natural processes or resources that are essential for the maintenance or restoration of relevant habitats and species in the site (e.g. tree cover, tidal exposure, annual flooding, prey, food resources)?
- Disrupt the factors that help maintain the favourable conditions of the site or that are needed to restore these to a favourable condition within the site?
- Interfere with the balance, distribution and density of species that are the indicators of the favourable conditions of the site?

6.4 **Assessment of the likely significant effects of the *Cliffs of Moher 2040 Strategy* objectives**

Assessment of core objectives

Note that from this point forwards, the three separate SAC sites, Inisheer Island SAC, Inishmaan Island SAC and Inishmore Island SAC, are considered collectively and referred to as 'The Aran Islands'.

Assessment of likely significant effects of implementing the *Cliffs of Moher 2040 Strategy* – Core Objectives is presented in Table 12 below.

Rewilding an enlarged landholding/arriving at the site

Assessment of likely significant effects of implementing the *Cliffs of Moher 2040 Strategy* – Masterplan Objectives is presented in Table 13 below.

New gateway reception building/The interpretation Hub (repurposed existing visitor centre building)

Assessment of likely significant effects of implementing the *Cliffs of Moher 2040 Strategy* – Masterplan Objectives is presented in Table 14 below.

The Skywalk and hinterland/O'Briens Tower and wetland habitat

Assessment of likely significant effects of implementing the *Cliffs of Moher 2040 Strategy* – Masterplan Objectives is presented in Table 15 below.

On the plateau/The escarpment/The escarpment to Pollboy

Assessment of likely significant effects of implementing the *Cliffs of Moher 2040 Strategy* – Masterplan Objectives is presented in Table 16 below.

Northern loop/Southern cliff walk

Assessment of likely significant effects of implementing the *Cliffs of Moher 2040 Strategy* – Masterplan Objectives is presented in Table 17 below.

Table 12: Assessment of likely significant effects of implementing the *Cliffs of Moher 2040 Strategy* – Core Objectives. ‘√’ means that significant effects cannot be ruled out, while ‘X’ means that significant negative impacts are considered unlikely.

Core Objectives	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	‘The Aran Islands’	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
<i>Enhancing Economic Benefits Across the Region</i>											
<i>Encourage visitors to stay longer in the area and facilitate greater benefits and investment into local towns and villages.</i>	√	√	√	√	√	√	√	√	√	√	√
<p>Rationale: This objective aims to encourage visitors to stay in the local area, and region as a whole. This broad objective has the potential to lead to various negative impacts upon Natura 2000 sites. Examples include direct impacts such as habitat loss/habitat modification and disturbance (to habitats and species within European sites) as a result of people visiting Natura 2000 sites, or indirect impacts such as those that might result from pressures upon the infrastructure of towns and villages as a result of increased levels of visitors (e.g. increased wastewater loadings and insufficient capacity in wastewater treatment plants).</p> <p>All ‘relevant’ Natura 2000 sites could be affected, the exception perhaps likely to be Ballyteigue (Clare) SAC which is a managed meadow (traditional hay making) and a nature reserve. However, as visitor management practices are not known for this site, and as the site has no management plan in place, a precautionary approach has been taken - impacts such as trampling could occur if visitor numbers increased in an unmanaged and unmitigated way.</p>											
<i>Develop enhanced partnerships and greater coordination between the Cliffs of Moher Experience and Local Businesses and Communities.</i>	√	√	√	√	√	√	√	√	√	√	√
<p>Rationale: This objective relates to retail and marketing initiatives, amongst others. Partnerships with local landowners and farmers to, for example, achieve habitat management objectives, are inherently designed to bring about positive improvements, but will require project-specific AA before negative impacts upon the Cliffs of Moher SPA can be ruled out.</p> <p>A precautionary approach has been taken, and all sites are included as having a potential for impacts, because details of the partnerships/coordination and geographical areas over which these will occur are not known.</p>											
<i>Align with the Local, Regional and National policy priorities to create high quality visitor experiences within the county.</i>	X	X	X	X	X	X	X	X	X	X	X
<p>Rationale: In itself, this broad objective will not lead to any direct negative impacts upon any Natura 2000 (European) sites.</p>											
<i>Minimise adverse impacts on local communities.</i>	X	X	X	X	X	X	X	X	X	X	X
<p>Rationale: In itself, this broad objective will not lead to any direct negative impacts upon any Natura 2000 (European) sites.</p>											
<i>Sustainably increase tourism revenue across the season</i>	√	√	√	√	√	√	√	√	√	√	√
<p>Rationale: The Strategy aims to sustainably increase tourism revenue across the season, disperse visitors more widely within the region, and minimise adverse impacts on local communities. Specifically, the strategic development of the Cliffs of Moher site must deliver the overarching objective of nature recovery that underpins the ‘ongoing drive to recover biodiverse land and sea areas’. Increasing tourism revenue through increased numbers of visitors and dispersal more widely across the region, presents a challenge for minimising impacts upon designated sites for nature conservation. As the strategy is implemented, proposals will be subject to the relevant planning legislation applicable at that time. Implementation will also align with relevant national, regional, sectoral and environmental plans. However, achieving this objective may require the completion of other necessary plans to avoid negative impacts upon Natura 2000 sites; one example being Management Plans for SAC and SPA sites.</p> <p>Visitor management lies at the very core of any strategy that aims to increase tourism revenue, whilst protecting and enhancing biodiversity. Visitor management will be central to achieving many of the Strategy’s objectives and a Visitor Management Plan for the Cliffs of Moher is required. This plan will be subject to AA.</p> <p>At the Cliffs of Moher, spreading visitor numbers, for example, to earlier or later in the day, or to off-peak seasons will need to be assessed carefully. For instance, the current behaviour and distribution patterns of Chough and Peregrine across the site may be influenced by the birds having habituated to current visitor numbers and timings. The birds may forage more actively in areas perceived to be subject to lower visitor numbers at certain times of the day. The on-going research on these two species will be of importance in assessing the impacts, and on-going monitoring will likely be required. Visitor numbers, locations and key areas for breeding seabirds and potential impacts upon them, will also need careful consideration.</p>											

Core Objectives	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	'The Aran Islands'	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Optimising the World-Class Experience											
<i>Deliver a world-class tourism model in which audience needs and satisfaction are central.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: In itself, this broad objective will not lead to any direct negative impacts upon any Natura 2000 (European) sites as long as the conservation requirements/objectives of the Natura 2000 sites in the region are considered within the tourism model.											
<i>Offer excellent value for money in delivering a sequence of memorable experiences that prioritise exhilarating encounters with the cliffs and immersion in untamed nature.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: In itself, this broad objective relating to value for money, will not lead to any direct negative impacts upon any Natura 2000 (European) sites.											
<i>Provide an enhanced landscape interpretation through a network of safe graded walks and enhanced landscape interpretation.</i>	√	X	X	X	X	X	X	X	X	X	X
Rationale: The provision of new/upgraded walk paths has the potential to cause significant negative impacts upon the SCIs of the Cliffs of Moher SPA if inappropriately designed or constructed. The creation of pathways within the Cliffs of Moher will result in habitat loss of a certain amount of natural/modified habitat within the SPA. Other potential impacts include disturbance to SCI species.											
<i>Develop targeted event and activity packages.</i>	√	X	X	X	X	X	X	X	X	X	X
Rationale: The provision of events and activity packages at the Cliffs of Moher site has the potential to cause significant negative impacts upon the SCIs of the Cliffs of Moher SPA if inappropriately designed, or with little/no mitigation. Potential impacts include disturbance to SCI species.											
Transforming the Natural Landscape											
<i>Conserve and highlight the beautifully rugged and ecologically rich habitats of the cliffs.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: Conservation of the Cliffs of Moher is an inherent part of this core objective. This objective is in line with the conservation objectives, goals and aims of the Natura 2000 network. In itself, this broad objective should not lead to any direct negative impacts upon any Natura 2000 (European) site.											
<i>Rewilding and recovery of the natural environment will enhance the biodiversity value as well as increase its aesthetic appeal for a wide range of audiences.</i>	√	X	X	X	X	X	X	X	X	X	X
Rationale: Habitat management and restoration will need to be carried out with the requisite level of scientific research, expertise etc. so that the conservation objectives of the SCI species are not undermined. Project-specific AA will be required before negative impacts upon the Cliffs of Moher SPA can be ruled out. Mitigation will likely be required and this is provided in Section 8.											
<i>Proactive habitat and visitor management will reinforce commitments to protect designated habitats and protected species and associated ecological corridors/linkages at the Cliffs of Moher site and wider area.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: Visitor management lies at the very core of any strategy that aims to create a sustainable tourism venue, whilst protecting and enhancing biodiversity. Visitor management will be central to achieving many of the Strategy's objectives.											
This broad objective should not lead to negative impacts upon Natura 2000 (European) sites, indeed correct implementation should result in positive impacts.											
<i>Strengthen opportunities for conservation research, monitoring and education through strategic partnerships.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: Research and monitoring will be required to develop many elements of the Strategy e.g. habitat management (as above). However, in itself, this broad objective will not lead to any direct negative impacts upon any Natura 2000 (European) sites. Rather, conservation research, by definition, should lead to positive impacts upon designated sites for nature conservation.											
<i>Protecting the cultural authenticity and wildness of the natural assets.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: In itself, this broad objective will not lead to any direct negative impacts upon any Natura 2000 (European) sites.											

Core Objectives	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	'The Aran Islands'	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Providing Sustainable Access											
<i>New Park and Ride hub and shuttle service for visitors to the Cliffs of Moher as part of an integrated transport system for the wider area.</i>	√	X	X	√	√	X	X	X	X	X	X
<p>Rationale: Project-specific AA will be required before negative impacts upon the Cliffs of Moher SPA, and potentially other Natura 2000 sites can be ruled out. Impacts on habitats and species in greenfield sites to be developed as Park & Ride facilities should be confined to the footprint of the works and if these sites are located outside of the boundaries of Natura 2000 sites, then impacts upon Natura 2000 sites are not anticipated. Further development of Park and Ride facilities at Doolin, Liscannor and Lahinch have the potential to cause indirect negative impacts on nearby Natura 2000 sites if, for example, visitors stay longer in the area, which results in pressures upon existing infrastructure. One example of this could be increased loadings to wastewater treatment plants which could cause negative impacts upon the water quality of receiving bodies if adequate treatment is not in place. That said, this transport objective is aligned with other regional and national policies that aim to ensure that appropriate infrastructure is in place in towns/villages to accommodate future population growth and reduce traffic congestion.</p> <p>The Strategy aims to encourage a shift in the modes of transport currently used, by encouraging increased usage of public transport and a shift away from car usage. More sustainable travel and transport should result in a decrease in traffic volumes on the</p> <p>Local and regional roads which will result in lower noise levels, an improvement in the quality of road runoff and improved (lowered) air emissions. Overall, implementation of this objective with project-specific AA and the incorporation of mitigation as required, should not lead to significant negative impacts upon any Natura 2000 site.</p>											
<i>At the Cliffs of Moher site, the provision of new and enhanced facilities, services and network of walkways and features, will facilitate sustainable and enhanced universal access for all visitors.</i>	√	X	X	X	X	X	X	X	X	X	X
<p>Rationale: The provision of new/upgraded walk paths and new and enhanced visitor facilities have the potential to cause significant negative impacts upon the SCIs of the Cliffs of Moher SPA if inappropriately designed or constructed. Potential impacts include habitat loss and disturbance to SCI species. Project-specific AA will be required before negative impacts upon the Cliffs of Moher SPA can be ruled out.</p>											
<i>Cliffs of Moher Coastal Walk and the development of greenways present opportunities for sustainable access links with the Cliffs of Moher site.</i>	√	X	X	X	X	X	X	X	X	X	X
<p>Rationale: The provision of new/upgraded walk paths and new and enhanced visitor facilities have the potential to cause significant negative impacts upon the SCIs of the Cliffs of Moher SPA if inappropriately designed or constructed. Potential impacts include habitat loss and disturbance to SCI species. Project-specific AA will be required before negative impacts upon the Cliffs of Moher SPA can be ruled out.</p>											
<i>Managing visitors across the wider area.</i>	√	√	√	√	√	√	√	√	√	√	√
<p>Rationale: Objectives to increase the numbers of visitors more widely across the region, presents a challenge for minimising impacts upon designated sites for nature conservation. As the strategy is implemented, proposals will be subject to the relevant planning legislation applicable at that time. Implementation will also align with relevant national, regional, sectoral and environmental plans. However, achieving this objective may require the completion of other necessary plans to avoid negative impacts upon Natura 2000 sites; one example being Management Plans for SAC and SPA sites.</p> <p>Visitor management lies at the very core of any strategy that aims to increase tourism revenue, whilst protecting and enhancing biodiversity. Visitor management will be central to achieving many of the Strategy's objectives and a Visitor Management Plan for the Cliffs of Moher is required. This plan will require AA.</p>											
<i>Provide valuable community amenities.</i>	√	X	X	X	X	X	X	X	X	X	X
<p>Rationale: Depending on the amenities to be developed, there may be a requirement for project-specific AA. Mitigation will be required, and this is provided in Section 8.</p>											
<i>Attracting visitors, increasing visitor revenue, and transforming the economic and social future of the towns, villages and rural areas around the region.</i>	√	√	√	√	√	√	√	√	√	√	√
<p>Rationale:</p> <p>This objective aims to encourage visitors to stay in the local area, and region as a whole. This broad objective has the potential to lead to various negative impacts upon Natura 2000 sites. Examples include direct impacts such as habitat loss/habitat modification and disturbance (to habitats and species within European sites) as a result of people visiting Natura 2000 sites, or indirect impacts such as those that might result from pressures upon the infrastructure of towns and villages as a result of increased levels of visitors (e.g. increased wastewater loadings and insufficient capacity in wastewater treatment plants). All 'relevant' Natura 2000 sites could be affected, the exception perhaps likely to be Ballyteigue (Clare) SAC which is a managed meadow (traditional hay making) and a nature reserve. However, as visitor management practices are not known for this site, and as the site has no management plan in place, a precautionary approach has been taken - impacts such as trampling could occur if visitor numbers increased in an unmanaged and unmitigated way.</p> <p>This objective will likely result in the requirement for new or upgraded infrastructure which may require project-specific AA.</p>											

Table 13: Assessment of likely significant effects of implementing the *Cliffs of Moher 2040 Strategy* – Masterplan Objectives. ‘√’ means that significant effects cannot be ruled out, while ‘X’ means that significant negative impacts are considered unlikely.

Objectives: Rewilding an enlarged landholding/arriving at the site	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Enhancing Economic Benefits Across the Region											
<ul style="list-style-type: none"> <i>Clare County Council has begun negotiations for the purchase or leasing of an extended landholding to facilitate an improved Visitor Experience.</i> 	√	X	X	X	X	X	X	X	X	X	X
<p>Clare County Council has begun negotiations for the purchase or leasing of an extended landholding to facilitate an improved visitor experience. This strategy presents a unique opportunity to enhance the biodiversity value and aesthetic appeal of the site through “rewilding” of the landscape. The Council will provide an ongoing commitment and the necessary resources to support appropriate habitat management, including providing specialist ecological stewardship by an experienced land manager and implementing a Habitat Management Plan.</p> <p>Rationale: This long-term strategy is welcomed as the restoration of natural habitats lies at its core. However, site habitat management will need to be developed in consultation with specialists and conservation staff of the NPWS to ensure that actions aimed at being positive for targeted flora/fauna, are not negative for others. Project phasing will likely be required, as well as-going monitoring to assess the efficacy of management actions undertaken.</p>											
Optimising the World-Class Experience											
<ul style="list-style-type: none"> <i>The topography is manipulated throughout by contour modification and berming to screen the impacts of the reception building and parked vehicles.</i> 	√	X	X	X	X	X	X	X	X	X	X
<ul style="list-style-type: none"> <i>The approach will also facilitate the managed dispersal of visitors across the site, creating more space and opportunities for an intimate “back to nature” experience with the cliffs.</i> 	√	X	X	X	X	X	X	X	X	X	X
<p>Rationale: Re-development of the existing site to include contour modifications and berming will require project-specific AA to ensure that there will be no significant impacts upon the SCI species, including any indirect impacts through changes to habitats that the species utilise. Managed dispersal of visitors across the site will require careful consideration of Chough and Peregrine distribution and behaviour across the site, especially where there are proposals to introduce people to areas where they were previously excluded.</p>											
Transforming the Natural Landscape											
<ul style="list-style-type: none"> <i>This strategy presents a unique opportunity to enhance the biodiversity value and aesthetic appeal of the site through “rewilding” of the landscape.</i> 	√	X	X	X	X	X	X	X	X	X	X
<ul style="list-style-type: none"> <i>With appropriate management, the landscape can be brought back to a naturally variable mosaic of grassland, heathland and scrub habitats.</i> 	√	X	X	X	X	X	X	X	X	X	X
<ul style="list-style-type: none"> <i>There are significant opportunities to form partnerships with adjacent landowners to achieve further habitat improvement along the full extent of the coastal walk in the future.</i> 	√	X	X	X	X	X	X	X	X	X	X
<ul style="list-style-type: none"> <i>Clare County Council will provide an ongoing commitment and the necessary resources to support appropriate habitat management, including providing specialist ecological stewardship by an experienced land manager and implementing a new Habitat Management Plan.</i> 	√	X	X	X	X	X	X	X	X	X	X
<p>Rationale: The above four actions under the heading ‘transforming the natural landscape’ have the potential to result in many positive impacts upon the Cliffs of Moher SPA and its SCI species, as well as the local and wider biodiversity. However, habitat management and restoration will need to be carried out with the requisite level of scientific research, expertise, timing, phasing and monitoring etc so that the conservation objectives of the SCI species are not undermined. There is considerable scope to enhance/restore the existing habitats which will lead to positive impacts upon the SCI species that utilise them. However, project-specific AA will be required before negative impacts upon the Cliffs of Moher SPA can be ruled out. The proposed Habitat Management Plan will also require AA.</p>											

Objectives: Rewilding an enlarged landholding/arriving at the site	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Providing Sustainable Access											
<ul style="list-style-type: none">The new Cliffs of Moher site has been designed to anticipate 10,500 visitor per day at peak, new shuttle services from remote car parks to deliver 3,300 visitors per day at peak, coach facilities to deliver 3,300 visitors per day at peak, onsite car parking deliver 3,300 visitors per day at peak, and a significant seasonal change from days with high visitor numbers to low visitor numbers.	√	X	X	√	√	X	X	X	X	X	X
<ul style="list-style-type: none">Bus drop-off for eight coaches with parking allocation for 30-40 more coaches of various sizes is provided, with separate building access.	√	X	X	X	X	X	X	X	X	X	X
<ul style="list-style-type: none">A surface car park for 450 cars with separate building access.	√	X	X	X	X	X	X	X	X	X	X
<ul style="list-style-type: none">A delivery area and separate staff car park is located to the southeast of the proposed new Gateway Reception building, at a lower level.	√	X	X	X	X	X	X	X	X	X	X
<p>Rationale: Project-specific AA will be required before negative impacts upon the Cliffs of Moher SPA, and potentially other Natura 2000 sites can be ruled out.</p> <p>Impacts on habitats and species in greenfield sites to be developed as Park & Ride facilities should be confined to the footprint of the works and if these sites are located outside of the boundaries of Natura 2000 sites, then impacts upon Natura 2000 sites are not anticipated. Further development of Park and Ride facilities at Doolin, Liscannor and Lahinch have the potential to cause indirect negative impacts on nearby Natura 2000 sites if, for example, visitors stay longer in the area, which results in pressures upon existing infrastructure. One example of this could be increased loadings to wastewater treatment plants which could cause negative impacts upon the water quality of receiving bodies if adequate treatment is not in place. That said, this objective is aligned with other regional and national policies that aim to ensure that appropriate infrastructure is in place in towns/villages to accommodate future population growth and reduce traffic congestion.</p> <p>The Strategy aims to encourage a shift in the modes of transport currently used, by encouraging increased usage of public transport and a shift away from car usage. More sustainable travel and transport should result in a decrease in traffic volumes on local and regional roads which will result in lower noise levels, an improvement in the quality of road runoff and improved (lowered) air emissions. Overall, implementation of this objective with project-specific AA and the incorporation of mitigation as required, should not lead to significant negative impacts upon any Natura 2000 site.</p>											

Table 14: Assessment of likely significant effects of implementing the *Cliffs of Moher 2040 Strategy* – Masterplan Objectives. '√' means that significant effects cannot be ruled out, while 'X' means that significant negative impacts are considered unlikely.

Objectives: New gateway reception building/The interpretation Hub (repurposed existing visitor centre building)	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Enhancing Economic Benefits Across the Region											
• The new Gateway Reception building creates a concealed enclosed courtyard at its centre, protected from the winds and will allow outdoor activities to develop that are not currently possible at the site, including facilitating an extension of the restaurant and retail areas on peak days.	√	X	X	X	X	X	X	X	X	X	X
• The existing Visitor Centre building (anticipated net building area extending to circa 2,700 sq m over 2 floors) will be reorganised to be an Interpretation Hub, which will focus on providing an updated interpretative exhibition with additional facilities for education and groups.	√	X	X	X	X	X	X	X	X	X	X
Rationale: Redevelopment of the Cliffs of Moher site has the potential to cause significant negative impacts upon the Cliffs of Moher SPA, such impacts could include habitat loss, habitat degradation and disturbance to SCI species. Redevelopment of the site, including the Gateway Reception Building, will require project level Appropriate Assessment with mitigation as required. The provision of a green roof may provide Chough foraging habitat, and such outcomes should be aimed for. The provision of educational/research space is welcomed.											
Optimising the World-Class Experience											
• Once visitors have passed into and through the Gateway Reception building, they will partake of the core Cliffs of Moher Experience and leave the world of cars and buses behind.	X	X	X	X	X	X	X	X	X	X	X
Rationale: In itself, this broad objective will not lead to any direct negative impacts upon any Natura 2000 (European) sites.											
Transforming the Natural Landscape											
• Vehicular traffic needed to sustain activities at the existing Visitor Centre building will be minimised and a significant reduction in hard landscaping around that building can therefore be achieved, in keeping with the ambition to rewild as much of the landscape as possible.	X	X	X	X	X	X	X	X	X	X	X
Rationale: In itself, this broad objective will not lead to any direct negative impacts upon any Natura 2000 (European) sites. Indeed, this objective aims for positive impacts upon the site and local biodiversity.											
Providing Sustainable Access											
• The new Gateway Reception Building (anticipated net building area extending to circa 3300 sq m over 2 floors) creates a critical threshold between the visitor arriving at the site and entering the site.	X	X	X	X	X	X	X	X	X	X	X
• The new building itself screens the visual impact of parked vehicles.	X	X	X	X	X	X	X	X	X	X	X
• The restaurant has an external patio that enjoys views of the western landscape.	X	X	X	X	X	X	X	X	X	X	X
• The masterplan foresees a revised role for the existing Visitor Centre, where it will no longer be at the centre of the Cliffs of Moher Experience, with most primary visitor functions being provided in the new Gateway Reception building.	X	X	X	X	X	X	X	X	X	X	X

Objectives: New gateway reception building/The interpretation Hub (repurposed existing visitor centre building)	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
<ul style="list-style-type: none"><i>The existing Visitor Centre building will continue to play an important role in offering shelter in inclement weather and it will maintain an enlarged seasonal café with panoramic view.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: In itself, these broad objectives will not lead to any direct negative impacts upon any Natura 2000 (European) sites. Redevelopment of the Cliffs of Moher site however, has the potential to cause significant negative impacts upon the Cliffs of Moher SPA, such impacts could include habitat loss, habitat degradation and disturbance to SCI species. Redevelopment of the site, including the Gateway Reception Building, will require project level Appropriate Assessment with mitigation as required.											

Table 15: Assessment of likely significant effects of implementing the *Cliffs of Moher 2040 Strategy* – Masterplan Objectives. '√' means that significant effects cannot be ruled out, while 'X' means that significant negative impacts are considered unlikely.

Objectives: The Skywalk and hinterland/O'Briens Tower and wetland habitat	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Enhancing Economic Benefits Across the Region											
• <i>Interpretative signage and rest/picnic opportunities will be provided.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: In itself, this objective is unlikely to result in significant impacts upon any Natura 2000 (European) sites.											
Optimising the World-Class Experience											
• <i>O'Brien's observation tower will remain the focus point of the Cliffs of Moher Experience for many visitors as it enjoys a particularly strategic view of the southern headlands, and no physical changes at this location is foreseen.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: In itself, this objective is unlikely to result in significant impacts upon any Natura 2000 (European) sites.											
Transforming the Natural Landscape											
• <i>The stone ledge in front of the existing visitor centre is of particular interest to geologists as there have been fossil finds at the location.</i>	X	X	X	X	X	X	X	X	X	X	X
• <i>Within the circle of the skywalk, the topsoil will be removed to expose more of the clifftop ledge as a geological exhibition.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: In itself, these two objectives are unlikely to result in significant impacts upon any Natura 2000 (European) sites.											
Habitat remediation will occur within the double cantilever circle.											
• <i>Historical maps indicate that there was once a freshwater lake to the east of O'Brien's Tower, and it is proposed to re-establish a freshwater wetland habitat at this location, which will benefit flora and fauna and create another natural feature for the visitor to engage with.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: In itself, this objective is unlikely to result in significant impacts upon any Natura 2000 (European) sites. Re-establishment of the former wetland habitat has the potential to be a positive impact on site and local biodiversity.											
Providing Sustainable Access											
• <i>The stone ledge in front of the existing Visitor Centre has long been the focus of activity for visitors to the Cliffs of Moher and will be used as part of the geological exhibition.</i>	X	X	X	X	X	X	X	X	X	X	X
• <i>The masterplan proposes the construction of a double cantilever skywalk at this location to bring the visitor out to experience the cliff-edge, without protruding over the cliff edge.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>Visitors also have an excellent vantage point to enjoy a view of the southern headlands from this location.</i>	X	X	X	X	X	X	X	X	X	X	X
• <i>A suspended pathway is designed to pass through the established wetland habitat east of O'Brien's Tower.</i>	√	X	X	X	X	X	X	X	X	X	X

Objectives: The Skywalk and hinterland/O’Briens Tower and wetland habitat	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
<ul style="list-style-type: none"><i>An inland cantilevered structure will be built south of the established wetland habitat to capitalise on the views from the existing raised promontory point and would be the end point of the revised primary site access route.</i>	√	X	X	X	X	X	X	X	X	X	X
Rationale: The proposed cantilever skywalk and suspended pathways have the potential to result in negative impacts upon the designated SPA and its SCI species, as well as the local and wider biodiversity if undertaken in a manner not consistent with the conservation sensitivities of the site. In particular, the positioning of the structure must not impact the distribution of SCI species across the site, or in any way cause impacts upon the nesting seabirds, Chough or Peregrine. Project-specific AA is required before negative impacts upon the Cliffs of Moher SPA can be ruled out.											

Table 16: Assessment of likely significant effects of implementing the *Cliffs of Moher 2040 Strategy* – Masterplan Objectives. '√' means that significant effects cannot be ruled out, while 'X' means that significant negative impacts are considered unlikely.

Objectives: On the plateau/The escarpment/The escarpment to Pollboy	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Enhancing Economic Benefits Across the Region											
• <i>Interpretative signage and rest/picnic opportunities will be provided.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: In itself, this objective is unlikely to result in significant impacts upon any Natura 2000 (European) sites.											
Optimising the World-Class Experience											
• <i>Between O'Brien's Tower and the escarpment is an elevated plateau landscape that enjoys dramatic panoramic viewing opportunities.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>From various locations in this landscape, the visitor can engage with views of the southern cliff headlands, views to Liscannor and Lahinch, views inland (eastward) and views to the Burren and North Clare from the trigonometry point.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>The escarpment at the northern perimeter of the plateau is a natural elevated position from which the visitor can enjoy dramatic cliff views.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>Views north to the Burren and North Clare from this location will give visitors a better understanding of the wider geographical context.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>The viewing point at Pollboy offers an exceptional visitor experience as it is lower than the cliffs to the south and allows the visitor a vantage point of the cliff structure and the bird life that is unavailable elsewhere.</i>	√	X	X	X	X	X	X	X	X	X	X
Rationale: Re-development of the existing site to include additional or new pathways to viewing platforms and the provision of engineered viewing platforms will require project-specific AA to ensure that there will be no significant impacts upon the SCI species, including any indirect impacts through changes to habitats that the SCI species utilise. Managed dispersal of visitors across the site will require careful consideration of seabird, Chough and Peregrine distribution and behaviour across the site, especially where there are plans to introduce people to areas where they were previously excluded. The dispersal of people away from the cliff edge and rehabilitation of cliff edge habitats could result in major positive impacts for the Cliffs of Moher SPA, particularly seabirds, Choughs, and biodiversity as a whole.											
Transforming the Natural Landscape											
• <i>A new cliff-edge walk will be created further inland to improve visitor safety, allowing habitat remediation at the clifftop to be carried out where it is most critical foraging habitat for birds.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>The landscape between the pathways will be rewilded and developed as an optimal foraging habitat for birds in terms of a dedicated Habitats Management Plan.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>The visitor pathways will skirt around the edges of poorly drained landscape between the trigonometry point and the escarpment, identified as valuable foraging area for the Chough.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>Additional routes from the trigonometry point to the escarpment will be developed to provide easier access for walkers with additional pathways constructed.</i>	√	X	X	X	X	X	X	X	X	X	X

Objectives: On the plateau/The escarpment/The escarpment to Pollboy	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
<p>Rationale: Habitat management and restoration will need to be carried out with the requisite level of scientific research, timing, phasing and monitoring so that the conservation objectives of SCI species are not undermined. Project-specific AA will be required before negative impacts upon the Cliffs of Moher SPA can be ruled out. Re-development of the existing site to include additional or new pathways to viewing platforms and the provision of engineered viewing platforms will require project-specific AA to ensure that there will be no significant impacts upon the SCI species, including any indirect impacts through changes to habitats that the species utilise. The proposed Habitat Management Plan will require AA.</p> <p>Managed dispersal of visitors across the site will require careful consideration of seabird, Chough and Peregrine distribution and behaviour across the site, especially where there are plans to introduce people to areas where they were previously excluded. The dispersal of people away from the cliff edge and rehabilitation of cliff edge habitats could result in major positive impacts for the Cliffs of Moher SPA, particularly seabirds and Choughs – these objectives are particularly welcomed.</p>											
Providing Sustainable Access											
• <i>Instead of the visitor experience being constricted to the current narrow clifftop walk, a new landscape of looped walkways offers more options to navigate through the habitats.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>Looped walking routes of varying distance and duration can therefore be offered to visitors, based on their fitness level and willingness to engage with the climate.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>Some engineered viewing platforms at optimal locations are proposed to bring the visitor back to the edge where views are particularly dramatic.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>The trigonometry point will be developed as a primary "destination" point in the landscape with the addition of a significant sculptural feature and viewing platform.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>An engineered cantilevered platform, not protruding over the cliff edge/face, will be constructed at the Cliff of the Foals to provide a safer opportunity to enjoy this particularly dramatic view.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>Additional routes from the escarpment to the Pollboy lookout will be developed to provide easier access for walkers with additional pathways constructed.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>On busy days the routes can be organised to into a one-way system, if necessary.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>Where the coastal path engages with the R478 road, access will be provided for emergency services.</i>	√	X	X	X	X	X	X	X	X	X	X
<p>Rationale: Re-development of the existing site to include additional or new pathways to viewing platforms and the provision of engineered viewing platforms will require project-specific AA to ensure that there will be no significant impacts upon the SCI species, including any indirect impacts through via changes to habitats that the species utilise. The proposed Habitat Management Plan will require AA.</p> <p>Managed dispersal of visitors across the site will require careful consideration of Chough and Peregrine distribution and behaviour across the site, especially where there are plans to introduce people to areas where they were previously excluded. The dispersal of people away from the cliff edge and rehabilitation of cliff edge habitats could result in major positive impacts for the Cliffs of Moher SPA, particularly Choughs.</p>											

Table 17: Assessment of likely significant effects of implementing the *Cliffs of Moher 2040 Strategy* – Masterplan Objectives. '√' means that significant effects cannot be ruled out, while 'X' means that significant negative impacts are considered unlikely.

Objectives: Northern loop/southern cliff walk	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Enhancing Economic Benefits Across the Region											
• <i>The Northern Loop connects with the coastal path to Doolin to the north and the threshold between the two projects shall be demarcated and signage provided.</i>	X	X	X	X	X	X	X	X	X	X	X
• <i>The Southern Cliff Walk extends south of the current visitor centre for circa 1.5km and connects onto the coastal walk to Hags Head and Liscannor.</i>	X	X	X	X	X	X	X	X	X	X	X
• <i>Interpretative signage and rest/picnic opportunities will be provided along these routes.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: In itself, these objectives are unlikely to result in significant impacts upon any Natura 2000 (European) sites, but also see below.											
Optimising the World-Class Experience											
• <i>The northern loop could provide a considerable extension to the Cliffs of Moher Experience, offering the visitor a more remote walking experience, particularly on busy days, as it is not envisaged that all visitors will reach this far from the core facilities.</i>	√	X	X	X	X	X	X	X	X	X	X
• <i>Core vantage points have been identified as viewing platforms along the Southern Cliff Walk.</i>	√	X	X	X	X	X	X	X	X	X	X
Rationale: The Northern Loop represents a considerable extension to the existing Cliffs of Moher experience. While it is not anticipated that all visitors will walk this far, it is reasonable to expect a greater number of visitors than at present, will undertake this walk to a more remote part of the site. This type of managed and increased dispersal of visitors across the site will require careful consideration of Chough and Peregrine distribution and behaviour across the site, especially where there are plans to increase the number of frequency of people in areas previously of low intensity use. The location of seabird nesting colonies and potential impacts will also need to be considered. The dispersal of people away from the cliff edge and rehabilitation of cliff edge habitats could result in major positive impacts for the Cliffs of Moher SPA, particularly seabirds and Chough.											
Transforming the Natural Landscape											
• <i>The lands within the Northern Loop do not form part of the Cliffs of Moher 2040 Strategy. However, in partnership with the landowners, the strategy recommends exploring how this area could be included into a dedicated Habitats Management Plan.</i>	X	X	X	X	X	X	X	X	X	X	X
• <i>The landscape between the pathways at the Southern Cliff-edge walk could be rewilded and developed as an optimal foraging habitat for birds in line with a dedicated Habitats Management Plan.</i>	X	X	X	X	X	X	X	X	X	X	X
Rationale: These recommendations are unlikely to result in significant negative impacts upon any Natura 2000 (European) site. Indeed, these objectives aim to deliver many positive benefits to the site and local biodiversity. Partnerships with local landowners, particularly farmers, in the development of habitat management measures, could have significant positive impacts for Chough.											
Providing Sustainable Access											
• <i>Lands to the north and south present further physical and ecological development opportunities.</i>	X	X	X	X	X	X	X	X	X	X	X

Objectives: Northern loop/southern cliff walk	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
<ul style="list-style-type: none">Based on ongoing analysis of the clifftop stability, a new Southern Cliff-edge walk could be created further inland to allow habitat remediation at the clifftop where it is most critical for sea bird foraging.	X	X	X	X	X	X	X	X	X	X	X
<ul style="list-style-type: none">Built interventions on the Northern Loop will be limited to gravel pathways and information panels to guide the visitor away from the cliff-edge where it is appropriate to do this.	X	X	X	X	X	X	X	X	X	X	X
<ul style="list-style-type: none">At the time of the publication of the Strategy 2040, a specialist review of the stability of the cliff-edge within the Northern Loop is still ongoing and the degree to which the cliff-edge walk could be set back has yet to be confirmed.	X	X	X	X	X	X	X	X	X	X	X
Rationale: These four above recommendations are still in development and cannot be assessed with any certainty at present. Each should be subject to project-specific AA when concepts and design are developed.											

7.0 **POTENTIAL FOR CUMULATIVE (IN-COMBINATION) EFFECTS**

Article 6(3) of the Habitats Directive requires that “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”. The likely impacts on the integrity of the relevant Natura 2000 sites arising from the combination of the Cliffs of Moher 2040 Strategy with other plans and projects, must therefore be assessed.

The Cliffs of Moher 2040 Strategy has been developed to enable integration within the context of wider national, regional, county and local development plans and strategic frameworks so that it can strengthen fundamental strategic priorities and partnerships. The Cliffs of Moher 2040 Strategy aims to align with the policy priorities to create high quality visitor experiences within the county, while protecting the cultural authenticity and wildness of the natural assets, sustainably increasing tourism revenue across the season, dispersing visitors more widely within the region, and minimising any adverse impacts on local communities. Specifically, the strategic development of the Cliffs of Moher site aims to deliver the overarching objective of nature recovery – restoration of the natural habitats is a recurring theme throughout the strategy.

As the strategy is implemented, proposals will be subject to the relevant planning legislation applicable at that time. It is also recognised that other relevant strategies, plans and programmes have largely also been subject to Appropriate Assessment. The assessment provided above in Section 6 has shown that there is potential for significant adverse effects on the Natura 2000 network to arise from implementation of the Cliffs of Moher 2040 Strategy. Given the uncertainties that exist with regard to the scale and location of some of the objectives and actions within the Strategy, it is recognised that the identification of in-combination effects is limited and that the assessment of in-combination effects will need to be undertaken in a more comprehensive manner at project-level.

The following appraisal of plans and strategies represents a moment in time. Tables 18 and 19 provide a non-exhaustive list and details of the strategies and plans assessed that may interact with the Strategy to cause in-combination effects to European sites (Natura 2000 sites). These strategies, plans and programmes etc were considered throughout the assessment.

A key potential in-combination effect of the implementation of the Strategy relates to the core objective to sustainably increase tourism revenue across the season and disperse visitors more widely within the region. A precautionary approach has been used in determining which European sites may be affected, as it is not clearly known how levels of tourism, or numbers of tourists will change in terms of numbers and/or their locations/destinations. For instance, aiming to increase visitor numbers at the Cliffs of Moher during quieter times or off-peak seasons, while capping the numbers of visitors at peak times is a positive visitor management strategy for the Cliffs of Moher site, while encouraging visitors to stay in the local area or region could have consequences for increased numbers of visitors at other ‘sites’ (that are also Natura 2000 sites) throughout the year. The impacts of increased human presence at such sites can be negative at any time of the year, because some relevant Natura 2000 sites are more at risk of impacts during spring/summer months (e.g. sites with breeding SCI species) while others are more at risk during winter (e.g. coastal SPAs such as Inner Galway Bay and the Mid Clare Coast which support wintering waterbirds). Habitats, of course, can be impacted year-round.

Visitor management lies at the very core of any strategy that aims to increase tourism revenue, whilst protecting and enhancing biodiversity. Visitor management will be central to achieving many of the Strategy’s objectives and a Visitor Management Plan for the Cliffs of Moher is required. However, visitor management at a variety of scales, including regional, will be key to protecting the Natura 2000 site network.

The Wild Atlantic Way Operational Programme 2015-2019 committed to continuous monitoring of the environmental effects of the Wild Atlantic Way and has, over time, commissioned a programme of surveying and monitoring, aimed at identifying the environmental impacts of visitors at sites along the Wild Atlantic Way. Results for the 2019 monitoring for example (Fáilte Ireland, 2019), show that a range of impacts can occur including trampling, erosion and disturbance to wildlife. The report provides recommendations including those in relation to the topic of disturbance caused by recreational use of sites, and dogs (particularly off leash).

The AA for the Wild Atlantic Way Regional Tourism Development Strategy 2023-2027 (Fáilte Ireland 2023) is supported by visitor management guidelines, site maintenance guidelines, environmental management guidelines, and others, and includes key pieces of mitigation to protect the Natura 2000 network. Once such element of mitigation is the need for management plans ‘integrated management plans’ for Natura 2000 sites and the AA states that *‘where Integrated Management Plans are being prepared for European sites (or parts thereof), Fáilte Ireland and local authorities shall engage with the National Parks and Wildlife Service in order to ensure that plans are fully integrated with the Strategy and other plans and programmes, with the intention that such plans are practical, achievable and sustainable and have regard to all relevant ecological, cultural, social and economic considerations, including those of local communities’*.

Such management plans, as required by Article 6 of the Habitats Directive, represent one key measure that needs to be in place, with their actions implemented, in order to protect the Natura 2000 network from increased tourism/visitor numbers, across the geographic area applicable to the Cliffs of Moher 2040 Strategy. For instance, NPWS (2019) reported that *‘most Irish habitats listed on the Habitats Directive are in unfavourable status and almost half are demonstrating ongoing declines’*. As Section 3.4 of this report has shown, a large proportion of the annexed habitats of the relevant Natura 2000 sites under assessment are in unfavourable conservation condition. Many seabird populations, SCI species for several SPAs, are in decline, while wintering waterbirds as a group, and listed for several coastal SPAs assessed here, have undergone serious populations declines over the past 20-30 years (e.g. Burke et al. 2018; Lewis et al. 2019). Dáil Éireann declared a biodiversity and climate emergency on May 9th 2019. Yet, the Intergovernmental Panel on Biodiversity and Ecosystem Service (IPBES)³ in its global assessment of the state of the world’s biodiversity and ecosystem services, still provides hope that *“through transformative change, nature can still be conserved, restored and used sustainably – this is also key to meeting most other global goals”*. In the NPWS Strategic Plan 2023-2025 (NPWS, 2023), it is unclear as to when these management plans will be prepared and implemented, although key programmes, initiatives and projects are set to be delivered in the next three years to protect national parks and nature reserves.

³ <https://biodiversityireland.ie/ipbes-irelands-biodiversity-crisis/>

Table 18: National Level Strategies and Plans.

Strategy, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower-level objectives, actions etc.
Ireland 2040 - Our Plan, the National Planning Framework, and The National Development Plan (2018-2027)	<ul style="list-style-type: none"> The National Planning Framework is the Government’s high-level strategic plan for shaping future growth and development to the year 2040. It is a framework to guide public and private investment, to create and promote opportunities for people, and to protect and enhance the environment - from villages to cities, and everything around and in between. The National Development Plan sets out the investment priorities that will underpin the successful implementation of the new National Planning Framework. This will guide national, regional and local planning and investment decisions in Ireland over the next two decades, to cater for an expected population increase of over 1 million people. 	<p>National Strategic Outcomes as follows:</p> <ul style="list-style-type: none"> Compact Growth Enhanced Regional Accessibility Strengthened Rural Economies and Communities Sustainable Mobility A Strong Economy, supported by Enterprise, Innovation and Skills High-Quality International Connectivity Enhanced Amenity and Heritage Transition to a Low-Carbon and Climate-Resilient Society Sustainable Management of Water and other Environmental Resources Access to Quality Childcare, Education and Health Services
Planning, Land Use and Transport Outlook 2040 [in preparation]	<p>The PLUTO will take account of forecasted future economic and demographic scenarios, affordability considerations and relevant Government policies and will:</p> <ul style="list-style-type: none"> Quantify in broad terms the appropriate scale of financial investment in land transport over the long term; Consider how fiscal, environmental and technological developments might impact on this investment; and, Identify strategic priorities for future investment to ensure land transport infrastructure provision facilitates the objectives of Project Ireland 2040. 	<p>PLUTO Goals are:</p> <ul style="list-style-type: none"> A clean, low-carbon and environmentally sustainable transport system Supporting successful places and vibrant communities A high-level of service on a safe, accessible, reliable and efficient public transport network A strong and balanced economy
Climate Action Plan 2021	<p>The Climate Action Plan 2021 provides a detailed plan for taking decisive action to achieve a 51% reduction in overall greenhouse gas emissions by 2030 and setting Ireland on a path to reach net-zero emissions by no later than 2050, as committed to in the Programme for Government and set out in the Climate Act 2021.</p>	<p>The Plan lists the actions needed to deliver on our climate targets and sets indicative ranges of emissions reductions for each sector of the economy. It will be updated annually, including in 2022, to ensure alignment with Ireland’s legally binding economy-wide carbon budgets and sectoral ceilings.</p>
The Sustainable Development Goals National Implementation Plan (2018 – 2020)	<ul style="list-style-type: none"> National Implementation Plan 2018 - 2020 is in direct response to the 2030 Agenda for Sustainable Development and provides a whole-of-government approach to implement the 17 Sustainable Development Goals (SDGs). The Plan provides an 'SDG Matrix' which identifies the responsible Government Departments for each of the 169 targets. It also includes an 'SDG Policy Map' indicating the relevant national policies for each of the targets. 	<p>The Plan identifies four strategic priorities to guide implementation:</p> <ul style="list-style-type: none"> Awareness: raise public awareness of the SDGs; Participation: provide stakeholders opportunities to engage and contribute to follow- up and review processes, and further develop national implementation of the goals; Support: encourage and support efforts of communities and organisations to contribute towards meeting the SDGs, and foster public participation; and Policy alignment: develop alignment of national policy with the SDGs and identify opportunities for policy coherence.
Strategy for Renewable Energy (2012-2020)	<ul style="list-style-type: none"> The Government’s overarching strategic objective is to make renewable energy an increasingly significant component of Ireland’s energy supply by 2020, so that at a minimum it will achieve its legally binding 2020 target in the most cost-efficient manner for consumers. Of critical importance is the role which the renewable energy sector plays in job creation and economic activity as part of the Government’s action plan for jobs. 	<p>This document sets out five strategic goals, reflecting the key dimensions of the challenge to 2020:</p> <ul style="list-style-type: none"> Increasing on and offshore wind, Building a sustainable bioenergy sector, Fostering R&D in renewables such as wave & tidal, Growing sustainable transport; and Building out robust and efficient networks.
Governments White Paper 'Ireland’s Transition to a Low Carbon Energy Future’ (2015 – 2030)	<p>The White Paper sets out a vision and a framework to guide Irish energy policy between now and 2030. A complete energy policy update informed by the vision to transform Ireland into a low carbon society and economy by 2050.</p>	<p>2030 will represent a significant milestone, meaning: Reduced GHG emissions from the energy sector by between 80% and 95% ensuring that secure supplies of competitive and affordable energy remain available to citizens and businesses.</p>

Strategy, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower-level objectives, actions etc.
National Policy Position on Climate Action and Low Carbon Development (2014)	<ul style="list-style-type: none"> The National Policy Position provides a high-level policy direction for the adoption and implementation by Government of plans to enable the State to move to a low carbon economy by 2050. Statutory authority for the plans is set out in the Climate Action and Low Carbon Development Act 2015. 	<p>National climate policy in Ireland:</p> <ul style="list-style-type: none"> Recognises the threat of climate change for humanity; Anticipates and supports mobilisation of a comprehensive international response to climate change, and global transition to a low-carbon future; Recognises the challenges and opportunities of the broad transition agenda for society; and Aims, as a fundamental national objective, to achieve transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050.
National Clean Air Strategy [in preparation]	The Clean Air Strategy will provide the strategic policy framework necessary to identify and promote integrated measures across government policy that are required to reduce air pollution and promote cleaner air while delivering on wider national objectives.	<ul style="list-style-type: none"> Having a National Strategy will provide a policy framework by which Ireland can develop the necessary policies and measures to comply with new and emerging EU legislation. The Strategy should also help tackle climate change. The Strategy will consider a wider range of national policies that are relevant to clean air policy such as transport, energy, home heating and agriculture. In any discussion relating to clean air policy, the issue of people's health is paramount and this will be a strong theme of the Strategy.
EirGrid's Grid25 Strategy and associated Grid25 Implementation Programme 2017-2022	EirGrid's mission is to develop, maintain and operate a safe, secure, reliable, economical and efficient transmission system for Ireland; "Our vision is of a grid developed to match future needs, so it can safely and reliably carry power all over the country to the major towns and cities and onwards to every home, farm and business where the electricity is consumed and so it can meet the needs of consumers and generators in a sustainable way."	Grid25, EirGrid's roadmap to uprate the electricity transmission grid by 2025, continues to be implemented so as to increase the capacity of the grid, to satisfy future demand, and to help Ireland meet its target of 40 per cent of electricity from renewable energy by 2020.
Strategy for the Future Development of National and Regional Greenways (2018)	<ul style="list-style-type: none"> The objective of this Strategy is to assist in the strategic development of nationally and regionally significant Greenways in appropriate locations constructed to an appropriate standard in order to deliver a quality experience for all Greenways users. It also aims to increase the number and geographical spread of Greenways of scale and quality around the country over the next 10 years with a consequent significant increase in the number of people using Greenways as a visitor experience and as a recreational amenity. 	<ul style="list-style-type: none"> A Strategic Greenway network of national and regional routes, with a number of high-capacity flagship routes that can be extended and/or link with local Greenways and other cycling and walking infrastructure; Greenways of scale and appropriate standard that have significant potential to deliver an increase in activity tourism to Ireland and are regularly used by overseas visitors, domestic visitors and locals thereby contributing to a healthier society through increased physical activity; Greenways that provide a substantially segregated off road experience linking places of interest, recreation and leisure in areas with beautiful scenery of different types with plenty to see and do; and Greenways that provide opportunities for the development of local businesses and economies, and Greenways that are developed with all relevant stakeholders in line with an agreed code of practice.
National Water Resources Plan [in preparation]	<ul style="list-style-type: none"> The NWRP is a plan on how to provide a safe, secure and reliable water supply to customers for the next 25 years, without causing adverse impact on the environment. The objective of the NWRP is to set out how we intend to maintain the supply and demand for drinking water over the short, medium and long term whilst minimising the impact on the environment. 	<p>The key objectives of the plan are to:</p> <ul style="list-style-type: none"> Identify areas where there are current and future potential water supply shortfalls, taking into account normal and extreme weather conditions; Assess the current and future water demand from homes, businesses, farms, and industry; Consider the impacts of climate change on Ireland's water resources. Develop a drought plan advising measures to be taken before and during drought events; Develop a plan detailing how we deal with the material that is produced as a result of treating drinking water; Identify, develop and assess options to help meet potential shortfalls in water supplies; Assess the water resources available at a national level including lakes, rivers and groundwater.
National Strategic Plan for Aquaculture Development (2014-2020)	Vision: "Aquaculture in RC is economically, socially and ecologically sustainable, with a developed infrastructure, strong human potentials and an organized market. The consumption of aquaculture products is equal or above EU average, while the technological development of the sector is among the best in the EU."	<p>General development and growth objectives of marine and freshwater aquaculture (2014 – 2020):</p> <ul style="list-style-type: none"> Strengthen the social, business and administrative environment for aquaculture development; Increase in the total production to 24,050 tonnes while adhering to the principles of economic, social and ecological sustainability; Improvement of the perception and increase in the national consumption of National products.

Strategy, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower-level objectives, actions etc.
Construction 2020, A Strategy for a Renewed Construction Sector	<p>Construction 2020 sets out a package of measures agreed by the Government and is aimed at stimulating activity in the building industry.</p> <p>The Strategy aims both to increase the capacity of the sector to create and maintain jobs, and to deliver a sustainable sector, operating at an appropriate level. It seeks to learn the lessons of the past and to ensure that the right structures and mechanisms are in place so that they are not repeated.</p>	<p>This Strategy therefore addresses issues including:</p> <ul style="list-style-type: none">• A strategic approach to the provision of housing, based on real and measured needs, with mechanisms in place to detect and act when things are going wrong;• Continuing improvement of the planning process, striking the right balance between current and future requirements;• The availability of financing for viable and worthwhile projects;• Access to mortgage finance on reasonable and sustainable terms;• Ensuring we have the tools we need to monitor and regulate the sector in a way that underpins public confidence and worker safety;• Ensuring a fit for purpose sector supported by a highly skilled workforce achieving high quality and standards; and• Ensuring opportunities are provided to unemployed former construction workers to contribute to the recovery of the sector.
Sustainable Development: A Strategy for Ireland (1997)	<p>The overall aim of this Strategy is to ensure that economy and society in Ireland can develop to their full potential within a well-protected environment, without compromising the quality of that environment, and with responsibility towards present and future generations and the wider international community.</p>	<p>The Strategy addresses all areas of Government policy, and of economic and societal activity, which impact on the environment. It seeks to re-orientate policies as necessary to ensure that the strong growth Ireland enjoys and seeks to maintain will be environmentally sustainable.</p>
National Landscape Strategy for Ireland 2015-2025 and National Landscape Character Assessment (pending preparation)	<ul style="list-style-type: none">• The National Landscape Strategy will be used to ensure compliance with the European Landscape Convention and to establish principles for protecting and enhancing the landscape while positively managing its change. It will provide a high-level policy framework to achieve balance between the protection, management and planning of the landscape by way of supporting actions.• Landscape Strategy Vision: “Our landscape reflects and embodies our cultural values and our shared natural heritage and contributes to the well- being of our society, environment and economy. We have an obligation to ourselves and to future generations to promote its sustainable protection, management and planning.”	<p>The objectives of the National Landscape Strategy are to:</p> <ul style="list-style-type: none">• Implement the European Landscape Convention by integrating landscape into the approach to sustainable development;• Establish and embed a public process of gathering, sharing and interpreting scientific, technical and cultural information in order to carry out evidence-based identification and description of the character, resources and processes of the landscape;• Provide a policy framework, which will put in place measures at national, sectoral - including agriculture, tourism, energy, transport and marine - and local level, together with civil society, to protect, manage and properly plan through high quality design for the sustainable stewardship of the landscape;• Ensure that we take advantage of opportunities to implement policies relating to landscape use that are complementary and mutually reinforcing and that conflicting policy objectives are avoided in as far as possible.
Ministerial Guidelines such as Sustainable Rural Housing Guidelines and Flood Risk Management Guidelines	<p>The Department produces a range of guidelines designed to help planning authorities, An Bord Pleanála, developers and the general public and cover a wide range of issues amongst others, architectural heritage, child care facilities, landscape, quarries and residential density.</p>	<p>The Minister issues statutory guidelines under Section 28 of the Act which planning authorities and An Bord Pleanála are obliged to have regard to in the performance of their planning functions.</p>
HSE Healthy Ireland Framework for Improved Health and Wellbeing 2013-2025	<p>The vision is: “A Healthy Ireland, where everyone can enjoy physical and mental health and wellbeing to their full potential, where wellbeing is valued and supported at every level of society and is everyone’s responsibility.”</p>	<p>These four goals are interlinked, interdependent and mutually supportive:</p> <p>Goal 1: Increase the proportion of people who are healthy at all stages of life;</p> <p>Goal 2: Reduce health inequalities;</p> <p>Goal 3: Protect the public from threats to health and wellbeing;</p> <p>Goal 4: Create an environment where every individual and sector of society can play their part in achieving a healthy Ireland.</p>
Our Sustainable Future: A framework for Sustainable Development for Ireland 2012	<p>A medium to long term framework for advancing sustainable development and the green economy in Ireland. It identifies spatial planning as a key challenge for sustainable development and sets a series of measures to address these challenges.</p>	<p>Sets out the challenges facing us and how we might address them in making sure that quality of life and general wellbeing can be improved and sustained in the decades to come.</p>

Strategy, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower-level objectives, actions etc.
Smarter Travel – A Sustainable Transport Future – A New Transport Policy for Ireland 2009 – 2020 (2009)	<p>Outlines a policy for how a sustainable travel and transport system can be achieved.</p> <p>Sets out five key goals:</p> <ul style="list-style-type: none">• To reduce overall travel demand.• To maximise the efficiency of the transport network.• To reduce reliance on fossil fuels.• To reduce transport emissions.• To improve accessibility to transport.	<p>Others lower-level aims include:</p> <ul style="list-style-type: none">• Reduce distance travelled by private car and encourage smarter travel, including focusing population growth in areas of employment and to encourage people to live in close proximity to places of employment;• Ensuring that alternatives to the car are more widely available, mainly through a radically improved public transport service and through investment in cycling and walking;• Improving the fuel efficiency of motorised transport through improved fleet structure, energy efficient driving and alternative technologies;• Strengthening institutional arrangements to deliver the targets.
Investing in our Future: A Strategic Framework for Investment in Land Transport (SFILT) – Department of Transport, Tourism and Sport	<p>SFILT sets out a set of priorities to guide the allocation of the State’s investment to best develop and manage Ireland’s land transport network over the coming decades.</p>	<p>The three priorities stated in SFILT are:</p> <p>Priority 1: Achieve steady state maintenance (meaning that the maintenance and renewal of the existing transport system is at a sufficient level to maintain the system in an adequate condition);</p> <p>Priority 2: Address urban congestion; and</p> <p>Priority 3: Maximise the value of the road network.</p> <p>In delivering on the steady state maintenance objective set out in SFILT, the Plan includes for:</p> <ul style="list-style-type: none">• Planned replacement programme for the bus fleet operated under Public Service Obligation (“PSO”) contracts;• Tram refurbishment and asset renewal in the case of light rail; and• To the extent within the Authority’ remit, support for the operation of the existing rail network within the GDA.
Delivering a Sustainable Energy Future for Ireland – The Energy Policy Framework 2007 – 2020 (2007)	<p>White paper setting out a framework for delivering a sustainable energy future in Ireland.</p> <p>Outlines strategic Goals for:</p> <ul style="list-style-type: none">• Security of Supply• Sustainability of Energy• Competitiveness of Energy Supply	<p>The underpinning Strategic Goals are:</p> <ul style="list-style-type: none">• Ensuring that electricity supply consistently meets demand;• Ensuring the physical security and reliability of gas supplies to Ireland;• Enhancing the diversity of fuels used for power generation;• Delivering electricity and gas to homes and businesses over efficient, reliable and secure networks;• Creating a stable attractive environment for hydrocarbon exploration and production;• Being prepared for energy supply disruptions.
National Adaptation Framework (NAF) 2018 and associated regional, local and sectoral adaptation plans	<p>NAF specifies the national strategy for the application of adaptation measures in different sectors and by local authorities in their administrative areas in order to reduce the vulnerability of the State to the negative effects of climate change and to avail of any positive effects that may occur</p>	<ul style="list-style-type: none">• Adaptation under this Framework should seek to minimise costs and maximise the opportunities arising from climate change.• Adaptation actions range from building adaptive capacity (e.g. increasing awareness, sharing information and targeted training) through to policy and finance-based actions.• Adaptation actions must be risk based, informed by existing vulnerabilities of our society and systems and an understanding of projected climate change.• Adaptation actions taken to increase climate resilience must also consider impacts on other sectors and levels of governance.
2030 Climate and Energy Framework	<p>Adopted October 2014, includes EU-wide targets and policy objectives for the period from 2021 to 2030.</p>	<p>Key targets for 2030:</p> <ul style="list-style-type: none">• At least 40% cut in greenhouse gas emissions (from 1990 levels).• At least 32% share for renewable energy. This was revised upwards in 2018.• At least 32.5% improvement in energy efficiency. This was revised upwards in 2018.

Strategy, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower-level objectives, actions etc.
National Renewable Energy Action Plan (2010)	Sets out the Member State’s national targets for the share of energy from renewable sources to be consumed in transport, electricity and heating and cooling in 2020, and demonstrates how the Member State will meet its overall national target established under the Directive.	Ireland’s 16% target of gross final consumption to come from renewables by 2020.
National Energy Efficiency Action Plan for Ireland (2009 – 2020)	This is the second National Energy Efficiency Action Plan for Ireland.	The Plan reviews the original 90 actions outlined in the first Plan and updates/renews/removes them as appropriate.
National Energy & Climate Plan (NECP) 2021 – 2030	Ireland’s National Energy & Climate Plan (NECP) 2021-2030 takes into account energy and climate policies developed up to 2019, the levels of demographic and economic growth identified in the National Planning Framework - Project 2040 and includes all of the climate and energy measures as set out in the National Development Plan 2018-2027.	The planned policies and measures that were identified up to the end of 2019, collectively deliver a 30% reduction by 2030 in non-Emission Trading Systems greenhouse gas emissions (from 2005 levels). Ireland is committed to achieving a 7% annual average reduction in greenhouse gas emissions between 2021 and 2030. The NECP was drafted in line with the current EU effort-sharing approach, before the Government committed to this higher level of ambition, and therefore does not reflect this higher commitment. Ireland is currently developing those policies and measures and intends to integrate the revision of the NECP into the process which will be required for increasing the overall EU contribution under the Paris Agreement.
Actions for Biodiversity (2017-2021) Ireland’s National Biodiversity Plan	Sets out strategic objectives, targets and actions to conserve and restore Ireland’s biodiversity and to prevent and reduce the loss of biodiversity in Ireland and globally.	<ul style="list-style-type: none"> • To mainstream biodiversity in the decision-making process across all sectors. • To substantially strengthen the knowledge base for conservation, management and sustainable use of biodiversity. • To increase awareness and appreciation of biodiversity and ecosystems services. • To conserve and restore biodiversity and ecosystem services in the wider countryside. • To conserve and restore biodiversity and ecosystem services in the marine environment. • To expand and improve on the management of protected areas and legally protected species. • To substantially strengthen the effectiveness of international governance for biodiversity and ecosystem services.
Irish Water’s Water Services Strategic Plan 2015 and associated Proposed Capital Investment Plan (2014-2016)	This Water Services Strategic Plan sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. It details current and future challenges which affect the provision of water services and identifies the priorities to be tackled in the short and medium term.	<p>Six strategic objectives as follows:</p> <ul style="list-style-type: none"> • Meet Customer Expectations; • Ensure a Safe and Reliable Water Supply; • Provide Effective Management of Wastewater; • Protect and Enhance the Environment; • Support Social and Economic Growth; • Invest in the Future.
Raised Bog SAC Management Plan and Review of Raised Bog Natural Heritage Areas	Aims to meet nature conservation obligations while having regard to national and local economic, social and cultural needs	<ul style="list-style-type: none"> • Ensure that the implications of management choices for water levels, quantity and quality are fully explored, understood and factored into policy making and land use planning. • Review the current raised bog NHA network in terms of its contribution to the national conservation objective for raised bog habitats and determine the most suitable sites to replace the losses of active raised bog habitat and high bog areas within the SAC network and to enhance the national network of NHAs.
Food Harvest 2020	Food Harvest 2020 is a roadmap for the Irish food industry, as it seeks to innovate and expand in response to increased global demand for quality foods. It sets out a vision for the potential growth in agricultural output after the removal of milk quotas.	Seeks for the improvement of all agricultural sectors at all levels in terms of sustainability, environmental consideration and marketing development.
Food Vision 2030	<p>This is a ten-year strategy for the Irish agri-food sector (taken to include primary agriculture, food and drink processing and manufacturing, fisheries, aquaculture and fish processing, forestry and forestry processing and the equine sector).</p> <p>The Strategy has four high-level Missions for the sector to work towards:</p> <p>Mission 1 - A Climate Smart, Environmentally Sustainable Agri-Food Sector,</p>	<p>The four high-level missions contain 22 goals in total. Those relating directly to biodiversity are:</p> <ul style="list-style-type: none"> • Develop a Climate Neutral Food System by 2050 and Improve Air Quality; • Restore and Enhance Biodiversity; • Protect High Status Sites and Contribute to Protection & Restoration of Good Water Quality and Healthy Aquatic Ecosystems • Develop Diverse, Multi-functional Forests.

Strategy, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower-level objectives, actions etc.
	Mission 2 - Viable and Resilient Primary Producers with Enhanced Well-Being, Mission 3 - Food Which is Safe, Nutritious and Appealing, Trusted And Valued at Home and Abroad, Mission 4 - An Innovative, Competitive and Resilient Agri-Food Sector, Driven by Technology and Talent.	
National Rural Development Programme	The National Rural Development Programme, prepared by the Department of Agriculture, Fisheries and Food, sets out a national programme based on the EU framework for rural development and prioritises improving the competitiveness of agriculture, improving the environment and improving the quality of life in rural areas.	At a more detailed level, the programme also: <ul style="list-style-type: none">• Supports structural change at farm level including training young farmers and encouraging early retirement, support for restructuring, development and innovation;• Aims to improve the environment, biodiversity and the amenity value of the countryside by support for land management through funds such as Natura 2000 payments etc.; and• Aims to improve quality of life in rural areas and encouraging diversification of economic activity through the implementation of local development strategies such as non-agricultural activities
Realising our Rural Potential: The Action Plan for Rural Development 2017	The Plan aims to unlock the potential of rural Ireland through a framework of supports at national and local level which will ensure that people who live in rural areas have increased opportunities for employment locally, and access to public services and social networks that support a high quality of life.	The Plan contains 276 actions across five key pillars. The five pillars are: <ul style="list-style-type: none">• Supporting Sustainable Communities,• Supporting Enterprise and Employment,• Maximising our Rural Tourism and Recreation Potential,• Fostering Culture and Creativity in Rural Communities, and• Improving Rural Infrastructure and Connectivity.
National Forestry Programme (2023-2027) and Ireland’s Forest Strategy (2023-2030)	The overriding objective is to expand the national forest estate on both public and private land in a manner that will deliver lasting benefits for climate change, biodiversity, water quality, wood production, economic development and quality of life.	Measures include the following: <ul style="list-style-type: none">• Afforestation scheme• Native tree area scheme• Native woodland conservation scheme• Forest Road scheme• And others...
River Basin Management Plan	The River Basin Management Plan sets out the measures planned to maintain and improve the status of waters.	<ul style="list-style-type: none">• Aim to protect and enhance all water bodies in the RBD and meet the environmental objectives outlined in Article 4 of the Water Framework Directive.• Identify and manages water bodies in the RBD.• Establish a programme of measures for monitoring and improving water quality in the RBD.• Involve the public through consultations.
National Peatlands Strategy (2015-2025)	This Strategy aims to provide a long-term framework within which all of the peatlands within the State can be managed responsibly in order to optimise their social, environmental and economic contribution to the well-being of this and future generations.	Objectives of the Strategy: <ul style="list-style-type: none">• To give direction to Ireland’s approach to peatland management.• To apply to all peatlands, including peat soils.• To ensure that the relevant State authorities and state-owned companies that influence such decisions contribute to meeting cross-cutting objectives and obligations in their policies and actions.• To ensure that Ireland’s peatlands are sustainably managed so that their benefits can be enjoyed responsible.• To inform appropriate regulatory systems to facilitate good decision making in support of responsible use.• To inform the provision of appropriate incentives, financial supports and disincentives where required.• To provide a framework for determining and ensuring the most appropriate future use of cutover and cutaway bogs.• To ensure that specific actions necessary for the achievement of its objectives are clearly identified and delivered by those involved in or responsible for peatlands management or for decisions affecting their management.

Strategy, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower-level objectives, actions etc.
Flood Risk Management Plans arising from National Catchment Flood Risk Assessment and Management Programme	The national Catchment Flood Risk Assessment and Management (CFRAM) programme commenced in Ireland in 2011 and is being overseen by the Office of Public Works. The CFRAM Programme is intended to deliver on core components of the National Flood Policy, adopted in 2004, and on the requirements of the EU Floods Directive.	CFRAM Studies have been undertaken for all River Basin Districts. The studies are focusing on areas known to have experienced flooding in the past and areas that may be subject to flooding in the future either due to development pressures or climate change. Flood Risk and Hazard mapping, including Flood Extent Mapping, was finalised in 2017. The final outputs from the studies are the CFRAM Plans, finalised in 2018. The Plans define the current and future flood risk in the River Basin Districts and set out how this risk can be managed.
Draft National Bioenergy Plan 2014 - 2020	The Draft Bioenergy Plan sets out a vision as follows: Bioenergy resources contributing to economic development and sustainable growth, generating jobs for citizens, supported by coherent policy, planning and regulation, and managed in an integrated manner.	Three high level goals of equal importance, based on the concept of sustainable development, are identified: <ul style="list-style-type: none"> To harness the market opportunities presented by bioenergy in order to achieve economic development, growth and jobs. To increase awareness of the value, opportunities and societal benefits of developing bioenergy. To ensure that bioenergy developments do not adversely impact the environment and its living and non-living resources.
Draft Renewable Electricity Policy and Development Framework (DCCAE) 2016	Goal: To optimise the opportunities in Ireland for renewable electricity development on land at significant scale, to serve both the All-Island Single Electricity Market and any future regional market within the European Union, in accordance with European and Irish law, including Directive 2009/28/EC: On the promotion of the use of energy from renewable resources.	Objective: To develop a Policy and Development Framework for renewable electricity generation on land to serve both the All-Island Single Electricity Market and any future regional market within the European Union, with particular focus on large scale projects for indigenous renewable electricity generation. This will, inter alia, provide guidance for planning authorities and An Bord Pleanála.
National Alternative Fuels Infrastructure for the Transport Sector (DTTAS) 2017- 2030	This Framework sets targets to achieve an appropriate level of alternative fuels infrastructure for transport, which is relative to national policy and Irish market needs. Non-infrastructure-based incentives to support the use of the infrastructure and the uptake of alternative fuels are also included within the scope of the Framework.	Targets for alternative fuel infrastructure include the following: <ul style="list-style-type: none"> AFV forecasts Electricity targets Natural gas (CNG, LNG) targets Hydrogen targets Biofuels targets LPG targets Synthetic and paraffinic fuels targets
Food Wise 2025 (DAFM)	Food Wise 2025 sets out a ten-year plan for the agri-food sector. It underlines the sector's unique and special position within the Irish economy, and it illustrates the potential which exists for this sector to grow even further.	Food Wise 2025 identifies ambitious and challenging growth projections for the industry over the next ten years including: <ul style="list-style-type: none"> 85% increase in exports to €19 billion. 70% increase in value added to €13 billion. 60% increase in primary production to €10 billion. The creation of 23,000 additional jobs all along the supply chain from producer level to high-end value-added product development.
National Cycle Network Scoping Study 2010	<ul style="list-style-type: none"> Outlines objectives and actions aimed at developing a strong cycle network in Ireland Sets out 19 specific objectives, and details the 109 actions, aimed at ensuring that a cycling culture is developed 	<ul style="list-style-type: none"> Sets a target where 10% of all journeys will be made by bike by 2020 Proposes the planning, infrastructure, communication, education and stakeholder participations measures required to implement the initiative
National Policy Framework for Alternative Fuels Infrastructure for Transport in Ireland 2017 to 2030	<ul style="list-style-type: none"> This National Policy Framework on Alternative Fuels Infrastructure for Transport represents the first step in communicating our longer-term national vision for decarbonising transport by 2050, the cornerstone of which is our ambition that by 2030 all new cars and vans sold in Ireland will be zero-emissions capable. By 2030 it is envisaged that the movement in Ireland to electrically-fuelled cars and commuter rail will be well underway, with natural gas and biofuels developing as major alternatives in the freight and bus sectors. 	<ul style="list-style-type: none"> This policy set out to achieve five key goals in transport: <ul style="list-style-type: none"> Reduce overall travel demand Maximise the efficiency of the transport network Reduce reliance on fossil fuels Reduce transport emissions Improve accessibility to transport These goals remain the cornerstone of transport policy and are fully aligned to the objectives of this National Policy Framework.

Strategy, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower-level objectives, actions etc.
Tourism Action Plan 2019-2021	The Tourism Action Plan 2019-2021 sets out actions that the Tourism Leadership Group has identified as priorities to be progressed until 2021 in order to maintain sustainable growth in overseas tourism revenue and employment. Each action involves specific tourism stakeholders, both in the public and private sectors, all of whom we expect to proactively work towards the completion of actions within the specified timeframe.	<p>The Plan contains 27 actions focusing on the following areas:</p> <ul style="list-style-type: none">• Policy Context• Marketing Ireland as a Visitor Destination• Enhancing the Visitor Experience• Research in the Irish Tourism Sector• Supporting Local Communities in Tourism• Wider Government Policy• International Context• Co-ordination Structures
Tourism Policy Statement: People, Place and Policy – Growing Tourism to 2025	The main goal of this policy statement is to have a vibrant, attractive tourism sector that makes a significant contribution to employment across the country; is economically, socially and environmentally sustainable; helps promote a positive image of Ireland overseas, and is a sector in which people want to work.	<p>The Tourism Policy Statement sets three headline targets to be achieved by 2025:</p> <ul style="list-style-type: none">• Overseas tourism revenue of €5 billion per year net of inflation excluding carrier receipts;• 250,000 people employed in tourism; and• 10 million overseas visitors to Ireland per year.
Draft Renewable Electricity Policy and Development Framework (DCCAE)	Goal: To optimise the opportunities in Ireland for renewable electricity development on land at significant scale, to serve both the All-Island Single Electricity Market and any future regional market within the European Union, in accordance with European and Irish law, including Directive 2009/28/EC: On the promotion of the use of energy from renewable resources.	<ul style="list-style-type: none">• Objective: To develop a Policy and Development Framework for renewable electricity generation on land to serve both the All-Island Single Electricity Market and any future regional market within the European Union, with particular focus on large scale projects for indigenous renewable electricity generation. This will, inter alia, provide guidance for planning authorities and An Bord Pleanála.• Methodology: Development of the Policy and Development Framework is to be informed by the carrying out of an SEA, including widespread consultation with stakeholders and public, and with AA under the Habitats Directive.
National Alternative Fuels Infrastructure for the Transport Sector (DTTAS) 2017- 2030	This Framework sets targets to achieve an appropriate level of alternative fuels infrastructure for transport, which is relative to national policy and Irish market needs. Non-infrastructure-based incentives to support the use of the infrastructure and the uptake of alternative fuels are also included within the scope of the Framework.	<p>Targets for alternative fuel infrastructure include the following:</p> <ul style="list-style-type: none">• AFV forecasts• Electricity targets• Natural gas (CNG, LNG) targets• Hydrogen targets• Biofuels targets• LPG targets• Synthetic and paraffinic fuels targets
People Place and Policy - Growing Tourism to 2025, (DTTAS, 2014)	Growing Tourism to 2025 is a policy framework for the development of tourism within the Country.	<p>The framework establishes the overall tourism goal of Government;</p> <ul style="list-style-type: none">• Employment in the tourism sector will be 250,000 by 2025, compared with around 200,000 at present.• There will be 10 million visits to Ireland annually by 2025.• The Government’s ambition is that overseas tourism revenue will reach €5 billion in real terms by 2025.
Waterways Ireland Heritage Plan 2016-2020	The overarching aim of the Plan is to: “Identify and protect the unique waterways heritage and promote its sustainable use for the enjoyment of this and future generations”.	<p>Four objectives of the Plan include the following:</p> <p>Objective 1: Fostering partnerships to continue building waterway heritage knowledge through storing information, undertaking research and developing best practice.</p> <p>Objective 2: Promoting awareness, appreciation and enjoyment of our waterway heritage with a focus on community engagement.</p> <p>Objective 3: Promoting the integrated management, conservation, protection and sustainable use of the inland navigable waterway asset.</p> <p>Objective 4: To develop Waterways Ireland as a heritage organisation committed to achieving the aim of this plan.</p>

Strategy, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower-level objectives, actions etc.
Tourism Development and Innovation – A Strategy for Investment 2016-2022, (Fáilte Ireland, 2016)	This strategy sets out the framework and mechanism for the delivery of investment to cities, towns, villages, communities and businesses across the country. It identifies priorities to support innovation in the sector to retain and grow the country's competitiveness in the marketplace. Its ultimate aim is to strengthen the appeal of Ireland for international visitors.	<p>The objectives of the Tourism Development and Innovation Strategy are:</p> <ul style="list-style-type: none"> To successfully and consistently deliver a world class visitor experience; To support a tourism sector that is profitable and achieves sustainable levels of growth and delivers jobs; To facilitate communities to play an enhanced role in developing tourism in their locality, thereby strengthening and enriching local communities; and To recognise, value and enhance Ireland's natural environment as the cornerstone of Irish tourism.
Marine Planning Development Management Bill (General Scheme), 2019	The Bill seeks to establish in law a completely new regime for the maritime area which will replace existing State and development consent regimes and streamline arrangements on the basis of a single consent principle.	One of the aims is to establish a legal basis for An Bord Pleanála and coastal local authorities to consent to development in the maritime area, while retaining existing foreshore and planning permission provisions for aquaculture and sea fisheries related development. It will also provide for a single environmental impact assessment (EIA) and a single appropriate assessment (AA), where applicable.
National Seafood Operational Programme (2014-2020)	<ul style="list-style-type: none"> The Operational Programme (OP) supported by the European Maritime and Fisheries Fund (EMFF) in Ireland aims at achieving key national development priorities along with the EU's "Europe 2020" objectives. The OP supports the general reform of the EU's Common Fisheries Policy (CFP) and the development of its Integrated Maritime Policy (IMP) in Ireland. The OP strategy is designed around the Irish national priorities in the agri-food sector: 'Act Smart' by encouraging knowledge and innovation, 'Think Green' through a responsible and sustainable use of resources, 'Achieve Growth' in order to maintain and create jobs. 	<p>The Irish OP is organised around the following priorities:</p> <ul style="list-style-type: none"> Union Priority 1 (UP1): €67 million (28% of the total allocation) aim at assuring the sustainable development of fishing activities, while protecting the marine environment. Union Priority 2 (UP2): €30 million (12% of the total allocation) will support the Irish National Strategic Plan for Aquaculture that aims at boosting the competitiveness of the aquaculture sector. Union Priority 3 (UP3): €84.8 million (35.4% of the total allocation) will go towards compliance with CFP rules regarding control and data collection. Union Priority 4 (UP4): €12 million (5% of the total allocation) will support local development initiatives — a substantial, eleven-fold increase compared to the 2007- 2013 funding period. Union Priority 5 (UP5): €33 million (13.8% of the total allocation) will go towards creating scale in the Irish marketing and processing sectors, starting from the base of very small-scale businesses. Union Priority 6 (UP6): €10.6 million (4% of the total allocation) will be used on measures to improve the knowledge on the state of the marine environment and the level of protection of marine areas.
Harnessing Our Ocean Wealth: An Integrated Marine Plan for Ireland 2012	Harnessing Our Ocean Wealth is an Integrated Marine Plan (IMP), setting out a roadmap for the Government's vision, high-level goals and integrated actions across policy, governance and business to enable our marine potential to be realised. Implementation of this Plan will see Ireland evolve an integrated system of policy and programme planning for our marine affairs.	<ul style="list-style-type: none"> Sustainable economic growth of marine/ maritime sectors; Increase the contribution to the national GDP; Deliver a business friendly yet robust governance, policy and planning framework; Protect and conserve our rich marine biodiversity and ecosystems; Manage our living and non-living resources in harmony with the ecosystem; Implement and comply with environmental legislation; Building on our maritime heritage, strengthen our maritime identity; Increase our awareness of the value, opportunities and societal benefits; and Engagement and participation by all.
All Ireland Pollinator Plan 2015-2020 and 2021-2025 (in preparation)	<p>The All-Ireland Pollinator Plan is an island-wide attempt to reverse declines in pollinating insects to ensure the sustainability of our food, avoid additional economic impacts on agriculture, and protect the health of the environment.</p> <p>The main objectives include:</p> <ul style="list-style-type: none"> Making farmland, public land and private land in Ireland pollinator friendly; Raising awareness of pollinators and how to protect them; Managed pollinators – supporting beekeepers and growers; Expanding our knowledge of pollinators and pollination service; and Collecting evidence to track change and measure success. 	<ul style="list-style-type: none"> This voluntary Plan identified 81 actions, shared out between over 100 governmental and non-governmental organisations. A large focus of the Plan is to identify actions to improve the quality and amount of flower-rich habitat. Actions range from creating pollinator highways along our transport routes, to supporting pollinators on farmland, in gardens, businesses, and on public land.

Table 19: Regional/County Level Strategies and Plans.

Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower-level objectives, actions etc.
Regional Economic and Spatial Strategy for the Southern Region: 2020-2032	The Regional Spatial and Economic Strategy provides a long-term strategic planning and economic framework for the Southern Region to support the implementation of the National Planning Framework.	The Southern Regional Economic and Spatial Strategy includes provisions for its ten constituent local authorities: Carlow County Council; Kilkenny County Council; Wexford County Council; Waterford County Council; Cork County Council; Cork City Council, Kerry County Council; Tipperary County Council, Limerick County Council and Clare County Council.
NPWS Conservation Plans and/or Conservation Objectives for SACs and SPAs	<p>Management planning for nature conservation sites have several aims, including:</p> <ul style="list-style-type: none"> To identify and evaluate the features of interest for a site To set clear objectives for the conservation of the features of interest To describe the site and its management To identify issues (both positive and negative) that might influence the site To set out appropriate strategies/management actions to achieve the objectives 	<ul style="list-style-type: none"> Conservation objectives for SACs and SPAs (European sites within the Natura 2000 network) have to be set for the habitats and species for which the sites are selected. These objectives are used when carrying out appropriate assessments for plans and projects that might impact on these sites. Note that the Cliffs of Moher SPA currently has 'generic' Conservation Objectives, as opposed to site-specific ones.
Groundwater Protection Schemes	A Groundwater Protection Scheme provides guidelines for the planning and licensing authorities in carrying out their functions, and a framework to assist in decision-making on the location, nature and control of developments and activities in order to protect groundwater.	A Groundwater Protection Scheme aims to maintain the quantity and quality of groundwater, and in some cases improve it, by applying a risk assessment-based approach to groundwater protection and sustainable development.
Clare County Development Plan 2023-2029	<ul style="list-style-type: none"> Outline planning objectives for land use development. Strategic framework for planning and sustainable development including those set out in National Planning Framework and Regional Economic and Spatial Strategy for the Southern Region. Set out the policies and proposals to guide development in the relevant area. 	<ul style="list-style-type: none"> Identify future infrastructure, development and zoning required. Protect and enhances amenities and environment. Guide planning authority in assessing proposals. Aim to guide development in the area and the amount of nature of the planned development. Aim to promote sustainable development. Provide for economic development and protect natural environmental, heritage.
Galway County Development Plan 2022-2028	<ul style="list-style-type: none"> Outline planning objectives for land use development. Strategic framework for planning and sustainable development including those set out in National Planning Framework and Regional Economic and Spatial Strategy for the Northern and Western Region. Set out the policies and proposals to guide development in the relevant area. Chapter 13 of the Galway County Development Plan 2022-2028 deals with the provisions for strategic development and a related range of policy objectives for the 'Galway Gaeltacht and Islands'. The Aran Islands are of direct relevance for the Cliffs of Moher Strategy 2040 because of their proximity and tourism links, including Aran Islands and Cliffs of Moher ferry excursions from Doolin Pier. 	<ul style="list-style-type: none"> Identify future infrastructure, development and zoning required. Protect and enhances amenities and environment. Guide planning authority in assessing proposals. Aim to guide development in the area and the amount of nature of the planned development. Aim to promote sustainable development. Provide for economic development and protect natural environmental, heritage.
Clare County Local Economic and Community Plan (LECP) 2016-2021	The overarching vision for the LECP is to support and facilitate local economic and community development to achieve "A county that, for all its people: nurtures an ethos of wellbeing, social inclusion and creativity; cherishes and sustains, for future generations, its environmental inheritance; fosters entrepreneurship and provides quality employment; offers cutting-edge research and development challenges, while providing education and training opportunities that are inspirational and accessible".	<p>The LECP sets out 14 no. High Level Goals to facilitate the achievement of the Vision for Clare under 5 no. Themes:</p> <ul style="list-style-type: none"> Economic Development, Employment and Enterprise Quality of Life, Health and Wellbeing Education and Training Research and Development Climate Change and Energy
County Clare Landscape Character Assessment and Landscape Character Assessments in adjoining counties	Characterises the geographical dimension of the landscape.	<ul style="list-style-type: none"> Identifies the quality, value, sensitivity and capacity of the landscape area. Guides strategies and guidelines for the future development of the landscape.

Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower-level objectives, actions etc.
Clare County Heritage Plan 2017-2022	<p>The aim of the Clare County Heritage and Biodiversity Plan 2017- 2022 is “to create awareness and understanding, leading to a greater appreciation, enjoyment and ownership of our natural, cultural, built and community heritage to optimise the opportunities that derive from the unique character of County Clare’s heritage”.</p> <p>Overarching objectives are:</p> <ul style="list-style-type: none">• Identify, manage and conserve heritage for the benefit of all• Collect and make available heritage information• Raise awareness through education initiatives• Acquire knowledge through surveys and research• Inform public policy on heritage• Support the strategic and integrated management of heritage at a local level.	<p>Actions to achieve the objectives set are specified under the following 6 no. themes:</p> <ul style="list-style-type: none">• Community• Training and Education• Sustainable Tourism• Biodiversity, Climate Change and Green Infrastructure Planning• Built Heritage• Cultural Heritage.
Clare County Biodiversity Action Plan 2017-2023	<p>The Clare County Biodiversity Action Plan 2017-2023 complements the Heritage Plan 2017-2022 and identifies and translates the actions of the National Biodiversity Plan which relate to County Clare and ensures that they are implemented at the local level.</p>	<ul style="list-style-type: none">• To implement the actions of Ireland’s National Biodiversity Action Plan 2017-2021 as they relate to County Clare;• To inform all biodiversity projects undertaken as part of the County Clare Heritage Plan 2017-2023 and support its full implementation;• To ensure the Clare County Biodiversity Action Plan 2017-2023 fully informs all planning policy within the County, including the biodiversity objectives in the Clare County Development Plan 2017-2023;• To produce best practice guidelines on biodiversity conservation and management for all sections of Clare County Council;• To ensure that all projects carried out under the Clare County Biodiversity Action Plan 2017-2023 comply with the requirements of the Habitats Directive, and all other legislation as appropriate
Clare County Renewable Energy Strategy 2017-2023 (LARES)	<p>LARES outlines the potential for a range of renewable resources, including bioenergy and anaerobic digestion, micro renewables, geothermal, solar, hydro, energy storage, onshore and offshore wind, wave and tidal energy.</p>	<p>The LARES sets out 8 no. Strategic Aims.</p> <ul style="list-style-type: none">• To support the attainment of and to exceed in County Clare, where possible, the National targets and commitments to renewable energy;• To identify/highlight the opportunities for various renewable energy technologies and resources and identify broad areas suitable for their development in full compliance with the requirements of all environmental legislation including the requirements of the Strategic Environmental Assessment Directive, Habitats Directive and Water Framework Directive;• To provide an evidence-based strategy founded on understanding the local feasibility and potential for renewable and low carbon technology, predicated upon optimising the County’s natural and socio economic, advantages and key assets, core skills, and nearby research institutes;• To maximise the opportunities for renewable energy development whilst safeguarding the environment and existing residential amenities;• To safeguard, where appropriate, areas with potential for renewable energy projects and to guide renewable energy development to preferred locations;• To set out policies and objectives for the main renewable sectors subject to Strategic Environmental Assessment (SEA) and Habitats Directive Assessment (HDA) requirements;• To provide guidance on energy efficiency and conservation;• To provide a clear development management framework

Legislation, Plan, etc.	Summary of high-level aim/ purpose/ objective	Summary of lower-level objectives, actions etc.
Clare County Noise Action Plan 2018	The Noise Action Plan addresses environmental noise from major roads and is prepared in accordance with the EU Noise Directive (EU Directive 2002/49/EC).	<ul style="list-style-type: none">• To endeavour to manage the existing noise environment and protect the future noise environment within the action planning area.• Management of the existing noise environment may be achieved by prioritizing areas for which further assessment and possible noise mitigation may be required.• Protection of the future noise environment may be achieved by acoustical planning, which further incorporates noise into the planning process via measures such as land-use planning, development planning, sound insulation measures, traffic planning and control of environmental noise sources.
Fáilte Ireland Tourism plans, strategies, including those relating to the Wild Atlantic Way	Fáilte Ireland’s work includes preparing various plans and strategies for Ireland’s Wild Atlantic Way and other brands and initiatives. These plans are subject to their own environmental assessment processes and any project arising is required to be consistent with and conform with the provisions of all adopted/approved Statutory Policies, Strategies, Plans and Programmes, including provisions for the protection and management of the environment.	<ul style="list-style-type: none">• Some of Fáilte Ireland’s plans and strategies include various projects relating to land use and infrastructural development, including those relating to development of land and the carrying out of land use activities. Many of these projects exist already while some are not currently in existence.• The Statutory Policies, Strategies, Plans and Programmes that provide for different projects undergo a variety of environmental assessments. These assessments ensure that environmental effects are considered, including those arising from new and intensified uses and activities; and those arising from various sectors such as tourism.

8.o MITIGATION MEASURES TO PROTECT NATURA 2000 SITES

This section of the report identifies mitigation measures that aim to avoid or minimise potential significant negative effects that may arise due to the implementation of the Cliffs of Moher 2040 Strategy. In many cases, elements of existing legislation will provide environmental protection against the pressures of development. These regulatory requirements will form the primary means of mitigating against the significant impacts of the Strategy, especially at regional level. Where it has been deemed necessary, supplementary mitigation measures have been identified and described here. Proposed mitigation is aligned with, and has been drawn up in parallel with the allied SEA Environmental Report.

A Improvements to, or new infrastructure outside of the Cliffs of Moher site

Inherent mitigation applies in the case of proposals for new or updated infrastructure, as all planning authorities and relevant stakeholders are statutorily required to comply with relevant planning policies and statutory requirements. In the majority of cases, proposals to introduce new infrastructure should be subject to environmental assessment, which at site level, should take into account the existing baseline ecological conditions of the site, the ecological value of on-site features, and contain bespoke mitigation and environmental protection measures to protect site and local ecology/biodiversity. Appropriate Assessment may be required in certain cases where:

- Any Natura 2000 site lies within or adjacent to the project area, or,
- Any Natura 2000 site lies within the likely zone of impact of the project. The distance of the zone of impact (or zone of influence ZOI) should be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in-combination effects.

B Redevelopment of the Cliffs of Moher site and/or improvements to existing infrastructure

Re-development of the Cliffs of Moher Visitor site will require project-specific Appropriate Assessment which should consider the nature conservation implications of each action/proposal before the decision is made to allow the projects(s) to proceed (DoEHLG, 2009).

Certain aspects of the site redevelopment have the potential to result in positive impacts upon the SCI species of the Cliffs of Moher SPA. For instance, the proposed setting back of the cliff-top pathway, whilst aiding the habitat restoration programme (see D below), will effectively move people away from the cliff top and reduce disturbance to seabirds, Chough and Peregrine. Overall, this could lead to better protection of habitats, lower disturbance to cliff-dwelling species such as seabirds, Chough and Peregrine, and will aid in the restoration of favourable conservation condition of the Special Conservation Interests of the Cliffs of Moher SPA’.

C Climate change

The Cliffs of Moher Experience Climate Action Strategy should set targets on greenhouse gas emissions, renewable energy and energy efficiency in line with EU and Ireland Public Sector targets set in the Public Sector Climate Action Strategy. The Strategy should comply with the most up to date Climate Action Plan, National Climate Change Adaptation Framework and National Mitigation Plan, including contributing towards efforts to

decarbonise the tourism sector, and improve low carbon travel, such as clean alternatively fuelled vehicles, walking and cycling. An Environmental Monitoring Programme is recommended which should include *inter alia* the monitoring of noise, groundwater, ambient air quality, greenhouse gas emissions, renewable energy and energy efficiency in the area.

Proposed Park and Ride facilities and shuttle bus services serving the Cliffs of Moher site and wider hinterland should prioritise the use of electric vehicles. Clean (alternatively fuelled) buses will offer considerable advantages. Reductions in emissions of greenhouse gases, air pollutants and noise have the potential to bring about considerable public health benefits as well as resulting in positive environmental impacts.

D Habitat management

A Habitats Management Plan is required to identify key actions and indicators as well as the provision for periodic monitoring/survey of parts of the site that will be subject to habitat restoration.

Restoration of habitats at the Cliffs of Moher lies at the very core of the Cliffs of Moher 2040 Strategy. While one aim is to ‘create a wilder, back to nature experience’ for visitors, it is well recognised that the natural cliff-top habitats within the site have been subject to considerable erosion as a result of the existing cliff-top pathway. In addition, the agricultural grasslands within the site have been intensively managed for decades and could be managed in a less intensive and more appropriate way for foraging Chough.

Choughs are specialist feeders of soil invertebrates and are thus susceptible to changes in land use and agricultural practices which affect abundance and accessibility of invertebrate prey (Hayhow et al. 2018). The link between short-cropped grass (grazing) and Chough foraging success is well documented, as is the requirement for the presence of animal dung; invertebrates and invertebrate larvae within dung being a food source. Management practices such as grazing, short-cropped grass, and animal dung will form important components of a habitat management plan for Chough, along with avoidance of macrocyclic lactone (ML) cattle treatments (Avermectins) which are known to reduce/kill invertebrates. Restoration of cliff-top habitats will also result in positive impacts upon Chough as foraging successfully close (<300m) to cliff ledge nest sites is important during the period of feeding chicks (e.g. Kerbiriou et al. 2006; Carroll et al. 2010).

The proposed Habitats Management Plan should be prepared in consultation and agreement with the NPWS, and/or integrated with any Management Plan that is being developed for the Cliffs of Moher SPA by NPWS.

E Protection and conservation of species of special conservation interest

The birdlife and biodiversity of the Cliffs of Moher are as renowned and important as the rich landscape and geological heritage of the site. The Cliffs of Moher 2040 Strategy recognises this importance and proposals to undertake habitat and visitor management will reinforce commitments to protect the designated habitats and protected species. We recommend that a formal Bird Survey Programme be developed to identify key actions, status and indicators. This programme should be developed in consultation with the National Parks and Wildlife Service. This programme should include the provision for continued monitoring of the Chough, Peregrine and seabird populations at the site. Given that the conservation condition (status) of Peregrine and Chough within the Cliffs of Moher SPA is unfavourable (compared to the baseline status), the required target is to increase numbers of breeding pairs of both species within the SPA. This mitigation action will also strengthen

opportunities for conservation research, monitoring and education and has the potential to be an exemplar of habitat and species restoration projects along the Wild Atlantic Way.

The Cliffs of Moher should seek to develop structured relationships with local communities and key stakeholders to embed a mutual understanding of, and commitment to, the importance of restoring and conserving the habitats, soils, geology, water resources, sustainable transport modes and landscape of the Cliffs of Moher and environs.

F **Seabird watching/viewing and code of conduct**

To remove the potential for disturbance to nesting seabirds, a formal code of conduct for ferries, cruises and other boats which operate trips to the Cliffs of Moher should be developed and put into practice, with each boat operator signing up and following the code of conduct thereafter.

Disturbance can cause long-term negative effects upon nesting seabirds (e.g. Jarrett et al., 2022) due to the energetic costs of disturbance (i.e. increased energy expenditure from moving away from source of disturbance), (ii) a reduction in efficient foraging and consequent reduction in prey caught and rate of provisioning chicks, and (iii) increased stress in response to disturbance. Seabirds leaving their nesting or roosting sites is a common consequence of disturbance. This results in chicks becoming more vulnerable to predation while the adults are away - eggs are not being incubated, hatching is delayed and/or eggs are knocked off the cliff. Furthermore, it has been known for frightened seabird chicks to fall off their cliff ledge sites in response to boat-based disturbance.

The seabird watching code of practice should be prepared by experienced seabird ecologists and in consultation with the National Parks and Wildlife Service.

G **Direct habitat creation - provision of nesting habitat**

The reasons why Choughs are taking up nest sites in buildings, often unused old agricultural sheds, as opposed to the more ‘traditional’ cliff nesting sites is not known. The use of farm sheds and barns appears to have increased in Ireland over the last decade or so. Recent work for the 2021 national Chough survey found an increasing proportion of West Cork Choughs now favouring farm buildings, including some buildings that are in use (C. Heardman pers. comm). Scott (2020) purported that the decline in breeding pairs on Dursey Island may have been linked to increased mortality of adult birds during the exceptionally severe weather in early March 2018 when severe cold for this area led to snow cover for several days and an inability therefore for Chough to forage, leading to birds in poor condition or starvation. With climate change we are seeing an increase in winter storms. For a species traditionally adapted to cliff-top and coastal living, could the increase in Chough moving inland to nest in buildings be linked to the birds simply retreating from severe weather?

To aid the recovery of the species at the Cliffs of Moher SPA (see also point E above) we recommend the provision of a disused farm building(s) at a suitable location within the site. The building should be enclosed with no human access and should be provisioned with a nest box, and under licence and NPWS guidance, could be fitted with a nest camera, which could replay live images back to the Visitor Centre for visitors to gain an intimate experience with this special and protected species during the nesting season. While this is not a novel idea (see <https://www.npws.ie/news/nestflix-and-chill-new-live-stream-nature-lovers-npws>), this would provide potential important Chough nesting habitat while providing visitors with a special encounter with the

species. Under licence and guidance of NPWS, Chough chicks could also be colour-ringed, which provides a way of uniquely colour marking individual birds – useful for future monitoring of the site population.

H **Visitor Management – Cliffs of Moher**

A core objective of the Strategy is to ‘encourage visitors to stay longer in the area and facilitate greater benefits and investment into local towns and villages.’ In addition, the Strategy aims to increase visitor numbers at the Cliffs of Moher during quieter times or off-peak seasons, while capping the numbers of visitors at peak times. Notwithstanding the positives, a Visitor Management Plan should be developed and implemented to include an annual monitoring programme which determines the length of visitor stay in at the Cliffs of Moher site and within the wider area.

Within the site itself, the layout of new walk paths and facilities such as viewing points, cantilever walk paths etc. needs to carefully identify both the areas/locations where visitor numbers/walkers can be increased without causing negative impacts to SCI species, and also what areas should be avoided, for example, areas close to nesting SCI species. It may be necessary for seasonal visitor management practices to be put in place, for example, excluding visitors from areas close to Chough nest sites during the period of time when the parent birds are feeding their young.

I **Visitor Management – local and regional**

Article 6 of the Habitats Directive requires that Member States establish the necessary conservation measures for European sites involving, if needs be, management plans specifically designed for the sites or integrated into other development plans. Fáilte Ireland and local authorities should engage with the National Parks and Wildlife Service in order to ensure that where Strategy objectives will result in increased visitor numbers to Natura 2000 sites, that management measures and measures to prevent disturbance to habitats and wildlife are in place. One action, for example, could be a collaborative, regional/national public educational campaign on the seriousness of disturbance to wintering and breeding waterbirds, with practical and achievable management methods aiming to result in lowered occurrences of this type of negative impact.

J **Management of Invasive species**

The Cliffs of Moher site does not currently support any invasive, alien species (IAS species). Development of the site, however, leads to the risk that such species may be introduced accidentally via vehicles, machinery or materials. To safeguard this happening, the future undertaking of site projects should be accompanied by a project-specific Construction Environmental Management Plans (CEMP) which contain measures to prevent the introduction and spread of IAS. The proposed habitat management plan should contain an early-warning system that sets out procedures/monitoring to identify the occurrence of IAS species at the earliest possibility, including the training of site staff to identify such species.

9.0 MITIGATION SUMMARY TABLES

Core objectives

Mitigation Summary – Core Objectives is presented in Table 20 below.
Rewilding an enlarged landholding/arriving at the site

Mitigation Summary – Strategy Objectives is presented in Table 21 below.

New gateway reception building/The interpretation Hub (repurposed existing visitor centre building)

Mitigation Summary – Strategy Objectives is presented in Table 22 below.

The Skywalk and hinterland/O’Briens Tower and wetland habitat

Mitigation Summary – Strategy Objectives is presented in Table 23 below.

On the plateau/The escarpment/The escarpment to Pollboy

Mitigation Summary – Strategy Objectives is presented in Table 24 below.

Northern loop/Southern cliff walk

Mitigation Summary – Strategy Objectives is presented in Table 25 below.

Table 20: Mitigation Summary – Core Objectives. Letters assigned to the relevant Natura 2000 (European) sites relate to the mitigation measures described in Section 8. Blank cells mean that no mitigation is required (no identified potential impacts).

Core Objectives	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	'The Aran Islands'	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Enhancing Economic Benefits Across the Region											
• Encourage visitors to stay longer in the area and facilitate greater benefits and investment into local towns and villages.	B, C, H	A, C, I	A, C, I	A, C, I	A, C, I	A, C, I	A, C, I	A, C, I	A, C, I	A, C, I	A, C, I
• Develop enhanced partnerships and greater coordination between the Cliffs of Moher Experience and Local Businesses and Communities.	B, C, E, H	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I
• Align with the Local, Regional and National policy priorities to create high quality visitor experiences within the county.											
• Minimise adverse impacts on local communities.											
• Sustainably increase tourism revenue across the season	B, C, E, F, H	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I	A, C, E, F, I
Optimising the World-Class Experience											
• Deliver a world-class tourism model in which audience needs and satisfaction are central.											
• Offer excellent value for money in delivering a sequence of memorable experiences that prioritise exhilarating encounters with the cliffs and immersion in untamed nature.											
• Provide an enhanced landscape interpretation through a network of safe graded walks and enhanced landscape interpretation.	B, D, H										
• Develop targeted event and activity packages.	H										
Transforming the Natural Landscape											
• Conserve and highlight the beautifully rugged and ecologically rich habitats of the cliffs.											
• Rewilding and recovery of the natural environment will enhance the biodiversity value as well as increase its aesthetic appeal for a wide range of audiences.	D, E, G										
• Proactive habitat and visitor management will reinforce commitments to protect designated habitats and protected species and associated ecological corridors/linkages at the Cliffs of Moher site and wider area.											
• Strengthen opportunities for conservation research, monitoring and education through strategic partnerships.											
• Protecting the cultural authenticity and wildness of the natural assets.											
Providing Sustainable Access											

Core Objectives	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	'The Aran Islands'	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
<ul style="list-style-type: none"><i>New Park and Ride hub and shuttle service for visitors to the Cliffs of Moher as part of an integrated transport system for the wider area.</i>	B, C			A, C	A, C						
<ul style="list-style-type: none"><i>At the Cliffs of Moher site, the provision of new and enhanced facilities, services and network of walkways and features, will facilitate sustainable and enhanced universal access for all visitors.</i>	B, D, E, H										
<ul style="list-style-type: none"><i>Cliffs of Moher Coastal Walk and the development of greenways present opportunities for sustainable access links with the Cliffs of Moher site.</i>	B, C, D, E, H										
<ul style="list-style-type: none"><i>Managing visitors across the wider area.</i>	H	I	I	I	I	I	I	I	I	I	I
<ul style="list-style-type: none"><i>Provide valuable community amenities.</i>	A, B										
<ul style="list-style-type: none"><i>Attracting visitors, increasing visitor revenue, and transforming the economic and social future of the towns, villages and rural areas around the region.</i>	B, C, H	A, C, I	A, C, I	A, C, I	A, C, I	A, C, I	A, C, I	A, C, I	A, C, I	A, C, I	A, C, I

Table 21: Mitigation Summary – Strategy Objectives. Letters assigned to the relevant Natura 2000 (European) sites relate to the mitigation measures described in Section 8. Blank cells mean that no mitigation is required (no identified potential impacts).

Objectives: Rewilding an enlarged landholding/arriving at the site	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Enhancing Economic Benefits Across the Region											
<ul style="list-style-type: none"> Clare County Council has begun negotiations for the purchase or leasing of an extended landholding to facilitate an improved Visitor Experience. 	B										
Optimising the World-Class Experience											
<ul style="list-style-type: none"> The topography is manipulated throughout by contour modification and berming to screen the impacts of the reception building and parked vehicles. 	B, D, E										
<ul style="list-style-type: none"> The approach will also facilitate the managed dispersal of visitors across the site, creating more space and opportunities for an intimate “back to nature” experience with the cliffs. 	B, D, E, H										
Transforming the Natural Landscape											
<ul style="list-style-type: none"> This strategy presents a unique opportunity to enhance the biodiversity value and aesthetic appeal of the site through “rewilding” of the landscape. 	B, D, E, G										
<ul style="list-style-type: none"> With appropriate management, the landscape can be brought back to a naturally variable mosaic of grassland, heathland and scrub habitats. 	B, D, E										
<ul style="list-style-type: none"> There are significant opportunities to form partnerships with adjacent landowners to achieve further habitat improvement along the full extent of the coastal walk in the future. 	B, D, E										
<ul style="list-style-type: none"> Clare County Council will provide an ongoing commitment and the necessary resources to support appropriate habitat management, including providing specialist ecological stewardship by an experienced land manager and implementing a new Habitat Management Plan. 	B, D, E, G										
Providing Sustainable Access											
<ul style="list-style-type: none"> The new Cliffs of Moher site has been designed to anticipate 10,500 visitor per day at peak, new shuttle services from remote car parks to deliver 3,300 visitors per day at peak, coach facilities to deliver 3,300 visitors per day at peak, onsite car parking deliver 3,300 visitors per day at peak, and a significant seasonal change from days with high visitor numbers to low visitor numbers. 	B, C, H			A, C	A, C						
<ul style="list-style-type: none"> Bus drop-off for eight coaches with parking allocation for 30-40 more coaches of various sizes is provided, with separate building access. 	B, C, H										
<ul style="list-style-type: none"> A surface car park for 450 cars with separate building access. 	B										

Objectives: Rewilding an enlarged landholding/arriving at the site	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
<ul style="list-style-type: none">A delivery area and separate staff car park is located to the southeast of the proposed new Gateway Reception building, at a lower level.	B										

Table 22: Mitigation Summary – Strategy Objectives. Letters assigned to the relevant Natura 2000 (European) sites relate to the mitigation measures described in Section 8. Blank cells mean that no mitigation is required (no identified potential impacts).

Objectives: New gateway reception building/The interpretation Hub (repurposed existing visitor centre building)	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Enhancing Economic Benefits Across the Region											
<ul style="list-style-type: none"> The new Gateway Reception building creates a concealed enclosed courtyard at its centre, protected from the winds and will allow outdoor activities to develop that are not currently possible at the site, including facilitating an extension of the restaurant and retail on peak days. 	B										
<ul style="list-style-type: none"> The existing Visitor Centre building (anticipated net building area extending to circa 2,700 sq m over 2 floors) will be reorganised to be an Interpretation Hub, which will focus on providing an updated interpretative exhibition with additional facilities for education and groups. 	B										
Optimising the World-Class Experience											
<ul style="list-style-type: none"> Once visitors have passed into and through the Gateway Reception building, they will partake of the core Cliffs of Moher Experience and leave the world of cars and buses behind. 											
Transforming the Natural Landscape											
<ul style="list-style-type: none"> Vehicular traffic needed to sustain activities at the existing Visitor Centre building will be minimised and a significant reduction in hard landscaping around that building can therefore be achieved, in keeping with the ambition to rewild as much of the landscape as possible. 											
Providing Sustainable Access											
<ul style="list-style-type: none"> The new Gateway Reception Building (anticipated net building area extending to circa 3300 sq m over 2 floors) creates a critical threshold between the visitor arriving at the site and entering the site. 											
<ul style="list-style-type: none"> The new building itself screens the visual impact of parked vehicles. 											
<ul style="list-style-type: none"> The restaurant has an external patio that enjoys views of the western landscape. 											
<ul style="list-style-type: none"> The masterplan foresees a revised role for the existing Visitor Centre, where it will no longer be at the centre of the Cliffs of Moher Experience, with most primary visitor functions being provided in the new Gateway Reception building. 											
<ul style="list-style-type: none"> The existing Visitor Centre building will continue to play an important role in offering shelter in inclement weather and it will maintain an enlarged seasonal café with panoramic view. 											

Table 23: Mitigation Summary – Strategy Objectives. Letters assigned to the relevant Natura 2000 (European) sites relate to the mitigation measures described in Section 8. Blank cells mean that no mitigation is required (no identified potential impacts).

Objectives: The Skywalk and hinterland/O'Briens Tower and wetland habitat	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Enhancing Economic Benefits Across the Region											
<ul style="list-style-type: none">Interpretative signage and rest/picnic opportunities will be provided.											
Optimising the World-Class Experience											
<ul style="list-style-type: none">O'Brien's observation tower will remain the focus point of the Cliffs of Moher Experience for many visitors as it enjoys a particularly strategic view of the southern headlands, and no physical changes at this location is foreseen.											
Transforming the Natural Landscape											
<ul style="list-style-type: none">The stone ledge in front of the existing visitor centre is of particular interest to geologists as there have been fossil finds at the location.											
<ul style="list-style-type: none">Within the circle of the skywalk, the topsoil will be removed to expose more of the clifftop ledge as a geological exhibition.											
Habitat remediation will occur within the double cantilever circle.											
<ul style="list-style-type: none">Historical maps indicate that there was once a freshwater lake to the east of O'Brien's Tower, and it is proposed to re-establish a freshwater wetland habitat at this location, which will benefit flora and fauna and create another natural feature for the visitor to engage with.											
Providing Sustainable Access											
<ul style="list-style-type: none">The stone ledge in front of the existing Visitor Centre has long been the focus of activity for visitors to the Cliffs of Moher and will be used as part of the geological exhibition.											
<ul style="list-style-type: none">The masterplan proposes the construction of a double cantilever skywalk at this location to bring the visitor out to experience the cliff-edge, without protruding over the cliff edge.	B										
<ul style="list-style-type: none">Visitors also have an excellent vantage point to enjoy a view of the southern headlands from this location.											
<ul style="list-style-type: none">A suspended pathway is designed to pass through the established wetland habitat east of O'Brien's Tower.	B										
<ul style="list-style-type: none">An inland cantilevered structure will be built south of the established wetland habitat to capitalise on the views from the existing raised promontory point and would be the end point of the revised primary site access route.	B										

Table 24: Mitigation Summary – Strategy Objectives. Letters assigned to the relevant Natura 2000 (European) sites relate to the mitigation measures described in Section 8. Blank cells mean that no mitigation is required (no identified potential impacts).

Objectives: On the plateau/The escarpment/The escarpment to Pollboy	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Enhancing Economic Benefits Across the Region											
<ul style="list-style-type: none"> <i>Interpretative signage and rest/picnic opportunities will be provided.</i> 											
Rationale: In itself, this objective is unlikely to result in significant impacts upon any Natura 2000 (European) sites.											
Optimising the World-Class Experience											
<ul style="list-style-type: none"> <i>Between O'Brien's Tower and the escarpment is an elevated plateau landscape that enjoys dramatic panoramic viewing opportunities.</i> 	B, H										
<ul style="list-style-type: none"> <i>From various locations in this landscape, the visitor can engage with views of the southern cliff headlands, views to Liscannor and Lahinch, views inland (eastward) and views to the Burren and North Clare from the trigonometry point.</i> 	B, H										
<ul style="list-style-type: none"> <i>The escarpment at the northern perimeter of the plateau is a natural elevated position from which the visitor can enjoy dramatic cliff views.</i> 	B, H										
<ul style="list-style-type: none"> <i>Views north to the Burren and North Clare from this location will give visitors a better understanding of the wider geographical context.</i> 	B, H										
<ul style="list-style-type: none"> <i>The viewing point at Pollboy offers an exceptional visitor experience as it is lower than the cliffs to the south and allows the visitor a vantage point of the cliff structure and the bird life that is unavailable elsewhere.</i> 	B, H										
Transforming the Natural Landscape											
<ul style="list-style-type: none"> <i>A new cliff-edge walk will be created further inland to improve visitor safety, allowing habitat remediation at the clifftop to be carried out where it is most critical foraging habitat for birds.</i> 	B, H										
<ul style="list-style-type: none"> <i>The landscape between the pathways will be rewilded and developed as an optimal foraging habitat for birds in terms of a dedicated Habitats Management Plan.</i> 	B, D, E, H										
<ul style="list-style-type: none"> <i>The visitor pathways will skirt around the edges of poorly drained landscape between the trigonometry point and the escarpment, identified as valuable foraging area for the Chough.</i> 	B, D, E, H										
<ul style="list-style-type: none"> <i>Additional routes from the trigonometry point to the escarpment will be developed to provide easier access for walkers with additional pathways constructed.</i> 	B, D, E, H										
Providing Sustainable Access											

Objectives: On the plateau/The escarpment/The escarpment to Pollboy	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
<ul style="list-style-type: none">Instead of the visitor experience being constricted to the current narrow clifftop walk, a new landscape of looped walkways offers more options to navigate through the habitats.	B, D, E, H										
<ul style="list-style-type: none">Looped walking routes of varying distance and duration can therefore be offered to visitors, based on their fitness level and willingness to engage with the climate.	B, D, E, H										
<ul style="list-style-type: none">Some engineered viewing platforms at optimal locations are proposed to bring the visitor back to the edge where views are particularly dramatic.	B, D, E, H										
<ul style="list-style-type: none">The trigonometry point will be developed as a primary "destination" point in the landscape with the addition of a significant sculptural feature and viewing platform.	B, D, E, H										
<ul style="list-style-type: none">An engineered cantilevered platform, not protruding over the cliff edge/face, will be constructed at the Cliff of the Foals to provide a safer opportunity to enjoy this particularly dramatic view.	B, D, E, H										
<ul style="list-style-type: none">Additional routes from the escarpment to the Pollboy lookout will be developed to provide easier access for walkers with additional pathways constructed.	B, D, E, H										
<ul style="list-style-type: none">On busy days the routes can be organised to into a one-way system, if necessary.	H										
<ul style="list-style-type: none">Where the coastal path engages with the R478 road, access will be provided for emergency services.	B										

Table 25: Mitigation Summary – Strategy Objectives. Letters assigned to the relevant Natura 2000 (European) sites relate to the mitigation measures described in Section 8. Blank cells mean that no mitigation is required (no identified potential impacts).

Objectives: Northern loop/southern cliff walk	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
Enhancing Economic Benefits Across the Region											
<ul style="list-style-type: none"> The Northern Loop connects with the coastal path to Doolin to the north and the threshold between the two projects shall be demarcated and signage provided. 											
<ul style="list-style-type: none"> The Southern Cliff Walk extends south of the current visitor centre for circa 1.5km and connects onto the coastal walk to Hags Head and Liscannor. 											
<ul style="list-style-type: none"> Interpretative signage and rest/picnic opportunities will be provided along these routes. 											
Optimising the World-Class Experience											
<ul style="list-style-type: none"> The northern loop could provide a considerable extension to the Cliffs of Moher Experience, offering the visitor a more remote walking experience, particularly on busy days, as it is not envisaged that all visitors will reach this far from the core facilities. 	B, D, E, H										
<ul style="list-style-type: none"> Core vantage points have been identified as viewing platforms along the Southern Cliff Walk. 	B, D, E, H										
Transforming the Natural Landscape											
<ul style="list-style-type: none"> The lands within the Northern Loop do not form part of the Cliffs of Moher 2040 Strategy. However, in partnership with the landowners, the strategy recommends exploring how this area could be included into a dedicated Habitats Management Plan being prepared. 											
<ul style="list-style-type: none"> The landscape between the pathways at the Southern Cliff-edge walk could be rewilded and developed as an optimal foraging habitat for birds in line with a dedicated Habitats Management Plan. 											
Providing Sustainable Access											
<ul style="list-style-type: none"> Lands to the north and south present further physical and ecological development opportunities. 											
<ul style="list-style-type: none"> Based on ongoing analysis of the clifftop stability, a new Southern Cliff-edge walk could be created further inland to allow habitat remediation at the clifftop where it is most critical for sea bird foraging. 											
<ul style="list-style-type: none"> Built interventions on the Northern Loop will be limited to gravel pathways and information panels to guide the visitor away from the cliff-edge where it is appropriate to do this. 											

Objectives: Northern loop/southern cliff walk	Cliffs of Moher SPA (4005)	Mid Clare Coast SPA (4182)	Carrowmore Point to Spanish Point and Islands SAC (1021)	Inagh River Estuary SAC (0036)	Black Head-Poulsallagh Complex SAC (0020)	The Aran Islands	Ballyteigue (Clare) SAC (0994)	East Burren Complex SAC (1926)	Galway Bay Complex SAC (00268)	Galway Bay SPA (4031)	Inishmore SPA (4152)
<ul style="list-style-type: none">At the time of the publication of the Strategy 2040, a specialist review of the stability of the cliff-edge within the Northern Loop is still ongoing and the degree to which the cliff-edge walk could be set back has yet to be confirmed.											

10.0 CONCLUSION

Stage 1 Screening and Stage 2 AA of the Cliffs of Moher 2040 Strategy have been carried out. These assessments demonstrate that the implementation of the Strategy has the potential to result in significant negative impacts upon the integrity of the Natura 2000 network of sites, if unmitigated. That said, many of the objectives relate to actions that aim to restore the ecological integrity of the site, and if achieved, have the potential to aid in restoring the favourable conservation condition of the species listed for the Cliffs of Moher Special Protection Area. This is highly welcomed.

The potential for significant negative impacts has been addressed by the identification and inclusion of mitigation measures. In many cases, proposed actions relate to projects that themselves will be subject to (lower tier) Appropriate Assessment with a requirement for bespoke mitigation measures to be identified and implemented at that time. In the case of in-combination (cumulative) impacts, particularly in the case of increased visitor numbers, we have provided rationale as to what is needed to safeguard the Natura 2000 network along the Cliffs of Moher, and across the network of 'relevant' sites in the hinterland. Full incorporation and correct implementation of mitigation will be required to fully safeguard the integrity of these Natura 2000 (European) sites.

Appendix 1 - Ecological Evaluation and Ecological Impact Assessment (EcIA)

Ecological Impact Assessment (EcIA) process has three main steps:

1.

Ecological evaluation – this step consists of evaluating each ecological resource (e.g. habitat, population, or species) within the zone of influence (area to be affected) using the criteria outlined in Table 1a (based on a geographic hierarchy of importance). Each ecological resource is given an evaluation value (ranking) as described in Table 1b.
2.

Impact (Affect) prediction - based on information provided on the proposed project/development, this step aims to identify all direct and indirect impacts that may affect the ecological features in the zone of influence, and wider area. Table 1c gives impact terminology as per the EPA (2022).
3.

Assessment of the magnitude of impact - impact magnitude refers to the ‘size’ or ‘amount’ of an impact/affect (IEEM, 2006; EPA, 2022). The magnitude of an impact will depend on the nature and sensitivity of the ecological features and will be influenced by intensity, duration (temporary/permanent), timing, frequency and reversibility of the potential impact (CIEEM 2018). Levels of impact magnitude are given in Table 1d. Magnitude terminology is based on EPA (2022) while the rationale for assigning level of significant impact follows CIEEM (2018). Importantly, this step aims to identify the impacts which may be significant upon ‘important ecological features’ (CIEEM, 2018).

Table 1a. Criteria for ecological evaluation

Evaluation criteria	Definitions and Notes
Site designations	<div>Designated areas for conservation are areas that are designated under national and/or European laws in order to conserve habitats and species of national or international conservation importance. These include:</div> <div><div><div>•</div><div>Natural Heritage Areas (NHA): a national designation given legal status by the Wildlife Amendment (2000) Act.</div></div><div><div>•</div><div>Special Areas of Conservation (SAC): areas considered of European and national importance whose legal basis is the EU Habitats Directive (92/43/EEC), transposed into Irish law through the European Union (Natural Habitats) Regulations, 1997.</div></div><div><div>•</div><div>Special Protection Areas (SPA): sites of conservation importance for birds whose legal basis is the EU Birds Directive (209/147/EC).</div></div><div><div>•</div><div>Wildfowl Sanctuary: designated under the 1976 Wildlife Act.</div></div><div><div>•</div><div>Ramsar Site: European designation based on the Ramsar Convention, 1984.</div></div></div>
Species designations/criteria	<div>Certain legislation refers directly to species/populations (e.g. annexed species):</div> <div><div><div>•</div><div>Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.</div></div><div><div>•</div><div>Council Directive 79/409/EEC on the Conservation of Wild Birds (‘Birds Directive’).</div></div></div>

Evaluation criteria	Definitions and Notes
	<div><div>•</div><div>Bern Convention on the Conservation of European Wildlife and Natural Habitats.</div></div> <div><div>•</div><div>The Wildlife Act (1976) and the Wildlife (Amendment) Act (2000).</div></div> <div><div>•</div><div>Birds of Conservation Concern in Ireland (Gilbert et al. 2021)</div></div> <div><div>•</div><div>Red Data Books (e.g. Wyse-Jackson et al. 2016)</div></div> <div><div>•</div><div>Flora (Protection) Order, 2022.</div></div>
Size	<div>Includes both size of habitats (area) and population size of individual species and is intrinsically linked to other criteria such as rarity and fragility (below).</div> <div>Habitats: considers minimum viable size of habitats, habitat heterogeneity, species/area relationships, home-range size.</div> <div>Populations: considers concept of minimum viable population size (population viability), national and local population trends, extinction risk.</div>
Rarity	<div>Applies to habitats and to species. The degree to which a habitat or community approximates a natural state. The degree to which the site is a good example of the habitat types.</div> <div>National, county, local scales e.g. within 10-km² squares.</div>
Naturalness	<div>The degree of modification by human intervention. Habitats that are least modified are generally regarded more highly (Treweek, 1999). Also considers the extent to which the habitat is free of alien species.</div>
Representativeness/ Typicalness	<div>How well the area represents habitats or vegetation types on a wider scale (Treweek, 1999); ‘degree of representivity of the natural habitat type on the area’ (Council Directive 92/43/EEC; Habitats Directive).</div>
Fragility	<div>The degree of sensitivity of habitats, communities and species to environmental change.</div>
Stability/Resistance/Resilience	<div>Habitats and species. Stability refers to the ability of an ecosystem to maintain some form of equilibrium in the presence of a disturbance. Resilience is defined as the ability and speed with which a community returns to its former state following a disturbance. Resistance is defined as the ability of a community to avoid displacement by a disturbance (Begon et al. 1996).</div>

Table 1b. Ecological Evaluation (Adapted from CIEEM, 2018; IEEM, 2009; NRA, 2004; Regini, 2000.)

Ecological value	Examples
A International	<div>Sites designated as Special Protection Areas (SPA), Special Areas of Conservation (SAC), Ramsar Sites.</div> <div>Sites meeting criteria for international designation.</div>
B National	<div>Sites designated as Natural Heritage Areas (NHA) or sites qualifying for designation.</div>

Ecological value	Examples
	Undesignated sites containing good examples of Annex I habitats. Undesignated sites containing significant numbers of resident or regularly occurring populations of Annex II species under the EU Habitats Directive or Annex I species under the EU Birds Directive or species protected under the Wildlife (Amendment) Act 2000. Sites supporting viable populations of Red Data Book species (nationally rare species).
C Regional	Undesignated sites that are prime examples of the habitat (natural or semi-natural) type, exhibit high biodiversity or support important communities/assemblages of species within the region. Sites exhibiting habitats that are scarce within the region. Sites that support nationally scarce plant species (recorded from less than 65 10-km² squares, unless they are locally abundant). Sites that hold regionally scarce vertebrate species.
D High Local	Sites that are prime examples of the habitat type, exhibit high biodiversity or important communities/assemblages of species within the local area. Habitats that are considered important in a local context – e.g. semi-natural habitats within an urban setting, hedgerows and treelines that serve as important ecological corridors within an otherwise modified landscapes. Sites exhibiting habitats/species that are generally scarce within the local area.
E Moderate Local	Sites that exhibit good quality semi-natural habitats. Hedgerows and treelines.
F Low Local	Artificial or modified habitats considered of low value for wildlife.

Table 1c. Description of effects as per the EPA (2022)

Positive Impact	A change which improves the quality of the environment.
Negative Impact	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem, or damaging health or property or by causing nuisance).
Neutral Impact	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Indirect Effects/ Secondary Effects	Impacts not directly associated with the project, often produced away from the project site or because of a complex pathway.
Cumulative Effects	The addition of many small impacts to create one larger, more significant, impact.
Do-Nothing Effects	The environment as it would be in the future if no development was carried out.
Worst-Case Effects	Impacts arising from a development in the case where mitigation measures substantially fail.
Indeterminable Effects	When the full consequences of a change in the environment cannot be described.

Positive Impact	A change which improves the quality of the environment.
Irreversible Effects	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
Residual Effects	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
Synergistic Effects	Where the resultant impact is of greater significance than the sum of its constituents.

Table 1d. Significance of Effects (terminology based on EPA 2022; CIEEM 2018)

Impact Magnitude	Definition / Rationale
Imperceptible	An effect capable of measurement but without noticeable consequences.
Not Significant	An effect that causes noticeable changes in the character of the environment but without significant consequences.
Slight Effects	An effect that has noticeable consequences 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	A significant effect is one which undermines the conservation objectives for ‘important ecological features’ (CIEEM, 2018). In broad terms, significant effects encompass impacts upon the structure and function of a defined site, its habitats and species and their conservation status; or in other words on site integrity**. EPA (2022) measures these effects as those that significantly alter a sensitive aspect of the environment.
Very Significant Effects	An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
Profound Effects	An effect that obliterates sensitive characteristics.
** Integrity is defined as ‘the integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.	

Table 1e. Quality of Effects (terminology based on EPA, 2022)

Impact Magnitude	Definition / Rationale
Positive Effects	A change which improves the quality of the environment (e.g. increasing species diversity, improving reproduction capacity or by removing nuisances).
Neutral Effects	No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
Negative Adverse Effects	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; damaging health or property or by causing nuisance).

Appendix 2 - NPWS site synopses

SITE NAME: Cliffs of Moher SPA
SITE CODE: 004005

This site extends a distance of some 9.5 km along the north Clare coast from Faunmore in the north to just south of Cancregga Point in the south. The cliffs, which rise to 203 m in height, are formed of horizontal beds of coal measure sandstones and shales. Cleavage in the rock is so good that the term flagstone has been applied, and the Liscannor Flag is the rock type best exposed in a quarry near Hag’s Head. The line of cliffs shows faulting and slumping to good effect, but these are difficult to observe from the cliff top. The site includes the cliffs, the land adjacent to the cliff edge (inland for 300 m) as well as the adjacent sea area to a distance of up to 500 m from the cliff base.

The sheer cliffs are largely unvegetated, though some wide slopes support a Fescue (*Festuca*) sward. The scarce Roseroot (*Rhodiola rosea*) occurs on the cliffs. The cliff-top vegetation is a typical maritime sward, including such species as Thrift (*Armeria maritima*), Sea Campion (*Silene vulgaris* subsp. *maritima*), Buck’s-horn Plantain (*Plantago coronopus*) and Rock Samphire (*Crithmum maritimum*). An interesting lichen flora has been recorded from the cliffs.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Fulmar, Kittiwake, Guillemot, Razorbill, Puffin and Chough. The site is also of special conservation interest for holding an assemblage of over 20,000 breeding seabirds.

The horizontally-layered flagstones of the cliff face provide ideal nesting ledges for seabirds. A survey in 1998/99 recorded a Razorbill population (5,159 pairs) just below the threshold of international importance and nationally important populations of Fulmar (3,566 pairs), Kittiwake (7,698 pairs), Guillemot (13,375 pairs) and Puffin (1,365 pairs). In addition, small numbers of Shag (31 pairs), Herring Gull (10 pairs), Great Black-backed Gull (3 pairs) and Black Guillemot (2 individuals) were recorded.

Breeding Peregrine (2 pairs) and Chough (12 pairs in 2002/2003), both species listed on Annex I of the E.U. Birds Directive, are recorded on the cliffs. Studies have shown that Chough forage mainly within 350 m inland of the cliff edge.

The Cliffs of Moher SPA is one of the most important seabird colonies in the country, with nationally important populations of five species. A nationally important population of Chough were recorded breeding at the site in 2002/03. The site holds the largest Kittiwake and Razorbill colonies in the country, and the second largest Fulmar colony (after Clare Island). The presence of two species that are listed on Annex I of the E.U. Birds Directive, Chough and Peregrine, is of note. Owing to the importance of the bird populations, the site was designated as a Refuge for Fauna in 1988.

SITE NAME: Mid-Clare Coast SPA
SITE CODE: 004182

The Mid-Clare Coast SPA site extends along the Co. Clare coastline in a south-southwesterly direction from Spanish Point (3 km west of Milltown Malbay) to just west of Doonbeg Bay, a distance of some 14 km. It comprises the mainland shoreline, Mutton Island and Mattle Island, a series of rocky reefs and the open marine

water of Mal Bay between the islands and the mainland. Underlying the site are Carboniferous grits which are bedded at a low angle and which give rise to surf conditions in places along the coast. The headlands and islands experience some of the most severe conditions of exposure in Ireland.

The mainland shoreline is mostly rocky or stony, though there are several sandy beaches and areas of intertidal flats. Shingle or stony banks are found at the base of cliffs and at the head of bays. The stretch of coastline between Quilty and Lurga Point has extensive areas of mud and sand flats and further intertidal flats occur at Doughmore Bay and Doonbeg Bay. Mutton Island is a medium-sized, uninhabited, island situated approximately 1 km from Lurga Point.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Cormorant, Barnacle Goose, Ringed Plover, Sanderling, Purple Sandpiper, Dunlin and Turnstone. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Mattle Island supports a nationally important breeding colony of Cormorant, with 60 nests present in May 1990. Both Mutton Island and Mattle Island have breeding Shag, estimated at less than 40 pairs in total in 1990. Both islands have nesting Herring Gull (probably less than 40 pairs) and Great Black-backed Gull (possibly up to 70 pairs), while Mutton Island has Lesser Black-backed Gull (24 pairs in 1995) and Common Gull (c. 10 pairs in 1995). Black Guillemot breeds, at least on Mutton Island (7 pairs in 1990).

Storm Petrel has long been known to breed on Mutton Island, though there has never been a quantitative estimate of the population size. A nationally important population of Barnacle Goose (250 – 4 survey mean between 1993 and 2003) winters on Mutton Island, with birds occasionally visiting Mattle Island and feeding sites on the mainland. Mutton Island provides both feeding and roosting sites for the species.

The mainland shore is important for wintering waders, especially the internationally important population of Purple Sandpiper (393) and nationally important populations of Ringed Plover (316), Dunlin (2,708), Sanderling (272) and Turnstone (571) – all figures are mean peaks for the 5 winters 1995/96 to 1999/2000. Other species which occur in winter include Golden Plover (1,446), Grey Plover (36), Oystercatcher (328), Lapwing (1,252), Curlew (486) and Redshank (77). Some of the waders may commute to the islands. The shallow seas are frequented by both Great Northern Diver (9) and Red-throated Diver (2).

The Mid-Clare Coast SPA is of high ornithological importance and supports an internationally important population of Purple Sandpiper, and nationally important populations of wintering Barnacle Goose and four wader species. In summer it is utilized by a range of breeding seabirds including a nationally important colony of Cormorant. Of particular note is that Barnacle Goose, Storm Petrel, Golden Plover, Great Northern Diver and Red-throated Diver are listed on Annex I of the E.U. Birds Directive. Part of the Mid-Clare Coast SPA is a Wildfowl Sanctuary. This site extends along the Co. Clare coastline from Spanish Point (3 km west of Milltown Malbay) in a south-westerly direction to Carrowmore Point. It comprises a strip of coastline, several offshore islands and rocks (notably Mutton Island), and the open marine water of Mal Bay between the islands and the mainland. Lough Donnell is a lagoon found near Carrowmore Point at the southern end of the site. Underlying the site are Carboniferous grits which are bedded at a low angle, and which give rise to surf conditions in places along the coast. The headlands experience some of the most severe conditions of exposure in Ireland.

SITE NAME: Carrowmore Point to Spanish Point and Islands SAC
SITE CODE: 001021

This site extends along the Co. Clare coastline from Spanish Point (3 km west of Milltown Malbay) in a south-westerly direction to Carrowmore Point. It comprises a strip of coastline, several offshore islands and rocks (notably Mutton Island), and the open marine water of Mal Bay between the islands and the mainland. Lough Donnell is a lagoon found near Carrowmore Point at the southern end of the site. Underlying the site are Carboniferous grits which are bedded at a low angle, and which give rise to surf conditions in places along the coast. The headlands experience some of the most severe conditions of exposure in Ireland.

As well as the habitats listed in Annex I of the E.U. Habitats Directive (lagoon, reefs, vegetation of stony banks and petrifying springs), a further range of marine and coastal habitats are represented on the site, including mud/sandflats, sand dunes, sandy, shingle and boulder beaches, clay and rocky sea cliffs, bedrock shores, the associated wetland communities of the lagoon and a short section of the Annageeragh River.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

- [1150] Coastal Lagoons*
- [1170] Reefs
- [1220] Perennial vegetation of stony banks
- [7220] Petrifying springs*

The priority habitat of petrifying springs with tufa formations is well represented at the site and occurs along the sea cliffs at the south end of Spanish Point beach.

Species typical of tufa formations found at the site include the bryophytes Palustriella commutata, Cratoneuron filicinum, Eucladium verticillatum, Leiocolea turbinata and Pellia endiviifolia.

The intertidal reefs have both good zonation of communities down the shore and excellent examples of communities which occur in areas very exposed to moderately exposed to wave action. Spanish Point holds a very high number of littoral reef communities (13 different community types). The low shore and subtidal fringe at both Spanish Point and Cloghaunicy Point have high species richness that range from 71 to 85 species. Subtidally, the area is important for its deep, exposed reef communities that are characterized by erect sponges and the fragile sea fan Eunicella verrucosa. There are a number of rare species present including the sponge Tetilla zetlandica, which is only known from four localities in Ireland between Galway Bay and the Kerry Head Shoal. Algal communities are well developed, with an excellent diversity of red and brown algae species.

Small sand dune systems are found near Spanish Point, about Lurga Point and further south. The northern dune system is somewhat degraded, while that near Lurga Point is less damaged and more stable and includes areas of foredune and fixed dune.

Shingle banks are found at the base of cliffs and at the head of bays. Due to their exposure these support a sparse vegetation with species such as Sea Beet (*Beta vulgaris* subsp. *maritima*), oraches (*Atriplex* spp.), Sea Mayweed (*Matricaria maritima*) Silverweed (*Potentilla anserina*) and Sea-milkwort (*Glaux maritima*).

Lough Donnell is a shallow (generally <1 m), sedimentary lagoon. It has an impressive cobble barrier approximately 7 m high and 40 m wide, modified by the installation of a large concrete tunnel which forms a

permanent inlet/outlet. Seawater enters through this tunnel, perhaps on most tides and also by percolation through the barrier. A small river, the Annageeragh River, enters the lagoon from the east. Salinity is assumed to be oligohaline as relatively large volumes of fresh water entering the lagoon appear to prevent appreciable amounts of seawater entering on most tides.

Geomorphologically, Lough Donnell is a classic lagoon with one of the most impressive barriers in the country. Floristically, the most notable feature of the lagoon is the presence of the lagoonal specialist Beaked Tasselweed (*Ruppia maritima*). Marginal vegetation, which is best developed on the eastern and southern shores, consists mostly of Common Reeds (*Phragmites australis*), Grey Club-rush (*Scirpus lacustris* subsp. *tabernaemontani*) and Sea Club-rush (*Scirpus maritimus*). A Red Data Book plant species, Corky-fruited Water-dropwort (*Oenanthe pimpinelloides*), occurs along the Annageeragh River. The faunal assemblage reflects the predominance of freshwater over marine influence throughout the lagoon. A total of 32 aquatic faunal taxa were recorded of which 5 species are regarded as lagoonal specialists. These are Palaemonetes varians (Order Decapoda), Sigara stagnalis (Order Hemiptera), Jaera nordmanni (Order Isopoda), Neomysis integer (Order Mysida) and Notonecta viridis (Order Hemiptera). Notonecta viridis is a rare brackish water species in Ireland.

The stretch of coastline between Quilty and Lurga Point has extensive areas of mud/sand flats and supports nationally important bird populations. The following counts are average maxima of individuals over five winters 1994/95-1998/99: wintering Purple Sandpiper (239), Dunlin (1,540), Turnstone (476), Ringed Plover (170) and Sanderling (189). Other species which occur in winter include Grey Plover, Oystercatcher, Lapwing, Curlew, Redshank and Golden Plover.

The offshore islands Mutton Island and Mattle Island, and rocks, Carrickaneelwar and Seal Rock, are important for the seabirds that breed on them, i.e. Storm Petrel (Mutton Island and Mattle Island, the only colonies in Clare, though recent studies are uncertain), Cormorant (Mattle Island, 60 pairs in 1990), Shag (Mattle Island and Mutton Island, c. 30 pairs in 1990), Great Black-backed Gull, Lesser Black-backed Gull and Herring Gull. Mutton Island also holds an internationally important wintering flock of Barnacle Goose (c. 350 individuals in 1994, with up to 480 recorded previously). This species is also occasionally seen on Mattle Island and on adjacent parts of the mainland. A variety of land birds, e.g. Skylark, Meadow Pipit, Rock Pipit, Pied Wagtail, Raven, Swallow,

Wheatear and Stonechat, amongst others, also use the islands (mainly Mutton Island) and are presumed to breed there.

Lough Donnell is used by a variety of birds, mainly waders (numbers in parentheses are based on a single count in one season between 1984/85 and 1986/87): Wigeon (16), Golden Plover (65), Grey Plover (12), Lapwing (170), Dunlin (65), Curlew (230) and Shag (52). Sand Martin nest in low clay cliffs to the north of the lake.

Mutton Island and Mattle Island are designated Special Protection Areas for their birds; the former is also a Wildfowl Sanctuary. Barnacle Goose, Storm Petrel and Golden Plover are listed on Annex I of the E.U. Birds Directive.

Grey Seal are regular in the area and haul out on all of the islands. Mutton Island has a high density of Irish hares.

The coastline around Spanish Point is an amenity and tourist resort and the sand dune system here has become degraded by overuse. Other areas of sand dune on the site have been damaged by over-grazing and erosion.

The site contains a diversity of habitats, plant and animal communities and species, and is notable for the occurrence of several habitats listed on Annex I of the E.U. Habitats Directive. The presence of lagoons and

petrifying springs, both habitats accorded priority status on this Annex, is of particular significance. The range of birds that use the site and the large populations of several of these add considerably to the importance of the site. Additionally, the site has been highly rated for the diversity of marine plant and animal species it supports.

SITE NAME: Inagh River Estuary SAC
SITE CODE: 000036

The Inagh River Estuary is an estuarine channel that flows westwards to the sea from Ennistimon, in the south-west of Co. Clare. The site includes the estuaries of both the Inagh and Dealagh Rivers. These channels meander through a wide, flat valley, which is sheltered from the sea by an extensive sand dune system to the west. Low undulating hills surround the valley, giving it a secluded nature. The soils vary from gleys to peats.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

- [1310] *Salicornia* Mud
- [1330] Atlantic Salt Meadows
- [1410] Mediterranean Salt Meadows
- [2120] Marram Dunes (White Dunes)
- [2130] Fixed Dunes (Grey Dunes)*

A diverse mosaic of habitats occurs within the site, ranging from coastal dune system, estuarine channel and its associated saltmarsh habitat, to freshwater and terrestrial habitats further inland. The bulk of the site is made up of low-lying wet grasslands.

Saltmarsh occurs along the tidal section of the valley. Common species here include a mixture of Plantains (*Plantago maritima*, *P. coronopus*) and Thrift (*Armeria maritima*), with lesser amounts of Sea Milkwort (*Glaux maritima*), Sea Aster (*Aster tripolium*) and glassworts (*Salicornia* spp.). In places the glassworts extend out onto the intertidal sands.

Owing to golf course development, only a small area of intact sand dune remains within the site. Some Marram (*Ammophila arenaria*) dunes occur at the tip of the sandy peninsula near O’Brien’s Bridge. These support species such as Sand Sedge (*Carex arenaria*), Sand Couch (*Elymus farctus*), Red Fescue (*Festuca rubra*) and Sea Sandwort (*Honkenya peploides*). A small area of fixed dunes occurs north of the channel. The nutrient-poor soils here support a diverse flora which includes Common Bird’s-foot-trefoil (*Lotus corniculatus*), Kidney Vetch (*Anthyllis vulneraria*), Quaking-grass (*Briza media*) and Early Marsh-orchid (*Dactylorhiza incarnata*).

Two small areas of deciduous woodland are found further inland towards Ennistimon town. A wet woodland, dominated by Willows (*Salix* spp.) and Downy Birch (*Betula pubescens*), occurs south of the river adjacent to Ivy Cottage. A narrow band of dry deciduous woodland, known as "The Glen", supports a mixture of Ash (*Fraxinus excelsior*) with occasional Oak (*Quercus* sp.) and Elm (*Ulmus* sp.). A scenic waterfall located at Ennistimon town adds to the interest and diversity of the site.

An expanse of wet grassland vegetation dominates much of the valley floor supporting an abundant cover of Rushes (*Juncus* spp.), along with lesser amounts of Sedges (*Carex* spp.), Plantains, Clover (*Trifolium* spp.), Buttercups (*Ranunculus* spp.) and Cuckooflower (*Cardamine pratensis*). These grasslands provide ideal feeding and sheltering grounds for wildfowl, and a range of bird species commonly use this area. A small flock of

Greenland White-fronted Goose formerly used the site during the winter months. The main waterfowl species now using the area are Wigeon (754), Teal (115), Mallard (67), Oystercatcher (148), Ringed Plover (53), Lapwing (657) and Curlew (211) (data for winters 1995/96 to 1997/98). Part of the site has been managed as a Wildfowl Sanctuary since 1989.

This is a large site with a range of coastal, tidal and terrestrial habitats that are of considerable ecological interest, five of which are listed under Annex I of the E.U. Habitats Directive. The extensive and relatively secluded low-lying wet grasslands provide a natural and legally protected refuge for wildfowl.

SITE NAME: Black Head-Poulsallagh Complex SAC
SITE CODE: 000020

The Black Head-Poulsallagh complex encompasses a complete range of rocky Burren habitats from coastal, glacially planed limestone pavements to high level heaths. The Caher River, the only river found in the high Burren, and Fanore dunes, one of the best dune systems in Clare, are included in the site. The shoreline, littoral and sublittoral areas are also interesting because of the rock type, physical exposure, and flora and fauna communities.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

- [1170] Reefs
- [1220] Perennial Vegetation of Stony Banks
- [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes)
- [3260] Floating River Vegetation
- [4060] Alpine and Subalpine Heaths
- [5130] Juniper Scrub
- [6210] Orchid-rich Calcareous Grassland*
- [6510] Lowland Hay Meadows
- [7220] Petrifying Springs*
- [8240] Limestone Pavement*
- [8330] Sea Caves
- [1395] Petalwort (*Petalophyllum ralfsii*)

The shoreline of this site has the best examples in Ireland of an important biogeographical variation of intertidal reefs extremely exposed to wave action, and these shores have been described as some of the most interesting open coast shores of both Britain and Ireland. The shores are gently sloping, stepped limestone pavements over most of the site, but at Black Head the shore is narrow and very steeply stepped.

There are numerous shallow rockpools on the shore. These frequently support large numbers of the Purple Sea Urchin, *Paracentrotus lividus*, that have burrowed into the limestone so that each urchin sits in a well-defined hollow. The pools also support the Beadlet Anemone *Actina equina*, the top shells *Gibbula magus*, *G. cineraria* and *G. umbilicalis*, and the coralline algae *Corallina officinalis*. A variety of algae may be found in the pools, including the red algae *Chondrus crispus*, *Plocamium cartilagineum* and *Palmaria palmata*, and the brown algae *Dictyota dichotoma* and *Bifucaria bifurcata* where the pools are deep enough. Of particular ecological importance is that both the Purple Sea Urchin and the brown alga *Bifurcaria bifurcata* are close to the northern limits of their distribution.

Marine caves are a feature of the site and this is probably the best-known extensive network of caves that are connected to the sea in Ireland. Their occurrence on a very exposed coast with difficult access gives very limited opportunities for biological survey work. It is known, however, that the caves are well scoured and it can be assumed that they exist in a very natural state.

The limestone pavement includes smooth, blocky and shattered types, and is particularly well represented in the Poulsallagh area. Erratics of Galway granite occur within the site, especially around Black Head. The bare pavement is interspersed with fine examples of species-rich, dry calcareous grassland. Limestone heath is also well developed, particularly on the higher areas to the north and north-east, where Bearberry (*Arctostaphylos uva-ursi*) occurs.

The rare Intermediate Wintergreen (*Pyrola media*) occurs on the high heaths. Other rare plants of limestone heaths are Hoary Rock-rose (*Helianthemum canum*) and Pyramidal Bugle (*Ajuga pyramidalis*), both of which occur in the Poulsallagh area.

The Caher River is a shallow, spring-fed stream approximately 5 km long, which flows underground for some of its course during dry periods. The upper section is heavily shaded by Hazel (*Corylus avellana*) scrub, which in the vicinity of the channel bears a luxuriant lichen flora. The lower section of river is on limestone bedrock and periodically dries out. This part of the river is dominated by mosses and algal crusts, both of which are heavily calcified, and in some places form tufa deposits of considerable thickness.

Fanore dunes, located south of Black Head, are formed over limestone. The bedrock can be seen outcropping in the low-lying areas. As a result, the sand is highly calcareous in nature and the dune vegetation comprises a number of calcicolous (calcium-loving) species. These include Pyramidal Orchid (*Anacamptis pyramidalis*), Thyme-leaved Sandwort (*Arenaria serpyllifolia*), Squinancywort (*Asperula cynanchica*) and Hairy Rock-cress (*Arabis hirsuta*). The parasitic Dodder (*Cuscuta epithymum*) grows in abundance and the profusion of orchid species including Pyramidal Orchid, Fragrant Orchid (*Gymnadenia conopsea*) and a range of *Dactylorhiza* species is noteworthy. Species recorded from the high dunes include Sea-holly (*Eryngium maritimum*), Sea Spurge (*Euphorbia paralias*) and Marram Grass (*Ammophila arenaria*). A small population of the rare liverwort *Petalophyllum ralfsii*, a species is listed on Annex I of the E.U. Habitats Directive, occurs within a damp, grassy area of the dunes.

A superb and extensive example of a highly exposed vegetated shingle bank occurs at Poulsallagh, with substrate ranging from large limestone boulders to pebbles. Species present include Thrift (*Armeria maritima*), Common Scurvygrass (*Cochlearia officinalis*), Sea Samphire (*Crithmum maritimum*), Red Fescue (*Festuca rubra*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Sea Plantain (*Plantago maritima*), Buck's-horn Plantain (*Plantago coronopus*) and Sea Mayweed (*Matricaria maritima*). The population of Sea Samphire is considered the best in the region. Lichen cover is particularly well developed.

The northern part of Black Head hosts approximately 25 breeding pairs of Black Guillemot while up to 15 Black-throated Divers winter there (this species is listed in Annex I of the E.U. Birds Directive).

Most of the terrestrial part of the site is grazed by cattle and sheep, particularly in winter, and by goats throughout the year, sometimes resulting in over-grazing. Scrub clearance and intensification of agriculture has caused damage to parts of the site and is a threat to the water quality of the Caher River. Some agriculturally improved areas in the Caher River catchment have been included within the site for hydrological reasons. Leisure activities, including the construction of a caravan park, in the Fanore area has led to erosion and a deterioration of the quality of the dune area.

Due to the presence of fine examples of Burren habitats, the site is of international scientific interest. The limestone pavement and heath and the marine component are particularly noteworthy, while the plant communities contain a high density of rare and interesting species.

SITE NAME: Inisheer Island SAC
SITE CODE: 001275

Inisheer is the smallest of the three Aran Islands, situated approximately 10 km off the west coast of Co. Clare. The island is a geological extension of the karstic Carboniferous region of the Burren. Upper Carboniferous limestone strata, interleaved with layers of shale and clay, form these exposed islands, which rise to a maximum height of 64 m on Inisheer. The soil cover is thin, with pockets of rendzina between the bare limestone. This naturally occurring soil has been combined with a mixture of sand and seaweed to form a man-made soil unique to these Islands. The land surface is subdivided into a labyrinth of high stone walls, each one enclosing a small area, typically composed of species-rich calcareous grassland and associated limestone pavement.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

- [1150] Coastal Lagoons*
- [1170] Reefs
- [4030] Dry Heath
- [6210] Orchid-rich Calcareous Grassland*
- [6510] Lowland Hay Meadows
- [8240] Limestone Pavement*

Both smooth-blocky and shattered types of limestone pavement types are present at this site, interspersed with a diverse range of associated plant communities including grassland and heath. An interesting maritime influence is evident at the south of the island, where species such as Sea Plantain (*Plantago maritima*), Thrift (*Armeria maritima*) and Rock Samphire (*Crithmum maritimum*) are found on bare pavement.

The species-rich calcareous grasslands hold a number of interesting species, such as Spring Gentian (*Gentiana verna*) and Dense-flowered Orchid (*Neotinea maculata*). Blue Moor-grass (*Sesleria albicans*) is usually the dominant grass species, and Wild Thyme (*Thymus praecox*), Squinancywort (*Asperula cynanchica*), Mountain Everlasting (*Antennaria dioica*) and Mouse-ear Hawkweed (*Hieracium pilosella*) also occurring. In places, the rocky grasslands and pavement support the Red Data Book plant species, Hairy Violet (*Viola hirta*). This species is protected under the Flora (Protection) Order, 1999. Orchid species commonly occurring include Pyramidal Orchid (*Anacamptis pyramidalis*), Early Purple-orchid (*Orchis mascula*), Lesser Twayblade (*Listera ovata*) and Lesser Butterfly-orchid (*Platanthera bifolia*). Occasional species found are Common Spotted-orchid (*Dactylorhiza fuchsii*), Autumn Lady's-tresses (*Spiranthes spiralis*), Heath Spotted-orchid (*D. maculata*), the marsh-orchid *D. majalis*, Fragrant Orchid (*Gymnadenia conopsea*) and Bee Orchid (*Ophrys apifera*).

Lowland hay meadows are now a rare habitat, both in Ireland and elsewhere. They are generally maintained by traditional land management practices. On Inisheer, the traditional farming practice of Rye cultivation for thatching has maintained some hay meadows and has thus provided suitable habitat for a number of rare arable weeds. Darnel (*Lolium temulentum*) and Smooth Brome (*Bromus racemosus*), formerly thought to be extinct in Ireland, have recently been recorded on Inisheer. Both species are listed in the Irish Red Data Book. The species-rich meadows at this site support a plant community dominated by grasses, but with many flowering herbs,

including Common and Greater Knapweeds (*Centaurea nigra* and *C. scabiosa*), Oxeye Daisy (*Leucanthemum vulgare*), Harebell (*Campanula rotundifolia*), eyebrights (*euphrasia* spp.) and orchids. In other areas, Wood Sage (*Teucrium scorodonia*) and Blue Moor-grass feature, while Blackthorn (*Prunus spinosa*) and Burnet Rose (*Rosa pimpinellifolia*) are colonising some grasslands.

Dry limestone heath has developed in places, and while small in area, it is generally species-rich. Species such as Heather (*Calluna vulgaris*), Bell Heather (*Erica cinerea*), Purple Moor-grass (*Molinia caerulea*) and Black Bog-rush (*Schoenus nigricans*) are found. Blue Moor-grass, Bloody Crane’s-bill (*Geranium sanguineum*), Bracken (*Pteridium aquilinum*), False Oat-grass (*Arrhenatherum elatius*), Tormetil (*Potentilla erecta*) are also found. There are also occasional patches of Juniper (*Juniperus communis*) scrub which occur in mosaic with the heath. The rare Irish Saxifrage (*Saxifraga rosacea*) has also been recorded from this habitat.

Lough More, situated in the east of the island, is an excellent example of a deep (up to 23 m), oligohaline, karstic rock lagoon, a type which is rare in Europe. The lagoon is connected to the sea through underground rock fissures, with limestone cliffs along much of the shoreline. Seawater enters from a karstic tidal pool to the northeast of the lake from which diluted seawater (up to 20 ppt) runs into the lake through limestone pavement. In 1998 the main body of the lake had a uniform salinity of 5 ppt between 1 and 5 m depth, with lower salinity water over parts of the surface (0- 3 ppt). The benthic vegetation is uniform, consisting of green algae (*Enteromorpha* spp.) and dense beds of Fennel-leaved Pondweed (*Potamogeton pectinatus*). This vegetation ceases below 2-3 m. No lagoonal plant specialists were found in recent surveys. Immediately below the pondweed community a zone of hard calcareous algal nodules occurs. These nodules are 2-3 cm in diameter and have a superficial similarity to marine coralline algae. They appear to be the product of several species. Marginal vegetation includes small stands of Common Reed (*Phragmites australis*), Grey Club-rush (*Scirpus lacustris subsp. tabernaemontani*) and Sea Club-rush (*Scirpus maritimus*). The presence of Saltmarsh Rush (*Juncus gerardi*) is indicative of saltmarsh vegetation. The fauna of the lagoon is poor despite the apparently stable and uniform conditions in the lagoon. This may be due to the ‘island effect’ and the problems of colonisation and survival on a small offshore island. Only three species which are considered lagoonal specialists have been recorded: *Sigara concinna* (Order Hemiptera), *Conopeum seurati* (a bryozoan) and *Jaera nordmanni* (Order Isopoda).

A range of coastal habitats occur on the island, including bedrock shores, shingle and sandy beaches, and boulder beaches. The reefs are particularly noteworthy, being listed in the Habitats Directive. At this site they show good zonation of benthic communities of algae and animal species. A highly porous substrate, such as is present here, is generally indicative of a rich and varied algal flora. However, the high wave action at this site reduces the diversity of communities present somewhat.

Several breeding pairs of Chough are present on the island. Arctic Tern, Little Tern and Sandwich Tern also breed here in small numbers. All four species are listed on Annex I of the E.U. Birds Directive. Lough More is of value to birdlife in the area, providing habitat for Grey Heron, Mute Swan and Mallard.

Agricultural intensity is low throughout the island. The majority of the land is used as winterage for cattle, sheep and, in some places, goats. The fields located close to the houses are used for summer grazing. This traditional practice, which is coupled with the general absence of fertilisers, has maintained the species richness and high diversity of the island flora. However, increased tourism on the island is resulting in a gradual move away from farming, in favour of more tourism-related enterprises - a move which may threaten the survival of some species-rich meadows which require regular mowing. Many of the islands habitats and associated wildlife are sensitive to damage resulting from certain forms of agricultural improvement and over-grazing. Removal of sand from dune areas poses a significant threat to those habitats. Future plans to develop the island for tourism and amenity purposes require close monitoring in this sensitive environment.

The island is of major ecological importance due to the quality and floristic richness of limestone pavement, grassland and coastal habitats present. The presence of a number of rare plant species enhances the conservation value of this site, while the island's coastline provides habitat for a number of rare bird species. Traditional farming methods practised on the island are intrinsically linked with its high conservation value. The botanical, historical, archaeological and cultural interest of the island make this an extremely valuable site for educational and scientific purposes.

SITE NAME: Ballyteige (Clare) SAC
SITE CODE: 000994

This site is located 2 km west of Lisdoonvarna, Co. Clare. It lies over shales of Upper Carboniferous age and adjoins the boundary of these geological strata with the Lower Carboniferous limestone series which constitute the bulk of the Burren region. The soils are of the gley type and are poor-draining.

The site consists of wet meadow and heath which have been managed in a traditional way for hay-making. Molinia meadows, a habitat listed on Annex I of the E.U. Habitats Directive, is well represented at the site. The lands along the eastern perimeter contain associations of plants typical of wet meadows and are very rich in species. Wet flushes occur throughout the area. The heath is confined to the western edge of the site. The northern boundary runs alongside a stream and here scrub is well developed.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

[6410] Molinia Meadows

The main vegetation type found at the site is wet grassland. The dominant species are Meadow Foxtail (*Alopecurus pratensis*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Marsh-marigold (*Caltha palustris*), Cuckooflower (*Cardamine pratensis*) and there is an abundance of the Marsh Orchid, *Dactylorhiza majalis*. The flushes are dominated by Marsh-marigold and Soft Rush (*Juncus effusus*), whilst the heath areas on the upper, western slopes are dominated by Purple Moor-grass (*Molinia caerulea*), Heather (*Calluna vulgaris*) and Lousewort (*Pedicularis sylvatica*). The scrub on the northern edge is mostly of willows (*Salix* spp.), principally Eared Willow (*S. aurita*).

This site is State-owned and managed as a Nature Reserve. It is of considerable conservation significance for the presence of a wet grassland type listed on Annex I of the E.U. Habitats Directive, Molinia meadows.

SITE NAME: Inishmaan Island SAC
SITE CODE: 000212

Inishmaan is the middle of the three Aran Islands, situated approximately 15 km off the west coast of Co. Clare (though the Aran Islands are part of Co. Galway). Geologically, the island is an extension of the Burren. The shallow soil is, in many places, a man-made combination of sand and seaweed built up over the centuries. Pockets of rendzina are also found. This site is of major scientific importance owing to the range of outstanding karstic Carboniferous limestone and coastal habitats, many of which are listed as priority and Annex I habitats under the E.U. Habitats Directive. The site is dominated by limestone pavement and its associated calcareous

grasslands. Other Annex I habitats which occur include dry heath, lowland hay meadows and orchid-rich calcareous grassland.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

- [1170] Reefs
- [1220] Perennial Vegetation of Stony Banks
- [1230] Vegetated Sea Cliffs
- [2110] Embryonic Shifting Dunes
- [2120] Marram Dunes (White Dunes)
- [21Ao] Machairs*
- [4030] Dry Heath
- [6210] Orchid-rich Calcareous Grassland*
- [6510] Lowland Hay Meadows
- [8240] Limestone Pavement*

A network of small, stone-walled fields dissect the island. Many fields enclose areas of limestone pavement and/or fine examples of species-rich, dry calcareous grasslands. In places, the rocky grasslands support rare plant species such as Hairy Violet (*Viola hirta*) and Wood Small-reed (*Calamagrostis epigejos*). Both species are legally protected under the Flora (Protection) Order, 1999. Common species in grasslands on the island include Blue Moor-grass (*Sesleria albicans*) and eyebrights (*Euphrasia* spp.), along with Knapweeds (*Centaurea nigra* and *C. scabiosa*), Orchids (Orchidaceae), Bloody Crane’s-bill (*Geranium sanguineum*) and Spring Gentian (*Gentiana verna*). The southern part of the island supports the highest proportion of these calcareous grasslands. Orchid species recorded include: Pyramidal Orchid (*Anacamptis pyramidalis*), Common Spotted-orchid (*Dactylorhiza fuchsii*), Heath Spotted-orchid (*D. maculata*), Broad-leaved Marsh-orchid (*D. majalis*), Fragrant Orchid (*Gymnadenia conopsea*), Common Twayblade (*Listera ovata*), Dense-flowered Orchid (*Neotinea maculata*), Bee Orchid (*Ophrys apifera*), Early-purple Orchid (*Orchis mascula*), Lesser Butterfly-orchid (*Platanthera bifolia*) and Autumn Lady’s-tresses (*Spiranthes spiralis*). There is an excellent diversity of limestone pavement formations and an outstanding associated variety of rare and protected flora. At the north of the site striking sheets of bare pavement are found. Throughout the site there is an intimate mosaic between pavement and other habitat and vegetation types.

Dry limestone heath has developed in places, and while scattered, it is often species rich. It is often found associated with Juniper (*Juniperus communis*) heath and limestone pavement. The most common species include Heather (*Calluna vulgaris*) and Bell Heather (*Erica cinerea*), with Purple Moor-grass (*Molinia caerulea*), Blue Moor-grass (*Sesleria albicans*), Bloody Crane’s-bill and Bracken (*Pteridium aquilinum*) frequent. Hoary Rock-rose (*Helianthemum canum*), a species listed in the Irish Red Data Book, occurs regularly throughout the dry heath and alpine heath habitats on the Island. Elsewhere on rocky crevices are found two other Red Data Book species, Pyramidal Bugle (*Ajuga pyramidalis*) and Musk Thistle (*Carduus nutans*).

The range of Annex I coastal habitats present includes sea cliffs, embryonic dunes, Marram dunes, shingle and stony beaches, and machair. The latter is characterised by a species-rich, dry calcareous grassland, with a short turf and a low abundance of sand-binding species such as Marram (*Ammophila arenaria*). Machair is also an important invertebrate and breeding bird habitat. The coastal habitats play host to a number of rare plant species, including Purple Milk-vetch (*Astragalus danicus*) and Hairy Violet, both of which are legally protected under the Flora (Protection) Order, (1999). In Ireland, Purple Milk-vetch is confined to Inishmaan and Inishmore, where it occurs on machair and sandy places close to the sea.

The embryonic shifting dunes are typically dominated by Sand Couch (*Elymus farctus*), with other species such as Sandwort (*Honkenya peploides*), Hairy Rock-cress (*Arabis hirsuta*) and Sea Spurge (*Euphorbia paralias*) also occurring. The dominant species in the Marram dunes is, unsurprisingly, Marram, though species such as Sea Bindweed (*Calystegia soldanella*) and Sea-holly (*Eryngium maritimum*) are also found. The vegetation of stony banks consists of such species as the rare Red Data Book species Sea-kale (*Crambe maritima*), along with Spear-leaved Orache (*Atriplex prostrata*), Curled Dock (*Rumex crispus*), Sea-milkwort (*Glaux maritima*) and Sea Beet (*Beta vulgaris subsp. maritima*).

The reef habitats found at this site show good zonation of benthic communities of algae and fauna. The substrate is highly porous, which is generally indicative of a rich and varied algal flora, however the high wave action at this site reduces the diversity of communities present somewhat. There are excellent examples of vegetated sea cliffs at this site, particularly at the south-west, where sheer vertical cliffs are found. The vegetation on cliffs of Inishmaan includes species such as Rock Samphire (*Crithmum maritimum*), Sea Spleenwort (*Asplenium marinum*), Rock Seaspurrey (*Spergularia rupicola*), Thrift (*Armeria maritima*) and Roseroot (*Rhodiola rosea*).

Traditional farming practices, in the form of rye cultivation for thatching, has maintained suitable habitat for a number of Rare and threatened arable weeds. Darnel (*Lolium temulentum*), Smooth Brome (*Bromus racemosus*), Cornflower (*Centaurea cyanus*) and Bristle Oat (*Avena strigosa*) all occur on Inishmaan. All four species are listed in the Irish Red Data Book and, prior to their discovery on the Aran Islands, some of these species were thought to have been extinct in Ireland. These lowland hay meadows are excellent examples of this rare and floristically diverse habitat.

Six pairs of flocking Chough were sighted off the cliffs to the west of the Island. Two breeding pairs of this species are known to be present on the island. The island is also important for breeding terns, with seven pairs of Arctic Tern and three pairs of Little Tern known to occur. All three species are listed under Annex I of the E.U. Birds Directive.

Seabirds which can be regularly seen around the island include Cormorant, Shag, Fulmar and a range of gull species. Inland habitats support Sparrowhawk, Kestrel, Raven, Dunnock, Wren, Pied Wagtail, Stonechat and Wheatear. In all, 39 species of bird were recorded during the NHA survey in 1993.

Agricultural intensity is lowest on Inishmaan, compared with the other two Aran Islands. The majority of the land is used as winterage for cattle, sheep and, in some places, goats. The fields located close to the houses are used for summer grazing. This low-impact farming, combined with the absence of fertiliser, has maintained the species-richness and high diversity of the island flora. A move towards agricultural intensification would see the deterioration of this unique environment. The survival of the complement of rare arable weeds which occur here depends on continuation of the current traditional practice of rye cultivation for thatching. Plans to develop the island for tourism and amenity require close monitoring, in order to safeguard the wildlife and scientific value of Inishmaan.

Inishmaan is of considerable scientific interest primarily for the wide range of good quality habitats which occur, and the floristic richness of many of these habitats. The island supports an impressive array of critically rare and threatened plant species. The cultural heritage of Inishmaan (and in particular the continuation of traditional, low-intensity farming practices) is intrinsically linked with its scientific interest. The island is also of high scenic and amenity value.

SITE NAME: Inishmore Island SAC
SITE CODE: 000213

Inishmore Island is the largest of the three Aran Islands, situated approximately 8 km off the south coast of Co. Galway. Geologically an extension of the Burren, Co. Clare, the island is formed of Upper Carboniferous limestone strata, interleaved with layers of shale and clay. In places along the coast, spectacular cliffs rise to 90 m. A thin cover of rendzina occurs in pockets between blocks of bare limestone. This soil is combined with a mixture of sand and seaweed to form a partially man-made soil cover, built up over the centuries. The site also includes a large area of marine waters surrounding the island.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

- [1150] Coastal Lagoons*
- [1170] Reefs
- [1220] Perennial Vegetation of Stony Banks
- [1230] Vegetated Sea Cliffs
- [2110] Embryonic Shifting Dunes
- [2120] Marram Dunes (White Dunes)
- [2130] Fixed Dunes (Grey Dunes)*
- [2170] Dunes with Creeping Willow
- [2190] Humid Dune Slacks
- [21A0] Machairs*
- [4030] Dry Heath
- [4060] Alpine and Subalpine Heaths
- [6210] Orchid-rich Calcareous Grassland*
- [6510] Lowland Hay Meadows
- [8240] Limestone Pavement*
- [8330] Sea Caves
- [1014] Narrow-mouthed Whorl Snail (*Vertigo angustior*)
- [1351] Harbour Porpoise (*Phocoena phocoena*)

Inishmore has many good examples of submerged reef communities that are extremely exposed to wave action. On the infralittoral reef are two exceptional communities. Ireland’s only recorded example of a population of sublittoral Purple Sea Urchins (*Paracentrotus lividus*) is on the west of the island, while at the reef in Blind Sound, is found Ireland’s best example of an extremely exposed, shallow, infralittoral community that is dominated by a forest of the brown seaweed, *Alaria esculenta*, with a red seaweed and anemone turf. Rare species are present in the infralittoral reef community, including soft corals, sea fans and anemones. In deeper water, there are many unusual and fragile circalittoral reef communities. Communities that are characterized by the rare sea fan, *Eunicella verrucosa*, are widespread and species-rich despite their fragility. A number of other notable circalittoral species are found, including sponges, hydroids, nudibranchs, soft corals and ascidians. Large submerged marine caves on the south-east coast are unusually species-rich (76 species recorded) and are characterized by a diverse fauna of sponges, hydroids, bryozoans, soft corals, anemones, nudibranchs, echinoderms and ascidians. Some of the caves extend back as far as 20 to 30 m. They are probably the best-known sea caves in Ireland.

Limestone pavement and its associated plant communities dominate the upland area in the south of the island. The limestone pavement includes smooth-blocky and shattered types. The bare pavement is interspersed with

fine examples of species rich, dry calcareous grasslands. Dry heath, alpine heath and lowland hay meadows are additional habitats which occur on Inishmore.

A network of small, stone-walled fields dissect the island. Many fields enclose areas of limestone pavement and/or fine examples of species-rich, dry calcareous grasslands. Common species include Blue Moor-grass (*Sesleria albicans*), eyebrights (*Euphrasia spp.*), Wood Sage (*Teucrium scorodonia*), Carlina Thistle (*Carlina vulgaris*) and Burnet Rose (*Rosa pimpinellifolia*), along with Knapweeds (*Centaurea nigra* and *C. scabiosa*), Orchids, Bloody Crane’s-bill (*Geranium sanguineum*) and Spring Gentian (*Gentiana verna*). Two Red Data Book plant species have been recorded, Pyramidal Bugle (*Ajuga pyramidalis*) and Wood Small-reed (*Calamagrostis epigejos*). The latter species is legally protected under the Flora (Protection) Order, 1999.

Dry limestone heath has developed in places, with Heather (*Calluna vulgaris*), Bell Heather (*Erica cinerea*), Purple Moor-grass (*Molinia caerulea*) and Black Bog-rush (*Schoenus nigricans*). Hoary Rock-rose (*Helianthemum canum*), a species listed in the Irish Red Data Book, occurs regularly throughout the dry heath and alpine heath habitats on the island. Other species found commonly in the heathy areas include Juniper (*Juniperus communis*), Blue Moor-grass, Bloody Crane’s-bill, Quaking-grass (*Briza media*), Oxeye Daisy (*Leucanthemum vulgare*) and Wild Madder (*Rubia peregrina*).

A range of coastal habitats, some of which are listed on Annex I of the E.U. Habitats Directive, occur around the island. Sea cliffs occur along much of the southern coast of Inishmore and reach in excess of 80 m at the south-west end. The cliffs are mostly sheer and very exposed to the force of the Atlantic Ocean. They support a typical cliff flora, including the scarce species Roseroot (*Rhodiola rosea*). Inishmore also supports a variety of karstic lagoons, a type which is believed to be rare in Europe. All are in a natural state and of good quality. Loch Phort Chorrúch and Loch Dearg are good examples of karstic lagoons with cobble barriers. Loch an Chara, in particular, is a good example of a karstic saline lagoon with underground connections to the sea. It behaves almost like a ‘tidal turlough’. The flora is typically lagoonal with three lagoonal specialists. The fauna is not rich but comprises a high number of lagoonal specialists, including the rare corixid species *Sigara selecta* (Order Hemiptera).

Machair is a form of coastal grassland which is characterised by a species-rich, dry calcareous grassland, with a short turf and a low abundance of sand-binding species such as Marram (*Ammophila arenaria*). The coastal habitats of Inishmore support a range of rare plant species. Purple Milk-vetch (*Astragalus danicus*) grows on machair and sandy places close to the sea. It is confined in Ireland to Inishmore and Inishmaan and is legally protected under the Flora (Protection) Order, 1999.

Sea-kale (*Crambe maritima*) occurs on coastal sands and shingle around the island; Hairy Violet (*Viola hirta*) and Bee Orchid (*Ophrys apifera*) can be found among the coastal grasslands. All three species are listed in the Irish Red Data Book, and Hairy Violet is legally protected under the Flora (Protection) Order, 1999. A number of sand dune habitats are found at this site, including embryonic dunes, Marram dunes, Fixed dunes, dunes with Creeping Willow (*Salix repens*) and dune slacks. Sand Couch (*Elymus farctus*) typically dominates the embryonic dunes, with accompanying species such as Sandwort (*Honkenya peploides*), Hairy Rock-cress (*Arabis hirsuta*), Sea Spurge (*Euphorbia paralias*), Sea-holly (*Eryngium maritimum*) and Sea Bindweed (*Calystegia soldanella*). Marram (*Ammophila arenaria*) dominates the Marram, or white, dunes, with some of the species listed above also being found. Additional important species in the fixed dunes include Red Fescue (*Festuca rubra*) and a number of compositae; Groundsel (*Senecio vulgaris*), Common Ragwort (*Senecio jacobaea*) and Dandelion (*Taraxacum agg.*). Rarer species, also linked to the fixed dunes, include Purple Milk-vetch, Autumn Lady’s-tresses (*Spiranthes spiralis*), Bee Orchid (*Ophrys apifera*) and Dodder (*Cuscuta epithymum*). In the dune slacks,

Creeping Willow, Kidney Vetch (*Anthyllis vulneraria*) and Common Bird’s-foot-trefoil (*Lotus corniculatus*) are all common.

On Inishmore, the vegetation of stony banks consists of such species as the rare Red Data Book species Sea-kale, along with Sea Couch, Sea Mayweed (*Matricaria maritima*), Spear-leaved Orache (*Atriplex prostrata*), and Sea Beet (*Beta vulgaris subsp. maritima*).

Traditional farming practices, in the form of rye cultivation for thatching, has maintained suitable habitat for a number of Rare and threatened arable weeds. Darnel (*Lolium temulentum*), Smooth Brome (*Bromus racemosus*), Cornflower (*Centaurea cyanus*) and Bristle Oat (*Avena strigosa*) all occur on Inishmore. All four species are listed in the Irish Red Data Book and, prior to their discovery on the Aran Islands, some of these species were thought to have been extinct in Ireland. These lowland hay meadows are excellent examples of this rare and floristically diverse habitat.

The birdlife of Inishmore is considered to be of international significance, due to the presence of significant numbers of bird species listed under Annex I of the E.U. Birds Directive. Chough, Little Tern, Arctic Tern and Peregrine Falcon all breed here. Additional bird species on Inishmore include Merlin, Kestrel, Sparrowhawk, Linnet and Goldfinch. Along the western coastline, cliffs provide excellent nesting sites for Guillemot, Fulmar, Razorbill, Shag, Herring Gull, Great Black-backed Gull and Kittiwake.

A colony of Common Seals is occasionally seen, resting on the island’s shores. This species is listed under Annex II of the E.U. Habitats Directive.

The mollusc, *Vertigo angustior*, a species that is listed on Annex II of the E.U. Habitats Directive, occurs at three different locations within the site, two on dune and one on maritime grass, the latter an unusual habitat for the species. This is the only known island population of this rare snail.

Most of the island is grazed by cattle and sheep and, in places, goats. Agricultural intensity is relatively higher here than on the other two Aran Islands. Parts of the site have been damaged by over-grazing and agricultural improvement. Elsewhere, the abandonment of farming, in favour of tourism and related enterprises, has resulted in the increase in scrub and particularly Bramble (*Rubus fruticosus* agg.) thickets. This is at the expense of species-rich grasslands. An increase in leisure activities, in particular scrambling and walking, on the Marram dunes at the east of the island, has resulted in damage to this habitat. Maintenance of traditional farming practices, which include winter grazing, absence of fertilisers and the cultivation of rye for thatching, is vital to preserve the species-richness and high diversity of the island flora. Development plans for tourism and amenity require close monitoring, to safeguard the wildlife and scientific value of this unique environment.

Inishmore is of considerable scientific interest primarily for the wide range of good quality habitats which occur, and the floristic richness of many of these habitats. The island supports an impressive array of rare and threatened plant species, and it also provides excellent habitat for several bird species. The cultural heritage of Inishmore (and in particular the continuation of traditional, low-intensity farming practices) is intrinsically linked with its scientific interest. The island is also of high scenic and amenity value.

Appendix 3 - Certificate of Competence

Limosa Environmental was established by **Dr Lesley J Lewis** and associates in 2004 and has since amassed a range of experience across both the private and public sectors. Our aim is to provide a first-class professional service at competitive prices in line with national and international best practice and adhering to the codes of conduct laid down by the Chartered Institute of Ecology and Environmental Management. We can provide a wide range of ecological and environmental services, bringing together teams of professionally qualified, accredited and specialist ecologists and environmental scientists to meet the specific requirements of each individual project. We hold current Professional Indemnity and Public Liability Insurances.

Relevant Experience in relation to Appropriate Assessment: Dr Lesley J Lewis has over 20 years of experience as a consultant ecologist. 2024 marks the 20th year of 'Limosa Environmental'.

Consultant ecologist to planning departments: Lesley has recently been engaged as a consultant ecologist by planning authorities including Dublin City Council and Cork City Council. Lesley is also on a panel of expert ecological consultants contracted by An Bord Pleanála. In this work Lesley reviews ecological reporting (AA/EIAR) and advises on planning opinions and decisions.

Recent Experience Ecological Impact Assessment/Appropriate Assessment: Appropriate Assessment of Westfields Wetlands Management Plan (2023 Limerick City and County Council), development of industrial units, Carrigtwohill, Cork (2023 private client), development of a warehouse, Macroom, Cork (2023 private client), development of a Data Centre, Little Island, Cork (2022 private client), private development Baltimore, Co. Cork (2021, private client), light industrial/warehousing development, Little Island, Cork (2021, private client), mixed-use development Carrigaline, Co. Cork (2021, Lidl Ireland), Youghal Front Strand Flood Mitigation Works (2020, Cork County Council), Mixed-use development (2020, Mallow, Co. Cork, Lidl Ireland), development of a light industrial park, Watergrasshill, Cork (2019, private client); Re-development of Carrignacurra Castle, Co Cork (2019, private client), private development Baltimore Co. Cork (2019, private client), bus shelter/accessible stop program – East Cork (2019, Cork County Council), development of a light industrial park, Little Island, Cork (2019, private client); installation of a zip-line on Bull Rock (2019, BirdWatch Ireland), development of a light industrial park/warehousing, Little Island, Cork (2019, private client); development of a light industrial park/warehousing, Watergrasshill, Co. Cork (2019, private client); repair works to sea walls Cork Harbour (2019, Cork County Council); housing development at Newmarket (2018, private client), housing development at Toonsbridge, Macroom (2018, private client), road re-surfacing at Toonsbridge, Macroom, Co. Cork (2018, for Cork County Council), development of pedestrian footbridges Castlemartyr, Co. Cork (2018, Cork County Council), private development Castletownbere Co. Cork (2018, private client), residential/business development Clonakilty, Co. Cork (2018, private client), re-development of site of former Duhallow Park Hotel (2018, private client), housing development (50 houses) Carrigtwohill, Co. Cork (2018, private client), road re-surfacing at Toonsbridge, Macroom, Co. Cork (2017, for Cork County Council), development of a discount foodstore Fermoy, Cork (2017, Lidl Ireland), housing development (47 houses), Cobh, Co Cork (2017, private client), extension to light industrial unit, Little Island, Cork (2017, private client), development of a discount foodstore Douglas, Cork (2017, Lidl Ireland), works to sea walls at Rosscarbery (2017 Cork County Council), development of a footbridge at Killeagh Co Cork (2017, Cork County Council), development of an eco-campsite in West Cork (2016, private client), Rosscarbery flood defence works (2016, Cork County Council), development of Lidl stores at Mallow and Kanturk (2016, Lidl Ireland).

Relevant Experience in relation to coastal ecology, wetlands, waterbirds and general ornithology:

- **1999- 2003 PhD Studies** - Ecological disturbance and its effects on estuarine benthic invertebrate communities and their avian predators (wading birds).
- **Waterbird Surveys:** Co-ordinator and participant in waterbird surveys at Bannow Bay (Co Wexford) during winters of 2014/15 – 2018/19 (for Inis Environmental/Marine Institute); Survey team member for waterbird surveys at Dungarvan Harbour (2015/16, 2017/18, 2018/19, 2020/21 and 2021/22 Atkins Ireland for the Marine Institute); Monthly I-WeBS counts at various sites including Clonakilty Bay (Co Cork) and Dungarvan Harbour (Co. Waterford) (September to March annually and on-going), waterbird surveys as part of ecological monitoring of Youghal Landfill (2014-2016, Cork County Council), and East Cork Landfill (2006 - 2016, Cork County Council). Survey team member during the NPWS Waterbird Survey Programme (2009-2012) including Courtmacsherry Estuary, Ballyteigue Burrow, Dungarvan Harbour, Dundalk Harbour, Bannow Bay, Blackwater Estuary and Cork Harbour.
- **Bird surveys:** (examples)
 - Winter bird survey of the proposed River Boyne Greenway Co. Meath. (2023)
 - Winter bird survey the proposed Wicklow to Greystones Greenway, Co. Wicklow (2023/2024)
 - Breeding bird survey of the Cliffs of Moher (2023)
 - Lower Lee Flood Defence Scheme (winter bird surveys winter 2021/22) (2022 OPW).
 - Lower Lee Flood Defence Scheme (breeding bird surveys 2019 and 2021) (2019, 2021 OPW).
 - Winter bird survey of two sites in County Clare (Mott MacDonald, 2020-21).
 - Breeding bird survey of a site in north County Dublin (2020, Golder Associates Ireland Ltd).
 - Breeding bird survey of Galmoy Mines Co. Kilkenny (2021, Golder Associates Ireland Ltd).
 - Breeding bird survey of Behan Quarry, Co. Dublin (2021, Golder Associates Ireland Ltd).
 - Breeding bird survey of the proposed S2S project Co. Dublin (2021, Atkins Ireland Ltd).
 - Macklin, R., Brazier, B., Gallagher, C., O' Brien, C. & **Lewis, L.** (2018) Biodiversity Study of the River Liffey at Ballymore Eustace, Co. Kildare. Unpublished report prepared by Triturus Environmental Services for the Ballymore Eustace Trout & Salmon Anglers Association in conjunction with the Local Authorities Water & Communities Office.
 - Macklin, R., Brazier, B., O' Brien, C. & **Lewis, L.** (2018) Biodiversity Study of the River Camac, Clondalkin, Dublin. Unpublished report prepared by Triturus Environmental Services for the Friends of the Camac in conjunction with the Local Authorities Water & Communities Office.

Estuarine benthic studies: Annual benthic study of the River Fergus Estuary (2006 – current, private client); intertidal survey of the Owenboy estuary (2013 Atkins Ireland Ltd), benthic surveys of Rossmore Bay and peninsula (as part of annual monitoring of East Cork Landfill (2006 – 2014, Cork County Council); benthic surveys of Tramore Bay (as part of annual monitoring of Tramore Landfill (2004 – 2008, Waterford County Council); benthic surveys of upper Colligan Estuary (as part of annual monitoring of Dungarvan Landfill (2004 – 2008, Waterford County Council).

Project Manager BirdWatch Ireland (P/T 2009 - current): Lesley is the current Project Manager of the Irish Wetland Bird Survey (I-WeBS) and Countryside Bird Survey (CBS). She is the lead or co-author on the most

recent national assessments of waterbird status and trends in the Republic of Ireland and is actively involved in studies on the response of waterbirds to disturbance.

Birds of Conservation Concern in Ireland (BoCCl4): Co-author of the most recent assessment of the status of birds in Ireland (Gilbert et al. 2021).

Waterbird Ecologist (2009–2014): Through BirdWatch Ireland, Lesley was contracted to the National Parks & Wildlife Service (NPWS) between 2009 and 2014. In her role as ‘Waterbird Ecologist’ Lesley was responsible for the design and implementation of the NPWS Waterbird Survey Programme. Lesley was the project manager for the programme of surveys that ran over three winters (2009/10, 2010/11 and 2011/12) with surveys undertaken across 32 coastal Special Protection Areas (SPAs). Data collected from the low tide waterbird survey programme were analysed and used in the process of formulating conservation objectives for coastal SPAs. Lesley worked on all aspects of this process from the initial stages of conception and development, data analysis, through to the production of conservation objectives documents for all 32 coastal SPAs. This work culminated in the publication of standard low-tide survey methods for waterbirds (Lewis & Tierney, 2014).

Recent relevant selected publications and reports:

Kennedy, J., Burke, B., Fitzgerald, N, Kelly, S.B.A., Walsh, A. & Lewis, L.J. (2023) Site-level trends and national trends for wintering waterbirds in Ireland 1994/95-2019/20. *Irish Birds* 45, 11-24.

Burke, B., Fitzgerald, N, Kelly, S.B.A., & Lewis, L.J. (2023) Status of Icelandic-breeding and feral Greylag Geese *Anser anser* in the Republic of Ireland. *Irish Birds* 45, 1-10.

Gilbert, G., Stanbury, A. & Lewis, L.J. (2021) Birds of conservation concern in Ireland 4 2020 – 2026. *Irish Birds* 43, 1-22.

Burke, B., McElwaine, J. G., Fitzgerald, N., Kelly, S.B.A., McCulloch, N., Walsh, A. J., & Lewis, L. J. (2021) Population size, breeding success and habitat use of Whooper Swan *Cygnus cygnus* and Bewick’s Swan *Cygnus columbianus bewickii* in Ireland: results of the 2020 International Swan Census. *Irish Birds* 43, 57-70.

Lewis, L. J. & Hayes, W. (2019) Waterbird survey of Lough Gur, County Limerick 2018 – 2019. Final Report. Report commissioned by Limerick City & County Council in association with Lough Gur Development Co-Operative Society Ltd and prepared by BirdWatch Ireland and Limosa Environmental. June 2019.

Lewis, L. J., Burke, B., Fitzgerald, N., Tierney, T. D. & Kelly, S. (2019) Irish Wetland Bird Survey: Waterbird Status and Distribution 2009/10 - 2015/16. Irish Wildlife Manuals No. 106. National Parks and Wildlife Service, Department of Culture, Heritage and the Gaeltacht, Ireland.

Lewis, L. J. (2019) An assessment of the effects of recreational and other activities on the waterbirds using the Bull Island saltmarsh. Final Report. Report commissioned by Dublin City & County Council and prepared by BirdWatch Ireland. April 2019.

Adcock, T., Lewis, L. J. & Hodd, R. (2019) Sutton to Sandycove (S2S) cycleway and footway ecology and ornithological monitoring 2018-2019. Report by BirdWatch Ireland to Dublin City Council. June 2019.

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Appendix 5 - Appropriate Assessment (AA) Screening Determination by Clare County Council as Competent Authority for *Cliffs of Moher Strategy 2040*



COMHAIRLE
CONTAE AN CHLÁIR

CLARE
COUNTY COUNCIL

**APPROPRIATE ASSESSMENT (AA) SCREENING DETERMINATION BY CLARE COUNTY COUNCIL
AS COMPETENT AUTHORITY for the *CLIFFS OF MOHER STRATEGY 2040***

An Appropriate Assessment Screening by Clare County Council as the Competent Authority has been undertaken associated with the *Cliffs of Moher Strategy 2040*.

It is the decision of the Clare County Council as Competent Authority to determine under PART 5 APPROPRIATE ASSESSMENT *Screening for Appropriate Assessment and Appropriate Assessment of implications for European Sites* Article 42(6) of the *European Communities (Birds and Natural Habitats) Regulations 2011*, as amended by the *European Union (Birds and Natural Habitats) (Amendment) Regulations 2021*, that:

"An Appropriate Assessment of the Cliffs of Moher Strategy 2040 is required in terms of Articles 6(3) and 6(4) of the Habitats Directive (92/43/EEC) and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011, as amended by the European Union (Birds and Natural Habitats) (Amendment) Regulations 2021."

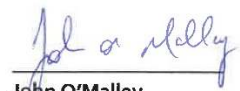
Therefore a Stage 2 Appropriate Assessment will be carried out per Article 42(6) of the *European Communities (Birds and Natural Habitats) Regulations 2011*, as amended by the *European Union (Birds and Natural Habitats) (Amendment) Regulations 2021*, and Articles 6(3) and 6(4) of the *Habitats Directive (92/43/EEC)*, in relation to the *Cliffs of Moher Strategy 2040* and Clare County Council as Competent Authority shall:

- Prepare a Natura Impact Statement.
- Compile any other evidence including, but not limited to, scientific evidence that is required for the purposes of the Appropriate Assessment.
- Submit a Natura Impact Statement together with evidence compiled to the Minister not later than six weeks before it proposes to adopt or undertake the *Cliffs of Moher Strategy 2040* to which the Natura Impact Statement and evidence relates.

the European Union (Birds and Natural Habitats) (Amendment) Regulations 2021

Signed:


Date: 24/5/24




John O'Malley
A/Director of Service

Roinn Turasóireachta
Stúirthóireacht Forbairt Turasóireachta
Áras Contae an Chláir, Bóthar Nua, Inis, Co. an Chláir, V95 DXP2

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Tourism Development Directorate
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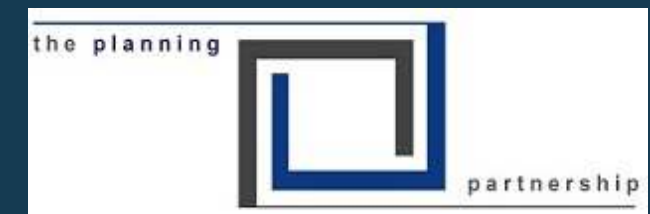


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Natura Impact Statement
Cliffs of Moher 2040 Strategy

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