

# NATIONAL MONUMENTS SERVICE

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## Sceilg Mhichíl Draft Management Plan 2020 - 2030

### Natura Impact Statement

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## DOCUMENT RELEASE FORM

### National Monuments Service

**P2349\_R5158\_Rev0**

Sceilg Mhichíl Draft Management Plan 2020 - 2030

Natura Impact Statement

Author/s

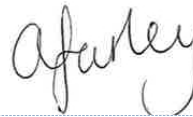
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## GLOSSARY

### AA

Appropriate Assessment

### AON

Apparently Occupied Nests

### AOS

Apparently Occupied Sites

### AOT

Apparently Occupied Territories

### CIL

Commissioners of Irish Light

### cSAC

Candidate Special Area of Conservation

### DAHG

Department of Arts, Heritage and the Gaeltacht

### DCHG

Department of Culture, Heritage and the Gaeltacht

### DEHLG

Department of Environment, Heritage and Local Government

### EC

European Commission

### EU

European Union

### IAA

Irish Aviation Authority

### INNS

Invasive / Non-Native Species

### IROPI

Imperative Reasons of Overriding Public Interest

### KCDP

Kerry County Development Plan

### LECP

Local Economic and Community Plan

### LSE

Likely Significant Effect

### NIS

Natura Impact Statement

### NGO

Non-Governmental Organisation

### NMS

National Monuments Service

### NPWS

National Parks & Wildlife Service

### OPW

Office of Public Works

### pNHA

Proposed Natural Heritage Area

### pSPA

Proposed Special Protection Area

### QI

Qualifying Interest (SACs)

### SAC

Special Area of Conservation

### SCI

Special Conservation Interest (SPAs)

### SI

Statutory Instrument

### SMIG

Skellig Michael Implementation Group

### SPA

Special Protection Area

### UAV

Unmanned Aerial Vehicle

### UNESCO

United Nations Educational, Scientific and Cultural Organisation

**WHS**

World Heritage Site

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**ZOI**

Zone of Influence

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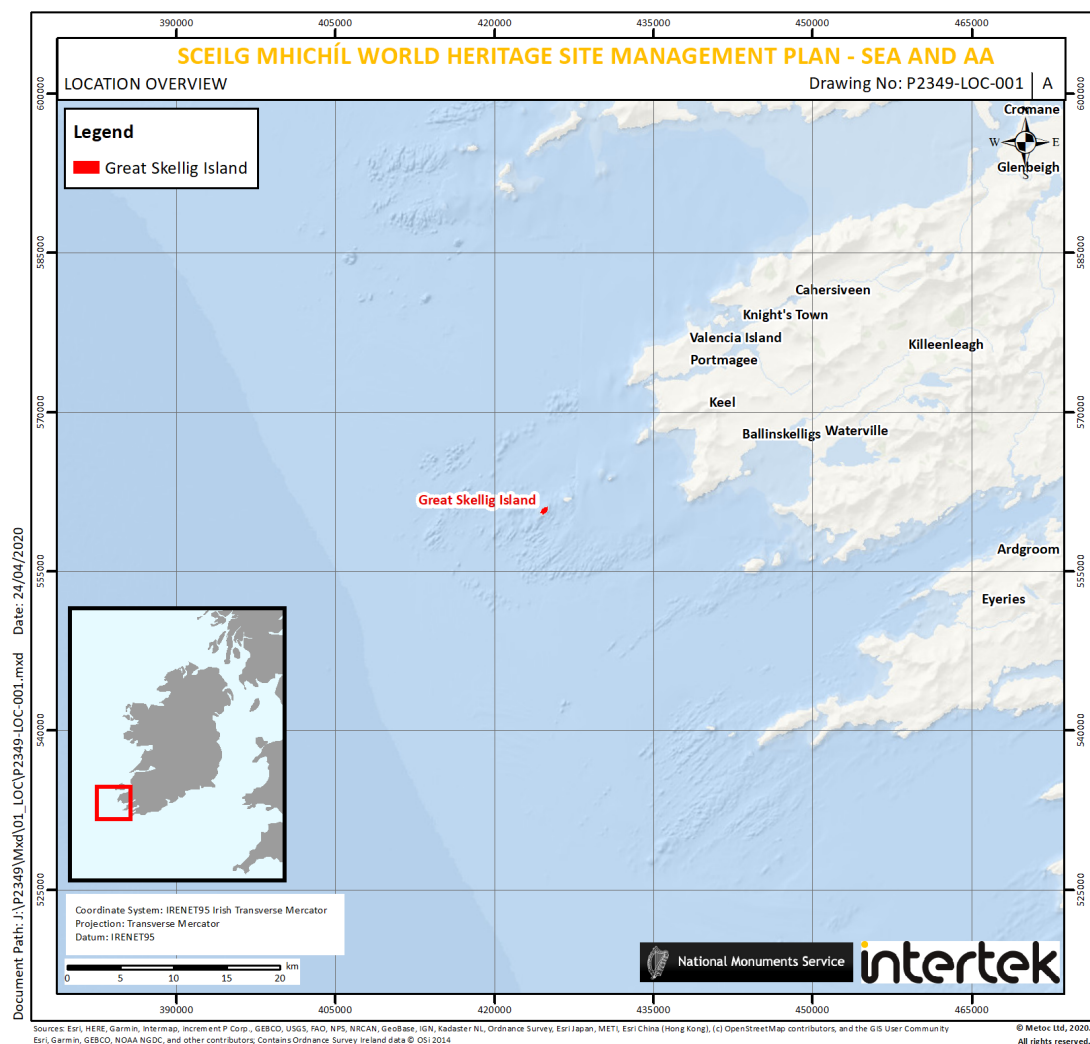
# 1. INTRODUCTION

This document has been prepared for National Monuments Service (NMS), part of the Department of Housing, Local Government and Heritage (DHLGH) by Intertek Energy and Water (Intertek). It is the Natura Impact Statement (NIS) of the draft Sceilg Mhichíl Management Plan 2020 - 2030.

## 1.1 Project Background

The DHLGH, in conjunction with the Office of Public Works (OPW), have produced a Draft Management Plan for the Sceilg Mhichíl World Heritage Site for the period of 2020 - 2030. This plan will replace the current Management Plan that covers the period between 2008 – 2018. The Draft Management Plan (hereafter referred to as ‘the Proposed Plan’) sets out key Objectives and Actions to ensure the long-term sustainable management of Sceilg Mhichíl and provides for the proactive management of the island in order to maintain its Outstanding Universal Value as a World Heritage Site (WHS). The location of Sceilg Mhichíl in relation to the Irish mainland is displayed in Figure 1-1 below (Drawing P2349-LOC-001).

Figure 1-1 Location of Sceilg Mhichíl (Drawing P2349-LOC-001)





## 1.2 The Requirement for Appropriate Assessment (AA)

### 1.2.1 Legislation

Article (6)3 of the European Commission (EC) Habitats Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna (the Habitats Directive) requires that any plan or project which is not directly connected with or necessary to the management of a Natura 2000 Site, but would be likely to have a significant effect on such a site, either individually or in-combination with other plans or projects, shall be subject to an ‘Appropriate Assessment’ (AA) of its implications for the Natura 2000 Site in view of the site’s conservation objectives. The plan-making body (in this case the DHLGH) shall agree to the plan (the Proposed Plan) only after having ascertained that it will not adversely affect the integrity of the site concerned, unless in exceptional circumstances, the provisions of Article 6(4) are met.

This procedure is applied in Ireland through Irish Habitat Regulations (2011) (Statutory Instrument (S.I.) No. 477 of 2011).

### 1.2.2 Screening for AA

Intertek carried out a Stage 1: Screening for AA of the Proposed Plan in June 2020. The assessment concluded that the Proposed Plan should be subject to Stage 2 AA. This was on account of one Natura 2000 Site being assessed as having the potential to be significantly affected by the Proposed Plan, the Skelligs Special Protection Area (SPA) (Intertek 2020).

The National Parks & Wildlife Service (NPWS), in its capacity as an advisory body, reviewed the findings of the Screening for AA and agreed with the conclusions. As such it was determined that assessment of the plan should proceed to Stage 2 AA and a NIS be prepared.

### 1.2.3 AA and SEA

The AA and Strategic Environmental Assessment (SEA) for the Proposed Plan have been conducted in parallel, due to the common overlap between the two reports. The AA is narrower in focus compared to the SEA, focusing specifically on the effect(s) the Proposed Plan may have on Natura 2000 sites and thus requires more detailed analysis. However, the findings of the AA and the research conducted for it also feed into the SEA, allowing for a better consideration of the environmental concerns in the SEA. The AA also aids the SEA process in the appraisal of potential alternatives, in relation to Natura 2000 sites.

## 1.3 The Plan Being Assessed

The Sceilg Mhichíl Management Plan 2020–2030 sets out the key objectives and future vision for the management of Sceilg Mhichíl. The plan will inform the day-to-day and long-term management of Sceilg Mhichíl. It will be a working document that is open to periodic review, with additions or amendments being made as conditions change.

The Stage 1: Screening for AA of the Proposed Plan conducted in June 2020 considered Natura 2000 sites within the geographical scope of the Proposed Plan (The Skelligs islands, and the three sailing routes from the mainland to the Sceilg Mhichíl). This report determined that the only Natura 2000 site that may be significantly affected by the Proposed Plan was the Skelligs SPA. As such, the scope of this plan-level NIS is focused on Skelligs SPA, which encompasses the islands of Sceilg Mhichíl, Sceilg Bheag and their surrounding waters.

### 1.3.1 Potential Effects on Natura 2000 Sites

The following pressures<sup>1</sup> were assessed during the Screening for AA to determine the potential for likely significant effects of the implementation of the Proposed Plan on Natura 2000 Sites:

#### Direct pressures

- Visual and physical disturbance (including noise disturbance) and potential displacement of protected species resulting from the presence of visitors (including vessels) and employees, conservation works and vehicles/vessels (e.g. boats, helicopters);
- Habitat loss/damage from conservation works and accidental/intentional damage from visitors; and
- Introduction of invasive non-native species (INNS) / problematic native species.

#### Indirect pressure

- Climate change – resulting in habitat loss and damage / visual and noise disturbance through a requirement for remedial conservation works.

## 1.4 Aims of the Report

In accordance with the provisions of Article 6(3) of the European Union (EU) Habitats Directive and the Irish Habitat Regulations (2011) S.I. No. 477 of 2011), a NIS has been prepared to consider the possible effects of the Proposed Plan on relevant Natura 2000 sites.

The aim of this report is to inform the AA process in determining whether the Proposed Plan, either alone or in combination with other plans or projects, is likely to have a significant effect on any Natura 2000 site. The effects of the Proposed Plan on relevant Natura 2000 sites are considered in the context of the site's conservation objectives and specifically on the habitats and species for which the sites have been designated.

This report presents the findings of this NIS and has been based on the following guidance documents:

- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (Department of Environment, Heritage and Local Government (DEHLG), 2010)
- Habitats Regulations Appraisal of Plans Guidance for Plan-Making Bodies in Scotland (David Tyldesley and Associates, 2015)
- Managing Natura 2000 sites. The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (European Commission (EC), 2018)
- Marine Natura Impact Statements in Irish Special Areas of Conservation – A Working Document (Department of Arts, Heritage and the Gaeltacht (DAHG), 2012)
- EU Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC (EC, 2007)
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2001)

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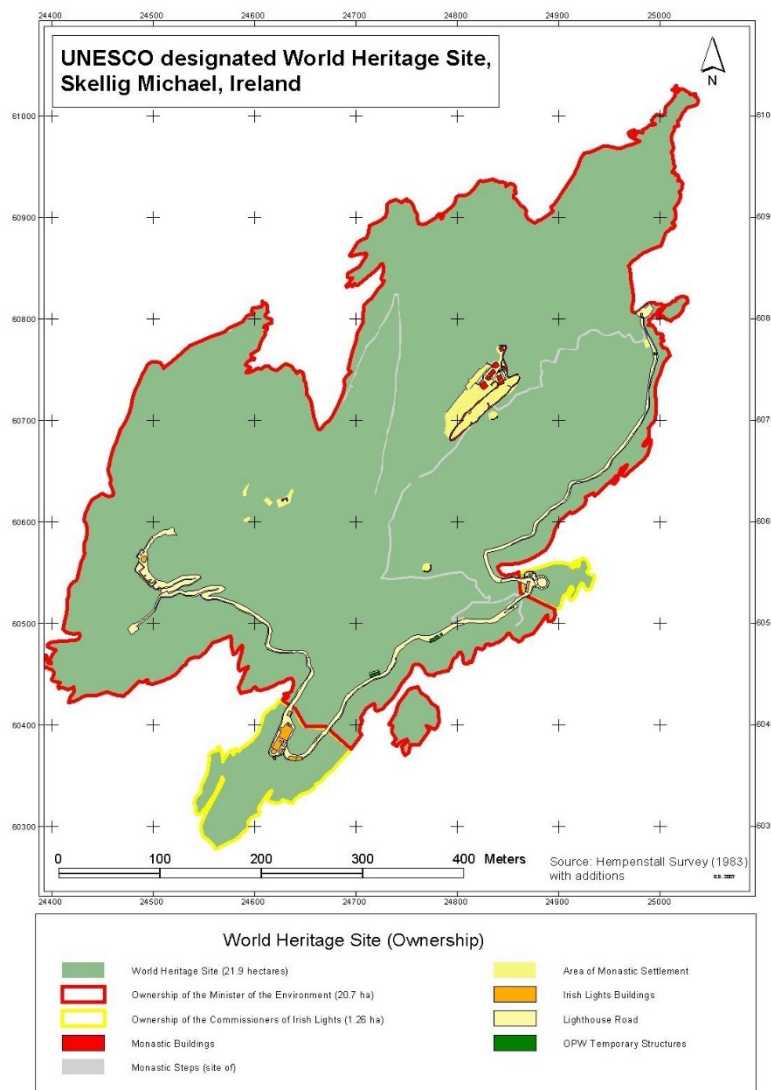
<sup>1</sup> A pressure is the mechanism through which an activity has an effect on any part of the ecosystem. A list of marine pressures and their descriptions was prepared by the OSPAR Intercessional Correspondence Group on Cumulative Effects (ICG-C) and the list of pressures is published within OSPAR Agreement 2014-02 'OSPAR Joint Assessment and Monitoring Programme (JAMP) 2014-2021' (Table II) (JNCC, 2019a).

## 2. OVERVIEW OF THE PROPOSED PLAN

### 2.1 Overview

The island of Sceilig Mhichíl (also referred to as Skellig Michael) was inscribed by The United Nations Educational, Scientific and Cultural Organization (UNESCO) on the World Heritage List as a WHS in 1996. Sceilig Mhichíl is located 11.6km west of the Iveragh Peninsula in County Kerry, on the Irish mainland. The entire island was inscribed due to its Outstanding Universal Value created by the historic interaction between the monks of Sceilig Mhichíl and the island's unique topography and harsh living environment. The boundary of the WHS designation is drawn tightly around the island, with the nearby island of Little Skellig or the surrounding seas not being included in the designation. The entirety of the site is owned by the DHLGH (on behalf of the State), with the exception of the lower lighthouse, its curtilage, the helipad and its adjacent store which are currently owned by the Commissioners of Irish Lights (CIL) on behalf of the state. Negotiations with CIL are currently underway for the DHLGH to lease this property. The WHS boundary is detailed in Figure 2-1 below:

Figure 2-1 Sceilig Mhichíl WHS boundary (UNESCO, 2008)



As required under the UNESCO World Heritage Convention 1972, Ireland is obligated to ensure every WHS within its territory has an appropriate management structure in place. The Proposed Plan will replace the existing Sceilg Mhichíl Management Plan 2008 – 2018. The Proposed Plan has been developed by DHLGH, in conjunction with the OPW, along with input from local interest groups, non-governmental organisations and other interested parties through public consultation. It has been developed to protect and preserve Sceilg Mhichíl WHS, addressing cultural and natural heritage issues in an integrated manner. The Proposed Management Plan provides a framework for the proactive management of the site, helping ensure that its Outstanding Universal Value is protected and managed for future generations.

Additionally, Sceilg Mhichíl is internationally renowned as one of the most important sites for breeding seabirds in Ireland. Sceilg Mhichíl, along with Little Skellig and their adjacent waters form part of Skelligs SPA designated under the Birds Directive (2009/147/EC) for northern fulmar (*Fulmarus glacialis*), Manx shearwater (*Puffinus puffinus*), European storm petrel (*Hydrobates pelagicus*), northern gannet (*Morus bassanus*), black-legged kittiwake (*Rissa tridactyla*), common guillemot (*Uria aalge*) and Atlantic puffin (*Fratercula artica*).

## 2.2 Purpose of the Proposed Plan

The Proposed Plan details the key Objectives and Actions that will be implemented to ensure the long-term conservation, preservation and effective management of the site, protecting the sites intrinsic Outstanding Universal Value. Its mission is to ensure the long-term conservation, preservation and presentation of this historically important site to international standards, by putting in place a management framework that will protect its Outstanding Universal Value. The plan aims to ensure that the site's unique qualities and global significance are understood in order to conserve and safeguard the inherited cultural and historical assets.

This revised Management Plan, includes:

- a brief history and description of the key features of cultural and natural heritage on Sceilg Mhichíl;
- identification of the issues that affect the core values of the site; and
- policies for effective management of this site into the future while sustaining its spiritual and cultural significance.

The Proposed Plan will inform both the day-to-day and long-term management of the site. It will act as a working document open to periodic review, so that amendments or additions may be made as required.

## 2.3 Preparation of the Proposed Plan

The Sceilg Mhichíl Implementation Group Review Committee was established by the DHLGH in 2018 to oversee the preparation of the Proposed Plan, in accordance with Ireland's obligations under the World Heritage Convention. The group was comprised of technical experts from the NPWS, National Monuments Service (NMS, DHLGH) and the OPW. Responsibility for the implementation of the management plan lies jointly with the DHLGH and the OPW.

While preparing the Proposed Plan, the group met regularly to develop a consensus on the key priorities. A draft plan was launched by the steering group in October 2018 for public consultation. The consultation period ran from December 2018 to February 2019. The public consultation process involved placing advertisements in the national and regional newspapers, a press release, publication of the draft management plan on the DHLGH's website (<https://www.housing.gov.ie/>) and the circulation of over 100 copies of the consultative document to interested parties and relevant organisations.

There were 24 submissions in response to the public consultation stage of the preparation of the Proposed Plan. There was a wide and varied scope to the submissions received, with significant input from community interest groups, professional and technical personnel, professional institutes, State-sponsored bodies, such as the Heritage Council, non-governmental organisations, guides, academics and the wider public.

All comments received were considered and taken into account by the steering group in the preparation of the Proposed Plan. The group also consulted with agencies such as the National Tourism Development Authority and Fáilte Ireland regarding sustainable tourism comments received during the consultative phase.

During the SEA process, a workshop was held between Intertek, OPW and the heritage division of DHLGH to discuss the initial findings of the SEA ER and NIS. This focused on agreeing changes to the Proposed Plan through re-wording of Plan Actions and the addition of new Plan Actions.

## 2.4 Key Issues

Key issues associated with the management of Sceilg Mhichíl in terms of cultural heritage, natural heritage, visual impacts and climate change have been outlined in the Proposed Plan. Those issues which are relevant to the Skelligs SPA are outlined below.

### **Introduction of invasive / non-native species (INNS)**

The issue which could have the greatest, and possibly most drastic impact on the island's biodiversity is from the introduction of invasive non-native species (INNS) to the island, particularly mammalian predators. The introduction of predators not currently found on the island presents a significant threat to the resident bird species of Sceilg Mhichíl, particularly those that nest in burrows such as Atlantic puffin, Manx shearwater, and European storm petrel. Mammals such as rats, mink, hedgehogs and cats could do considerable damage to breeding bird colonies.

### **Visitor numbers and conservation works**

There is potential for adverse effects on nesting birds and habitats or biodiversity from two principal pressures: visitors and conservation works. During the main visitor season, up to 180 people may visit the island per day. This number of people has the potential to cause disturbance to nesting birds and to cause habitat damage through trampling. Conservation works also have the potential to cause habitat damage as well as direct disturbance to nesting birds, including displacement and entombment.

### **Unregulated access on, and in the vicinity of, the island**

The movement of visitors on the island are largely controlled by the very nature of the terrain. Areas that are not accessible by existing steps or roadways are difficult to reach due to the steep and often unstable slopes. For safety reasons, guides request that visitors always keep to recognised visitor routes. If visitors do not stick to the designated paths, visitors may disturb the resident bird species and cause habitat loss/damage through trampling. There also exists the issue of visitors accessing the island outside of the recognised visitor season. Such visits are unregulated, with no guides being present on the island to direct visitors away from sensitive areas of habitat.

### **Works programme to lighthouse structures**

Works on the island have the potential to cause habitat damage as well as direct disturbance to nesting birds, including displacement and entombment. A programme of works has been planned within the lower lighthouse complex on the island to provide accommodation for workers; toilets for visitors; and room for academic researchers. Preliminary work having already been carried out involved the removal of refurbishments carried out in the 1970's; the removal of asbestos; and the removal of some plaster. Since there are no nesting birds within this complex these works are unlikely to present an issue with disturbance or habitat damage. Should other future works (such as planned works on the

road between the lower lighthouse and upper light house and on the upper lighthouse itself) come into contact with nesting birds, there is a potential they could cause disturbance and habitat damage.

### **Climate change**

The impact of climate change on the island is of increasing concern. The natural heritage can be particularly affected by climate change with intense rainfall, changes in phenology (timing of events, such as flowering) and changes in the ecosystem configuration leading to, amongst others, disturbance in breeding patterns of species and growing seasons of plants.

Until recently Sceilg Mhichíl has seen relatively few effects of climate change, other than landslides. However, its location makes it particularly vulnerable to the damaging effects of increased storm and wind strength. In 2016 and 2017 there were severe rock falls on the island which damaged the lighthouse road. It is noted in the Proposed Plan that Sceilg Mhichíl will, in the future, require close monitoring and maintenance by the relevant authorities to mitigate potential impacts of climate change (NMS, 2020).

## 3. STAGE 2 APPROPRIATE ASESMENT METHOD

### 3.1 Legislative Context

The Birds Directive (2009/147/EC) and the Habitats Directive (92/42/EEC) require EU Member States to establish a network of sites of highest biodiversity importance for rare and threatened habitats and species across the EU. This network of sites is known as the Natura 2000 network. The network comprises Special Areas of Conservation (SACs) designated under the Habitats Directive, and Special Protection Areas (SPAs) designated under the Birds Directive. Natura 2000 sites are also referred to as European sites.

The Natura 2000 network in Ireland is made up of European sites which include SACs, SPAs, candidate SACs (cSACs) and proposed SPAs (pSPAs). cSACs and proposed pSPAs also form part of the network and are treated as if fully designated. SACs are designated for the protection of Annex I listed habitats and Annex II listed species referred to as the Qualifying Interests (QI) of the site. SPAs are established for the protection of endangered species of wild birds designated under Annex I of the Birds Directive, along with regularly occurring migratory species, such as ducks, geese and waders and areas of wetland, which are referred to as the Special Conservation Interests (SCI) for the site.

A key requirement of the Habitats Directive is that the effects of any plan or project, alone, or in combination with other plans or projects, on the Natura 2000 site network, should be assessed before any decision is made to allow that plan or project to proceed. This process is known as Appropriate Assessment (AA). Each plan or project considered for approval, must take into consideration the possible effects it may have in combination with other plans and projects when going through the AA process.

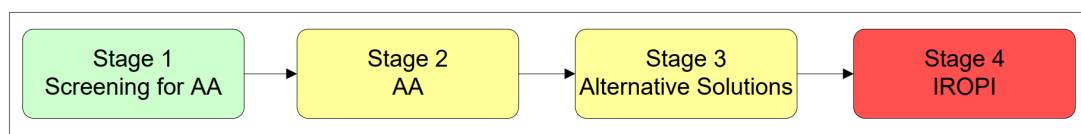
The obligation to undertake AA derives from Article 6(3) and 6(4) of the Habitats Directive. Article 6(3) of the Habitats Directive states that:

*“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. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.”*

This provision is transposed into Irish law in respect of the Proposed Plan by Part 5 of the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No. 477 of 2011), (as amended).

The European Commission’s methodological guidance (EC, 2002) outlines a four-stage approach to the AA process, where the outcome at each successive stage determines whether a further stage in the process is required. The results at each step must be documented so there is transparency of the decisions made. The four stages are shown in Figure 3-1 and described below.

Figure 3-1 Stages of the AA process (DEHLG, 2010)



### 3.1.2 Stage 1 – Screening for AA

Stage 1 of the AA process is referred to as screening for AA and identifies whether the proposed plan or project, either on its own or in combination with other plans or projects, would be “likely to have a significant effect” upon any Natura 2000 site. A likely effect is one that cannot be ruled out on the basis of objective information. The test is a ‘possibility’ of effects rather than a ‘certainty’ of effects. The test of significance is whether a plan or project could undermine the site’s conservation objectives.

### 3.1.3 Stage 2 – AA

If effects are considered likely to be significant, potentially significant or uncertain, or if the screening process becomes overly complicated, the process must proceed to Stage 2: AA, with the preparation of a Natura Impact Statement by the applicant to inform the AA that is to be conducted by the competent authority.

The European Court of Justice has also made a relevant ruling on what should be contained within an AA:

“[The AA] cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned”.

### 3.1.4 Stage 3 – Alternative solutions

This stage examines any alternative solutions or options that could enable the plan or project to proceed without adverse effects on the integrity of a Natura 2000 site. Demonstrating that all reasonable alternatives have been considered and assessed, and that the least damaging option has been selected is necessary to progress to Stage 4.

### 3.1.5 Stage 4 – Imperative Reasons of Overriding Public Interest (IROPI) / Derogation

Stage 4 is the main derogation process of Article 6(4) which examines whether there are Imperative Reasons of Overriding Public Interest (IROPI) for allowing a plan or project that will have adverse effects on the integrity of a Natura 2000 site to proceed in cases where it has been established that no less damaging alternative solution exists.

The extra protection measures for Annex I priority habitats come into effect when making the IROPI case. IROPI reasons that may be raised for sites hosting priority habitats are those relating to human health, public safety or beneficial consequences of primary importance to the environment. In the case of other IROPI for Annex I priority habitats, the opinion of the European Commission is necessary and should be included in the AA. Compensatory measures must be proposed and assessed. The European Commission must be informed of the compensatory measures. Compensatory measures must be practical, implementable, likely to succeed, proportionate and enforceable.



## 3.2 Stage 1: Screening for AA Conclusions

The Stage 1 Screening for AA report concluded that Stage 2 AA was required to assess whether it can be demonstrated, beyond reasonable scientific doubt, that the implementation of the Proposed Plan will not adversely affect the site integrity of one Natura 2000 site, the Skelligs SPA.

### 3.2.1 Potential Adverse Effects

Potential pressures of the implementation of the Proposed Plan on the SCIs of Skelligs SPA are listed below. The potential pressures of the Proposed Plan include:

#### Direct pressures

- Visual and physical disturbance (including noise disturbance) and potential displacement of protected species resulting from the presence of visitors (including vessels) and employees, conservation works and vehicles/vessels (e.g. boats, helicopters);
- Habitat loss/damage from conservation works and accidental/intentional damage from visitors; and
- Introduction of invasive non-native species (INNS) / problematic native species.

#### Indirect pressure

- Climate change – resulting in habitat loss and damage / visual and noise disturbance through a requirement for remedial conservation works.

These pressures are described in more detail below. For each potential pressure, the Zone of Influence (ZOI) – the spatial extent over which the activities of the Proposed Plan (the pressures) are predicted to have an impact on the QIs/SCIs of Natura 2000 sites – has been established. The identified potential pressures and their ZOI are presented in Table 3-1.

#### 3.2.1.1 Visual & physical disturbance (including noise disturbance) and displacement

Anthropogenic activities have the potential to cause visual and physical disturbance/displacement to the SCIs of Skelligs SPA. Birds may be physically disturbed either by noise, the visual presence or physical presence of visitors and staff members within a site; conservation/building works being undertaken within a site; the presence of transiting vessels, helicopters and drones; and any sound above existing background levels that such activities may lead to.

Disturbance may lead to physiological and behavioural responses which can affect demographic characteristics of the population. Responses to disturbance may result in loss of energy; impaired breeding; unrest through increased vigilance; disruption to incubation; increased nest failures due to predation; and nest abandonment (Valente and Fischer, 2011). This can lead to temporary or permanent avoidance of areas (i.e. displacement).

The extent to which a seabird responds to disturbance is dependent upon a number of factors including period of breeding cycle during which disturbance occurs; duration, type and intensity of the disturbance; presence of opportunistic predators; and the degree of habituation with the disturbance (Showler *et al.*, 2010). Sensitivity of species to displacement differs considerably between seabird species. Advice on the extent and potential consequences of seabird displacement from offshore wind farm developments (JNCC 2017) recommends consideration is given to the susceptibility to disturbance and habitat specialisation of each species to understand which species are most susceptible to displacement impacts. A 2km ZOI has been utilised to assess for the potential for seabirds to be visually disturbed. This is the standard ZOI utilised for the potential disturbance of all seabirds that are not sea ducks or divers, of which none of the SCIs of Skelligs SPA are classified under (JNCC, 2017).

### 3.2.1.2 Habitat loss / damage

Anthropogenic activities have the potential to lead to a loss of / damage to existing habitat within the Skelligs SPA. This may occur through the following activities:

- Visitors to a site walking outside of any prescribed pathways leading to the collapse of burrows or dislodging rocks that impact nesting birds on cliffs;
- The presence of visitors within the monastery complex causing European storm petrel to abandon their existing nests;
- Conservation works on cultural heritage structures resulting in the loss of bird breeding habitat, e.g. through works on strengthening retaining walls preventing species such as European storm petrel from nesting within them; and
- Visitors walking across the steps on Sceilg Mhichíl, causing disturbance to birds nesting under the steps, e.g. European storm petrel and Atlantic puffin (and to a lesser extent Manx shearwater) which site their nests under the steps.

### 3.2.1.3 Introduction of INNS / problematic native species

There is potential for INNS to reach remote islands such as Sceilg Mhichíl through vessels transiting to them from the Irish Mainland.

The direct or indirect introduction of INNS or problematic native species can have catastrophic effects on the island's biodiversity because of the subsequent spread of such species and out-competing of native species (Spatz et al., 2017; Dias et al., 2019). Non-indigenous species have the potential to upset the balance of the existing ecosystem. For example, they may:

- Prey on native species;
- Change the food web;
- Decrease biodiversity; and
- Dominate the island's ecology, especially in the absence of natural predators.

The dangers that the introduction of species such as rats to remote seabird nesting sites would pose to the viability of the site is high, with invasive rats being one of the highest contributors to the reductions in seabird numbers worldwide (Dias et al., 2019).

### 3.2.1.4 Climate change

While the implementation of the Proposed Plan will not result in any direct pressures from climate change to the Skelligs SPA, the increasing frequency and severity of storms in the Atlantic Ocean and off the south-west coast of Ireland (as a result of climate change) has led to an increase in rockfalls on Sceilg Mhichíl, as well as an increased difficulty in carrying out conservation works and landing visitors on the island (NMS, 2020). The in-direct pressure from this is an increased requirement for remedial conservation works to be undertaken which have the potential to adversely affect the SCIs of Skelligs SPA, through visual disturbance events and further potential habitat loss.

### 3.2.1.5 Summary

Table 3-1 provides a summary of the potential pressures on Skelligs SPA in the NIS and the predicted ZOI of each pressure.

**Table 3-1 Potential pressures, ZOIs and potential adverse effects of activities resulting from the Proposed Plan**

Activities	Potential Pressure	ZOI	Potential Adverse Effects
Presence of visitors (including vessels) and employees; conservation works; programmed works; and Presence of vehicles/vessels (e.g. boats, helicopters, drones)	Visual disturbance and physical disturbance (including noise disturbance) and potential displacement (including indirect pressure from climate change)	2km*	Behaviour changes including displacement, leading to a reduction in breeding success
Conservation works; programmed works; and Accidental/intentional damage from visitors	Habitat loss (including indirect pressure from climate change)	Within the footprint of the conservation and programmed works	Reduction in breeding success if habitat loss is at nesting sites and reduction in habitat range
Boats landing at Sceilg Mhichíl	Introduction of INNS/problematic native species	Sceilg Mhichíl	Predation of chicks, adults and eggs causing a reduction in breeding success and population levels with potential for eradication of the bird species from the islands

\* Based on the extent and potential consequences of seabird displacement from offshore wind farm developments published by the UK Joint Statutory Nature Conservation Bodies (JNCC 2017).

### 3.3 Stage 2: AA Approach

#### 3.3.1 Overview

AA is a focused and detailed impact assessment of the implications of the plan or project (alone and in combination with other plans and projects), on the integrity of a Natura 2000 site. The AA process comprises two main elements. Firstly, a NIS, a statement of the likely and possible impacts of the plan or project on a Natura 2000 site must be prepared. This comprises a comprehensive ecological impact assessment of a plan or project; it examines the direct and indirect impacts that the plan or project might have on its own or in combination with other plans or projects, on one or more Natura 2000 sites in view of the sites' conservation objectives. Secondly, the competent authority carries out the AA, based on the NIS and any other information it may consider necessary.

The Stage 2 AA considers whether the plan or project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a Natura 2000 site, with respect to the conservation objectives of the site and to its structure and function. If necessary, it proposes mitigation measures necessary to avoid, reduce or offset negative effects.

The assessment process includes the gathering and consideration of data and information relating to the Proposed Plan and the site. Key elements of such gathered data should be included in the NIS,

along with data and information from other sources, and opinions from stakeholders such as nature conservation authorities and relevant NGOs.

The overall approach to AA has been undertaken in accordance with the process set out in the Irish Guidance (DEHLG, 2010). However, Irish guidance on AA does not provide detailed guidance on how to assess policies and objectives within a plan. Therefore, guidance from Scotland (David Tyldesley and Associates, 2015) has been drawn upon for the NIS, which outlines a relevant assessment process for policies and objectives.

The steps which have been undertaken are as follows:

- Step 1: Special Conservation Interest Assessment
- Step 2: Examination of Proposed Plan Actions and Objectives
- Step 3: Link Pressure-Receptor Pathways with Proposed Plan Actions
- Step 4: Assessment of Adverse Effects on Integrity of Skelligs SPA (alone and in-combination)
- Step 5: Mitigation Measures
- Step 6: Determination

### **3.3.2 Step 1: Special Conservation Interest Assessment**

The first step in the NIS was a review of the Skelligs SPA SCI species. This step identified for each SCI species their current conservation status, status of the Skelligs SPA population and assessed their sensitivity to the identified pressures.

### **3.3.3 Step 2: Examination of Proposed Plan Actions and Objectives**

The purpose of this step is to identify which aspects (Objectives and Actions) of the Proposed Plan possess the potential to have an adverse effect on the integrity of Skelligs SPA.

The Proposed Plan Actions were examined to identify i) which elements of the implementation of the Proposed Plan would not result in activities which could have an adverse effect on the integrity of Skelligs SPA (and therefore do not require further consideration); and ii) which Proposed Plan Actions require further assessment. Categories based on Tyldesley (2015), which define criteria for either a Potential Adverse Effect or No Adverse Effect from implementation of the Objectives and Actions of the Proposed Plan were applied during the assessment process. Further details on these categories are provided in Section 5.1.

If as a result of the SEA and AA process any changes were made to the Proposed Plan, they have also been subject to screening for AA, AA and SEA.

### **3.3.4 Step 3: Link Pressure-Receptor Pathways and Proposed Plan Actions**

Any Actions determined as having the potential to have an adverse effect on Skelligs SPA were collated in a matrix. This matrix determined which of the pressures described in Section 3.2.1 may result from implementation of the listed Actions.

### **3.3.5 Step 4: Assessment of Adverse Effect on Integrity of Skelligs SPA**

A review of the Skelligs SPA conservation objectives to establish the effects that the Proposed Plan may have on its site integrity has been based on the following:

- a. Assessment of adverse effects of the Proposed Plan implementation on site integrity – for Skelligs SPA where a potential for an adverse effect for a SCI (bird species) has been identified, an assessment in relation to the conservation objectives and site integrity has been undertaken.

- b. In-combination effects assessment – assessment of other plans and projects within the potential ZOI between the Skelligs SPA and the Proposed Plan has been undertaken. For there to be a potential in-combination effect between the Proposed Plan and another plan or project there must be a common pressure-receptor pathway which overlaps spatially and temporally.

### 3.3.6 Step 5: Mitigation Measures

Application of mitigation measures to avoid, reduce or remedy the adverse effects on the integrity of the site are proposed at this stage. This includes reasoning as to how such measures would mitigate against potential adverse effects discussed in the previous step.

### 3.3.7 Step 6: Determination of adverse effect on site integrity

A summary of the conclusions of the assessment have been provided, along with recommendations regarding the NIS document and future monitoring work.

## 3.4 Uncertainties / Gaps

The robustness of any environmental assessment depends upon having good baseline data and (in particular for AA, a benchmark of what 'favourable conservation status' looks like to assess against). Whilst there are conservation objectives for Skelligs SPA, they are limited to the list of species the site is designated for and a generic conservation objective. The recorded numbers for the populations of the SCIs at the time of designation are based on population estimates from the early 2000's, with there currently being no conservation management plan for the site with set targets for what favourable conservation status should look like for each SCI species.

There are also significant gaps in the available monitoring data for the SCIs of Skelligs SPA. Monitoring data has historically focused on the diurnal cliff-nesting species of Sceilg Mhichíl (northern fulmar, black-legged kittiwake and common guillemot). NPWS has collected data for these species annually between 1990 and 2002 for the 2000 census and annually since 2006. Monitoring data for northern gannet (also a diurnal cliff nesting SCI species of Skelligs SPA, but exclusively found on Sceilg Bheag) has been conducted between 2013 and 2018.

The greatest gap in data is for the burrowing nesting nocturnal SCI species found on Sceilg Mhichíl, namely Atlantic puffin, Manx shearwater and European storm petrel. These species have been identified as the most vulnerable to the identified potential pressures from implementation of the Proposed Plan. However, monitoring these species is inherently difficult given their nocturnal, burrowing nature and access to some burrows on the island is potentially hazardous, requiring safety equipment due to the steep nature of the land.

For Atlantic puffin, data estimates of species numbers of the breeding population on the island has proven difficult, with numbers being derived from counts of adults found on land in the evening, flying around the island or rafting in nearby waters. The most recent survey conducted in 2019 for NPWS estimated 6,808 individuals. However, limitations of this data include timings and the technique used. Due to constraints on when the survey could take place, it was conducted towards the end of June which would have been too late to capture the peak of the breeding season and the methods would not provide representative numbers of the birds present or their distribution on Sceilg Mhichíl.

Manx shearwater population numbers have been estimated by using a tape playback method during which the call of the species is played at burrow entrances to elicit a response from nearby incubating adults. This method allowed for a breeding population of 902 Apparently Occupied Sites (AOS) to be estimated during the Seabird 2000 survey (plans for further census work are currently under discussion (NMS, 2020)). However, Arneill et al., (2019) notes that such population estimates are likely to be highly inaccurate, owing to the species' patchy distribution and any estimates of mean density carrying high standard errors.

European storm petrel burrow entrances are very small making monitoring particularly difficult for this species because it is difficult to access the burrows either by hand or using burrowscope cameras. Similar to Manx shearwaters, the most accurate population estimates are obtained using call playbacks to identify apparently occupied sites (AOS). A census of the population on Sceilg Mhichíl in 2020 estimated that a colony size of 1,904 (1,672 – 2,211) AOS was present (NPWS, 2020).

As a result of the difficulties in obtaining data for these species there is a lack of understanding with regard to the distribution of the individuals across the island and a lack of data on yearly breeding success to be able to monitor trends in population levels.

Another significant data gap is the productivity of black-legged kittiwake, which is currently in decline within the site and at the national level (Cummins et al., 2019).

Additionally, no data could be sourced on the specific foraging ranges of the species present within Skelligs SPA. As such, generic foraging ranges from the 'Desk-based revision of seabird foraging ranges used for HRA screening' report (Woodward et al. 2019) have been utilised where appropriate.

As highlighted in the An Taisce response to the 2019 public consultation event, the variability in bird populations is increasingly being impacted by the cumulative impacts of human-induced climate change. For example, oceanic warming has the potential to affect food availability around the Irish coast which through a depletion of prey species such as fish, could be in part responsible for declines in seabird populations on the island. Separating the potential pressures identified for the implementation of the Proposed Plan such as disturbance, from larger scale processes such as climate change is challenging.

## 4. SPECIAL CONSERVATION INTERESTS OF SKELLIGS SPA

This Stage of the NIS considers any impacts on the conservation objectives of the SCIs of Skelligs SPA. It should be noted that due to the lack of long-term population monitoring data for burrowing nesting bird species, the current status of these populations on Sceilg Mhichíl cannot be accurately determined.

Sensitivity scores for the following species to visual disturbance have been taken from the Joint SNCB Interim Displacement Advice Note published in 2017, which ranks various seabird species for their susceptibility to disturbance, from 1 (low sensitivity) to 5 (high sensitivity). This ranking is split between a species' disturbance susceptibility (e.g. to passing vessel traffic) and their habitat specialisation. Scores of 2 or below indicate a species has low sensitivity to visual disturbance. Scores of 3 or above in either of the two categories indicates that the species may have a moderate-high sensitivity to visual disturbance, depending on the given ranking. It should be noted that these rankings do not refer to species' sensitivity to visual disturbance when nesting on land from human presence, instead ranking species sensitivity to disturbance from factors such as vessel traffic and offshore wind infrastructure. Where applicable this difference has been noted in the description of the SCIs sensitivity.

### 4.1 Conservation Objectives for Skelligs SPA [004007]

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest.

#### Special Conservation Interests

Skelligs SPA is designated for seven seabird species as follows:

- Fulmar (*Fulmarus glacialis*) [A009]
- Manx Shearwater (*Puffinus puffinus*) [A013]
- European Storm Petrel (*Hydrobates pelagicus*) [A014]
- Northern Gannet (*Morus bassanus*) [A016]
- Kittiwake (*Rissa tridactyla*) [A188]
- Guillemot (*Uria aalge*) [A199]
- Puffin (*Fratercula arctica*) [A204]

#### Skelligs SPA Conservation Objective:

To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

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;
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future;
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

## 4.2 Burrowing Species

### 4.2.1 Atlantic puffin (*Fratercula arctica*) (Breeding)

#### 4.2.1.1 Conservation Status

European Red List Status	Assessment Rationale	Irish Bird of Conservation Concern status (BoCC)	Irish population
Endangered	This species began undergoing rapid declines across the majority of its European breeding range during the 2000s. Extrapolated over a three generation length period (65 years), allowing for considerable uncertainty given the long trend period (and even assuming current rates of decline do not continue), the species warrants classification as Endangered in Europe.	Amber	21,212 (pairs)

(Colhoun and Cummins, 2013; BirdLife International, 2020a)

#### 4.2.1.2 Skelligs SPA population

A regularly occurring migratory species, Atlantic puffin are present on Sceilg Mhichíl during the breeding season, typically arriving in March and leaving by mid-August (BirdWatch Ireland, 2020c, Dr Mark Jessopp, pers comms, September 2020). They nest in burrows and crevices over Sceilg Mhichíl, including within the steps leading to the monastery. They primarily feed on small fish and crustaceans in the nearby waters. Estimating species numbers of the breeding population on the island has proven difficult, with numbers being derived from counts of adults found on land in the evening, flying around the island or rafting in nearby waters. Using these methods, the most recent study conducted in 2019, counted an estimated 6,808 individuals. This represents an increase from the previous count of 2,170 recorded in July 2010 (JNCC, 2020a). Such species counts may not be fully representative however, as counts conducted in the summer can be more variable than those taken in the spring due to a wide variety of factors, e.g. adult attendance at the colony and influxes of immature birds (JNCC, 2020a).

#### 4.2.1.3 Sensitivity

**Visual & Physical disturbance (including noise disturbance) and displacement:** At sea, Atlantic puffin has a moderate sensitivity to visual disturbance, with a disturbance habitat specialisation ranking of 3 and disturbance susceptibility ranking of 2 (JNCC, 2017). Atlantic puffin moult while at sea over winter, therefore, are not sensitive to disturbance at Sceilg Mhichíl during the moulting period. Breeding birds tend to aggregate at sea near to colonies in early March before coming ashore to breed (Furness and Wade, 2012). Birds are also commonly seen rafting immediately adjacent to colonies throughout the breeding season. When rafting, puffins are likely to be more sensitive to disturbance. However, based on observations, it is likely that vessels would need to get very close to disturb individuals and being diving birds they tend to dive underwater if disturbed and surface further away. There is the potential for groups to be disturbed by circulating tourist vessels should such boats transit close-by but impacts from vessels during rafting is anticipated to be low (Dr Mark Jessopp, pers. comms., September 2020).

Atlantic puffin are most likely to be sensitive to disturbance and potential displacement at or close to their nest sites on Sceilg Mhichíl during the breeding season (March – mid-August). Although on Sceilg Mhichíl Atlantic puffin nest in burrows across the entire island, some individuals are known to site their nest in burrows close to visitor routes or under the steps. An Taisce noted in their 2019 consultation response that 60 puffin nests are located immediately adjacent to or under the monastic steps (see Figure 4-1) (An Taisce, 2019). The species will typically lay a single egg in late April / early May which is incubated for 36-45 days (RSPB, 2020). The chicks fledge from 34 to 60 days later (RSPB, 2020). Numbers generally peak between June and July (Furness and Wade, 2012). As chicks tend to



fledge/leave their burrows at night, the potential for direct interaction with visitors is unlikely (Dr Mark Jessopp, pers. comms., September 2020).

Adults and their chicks within burrows may still be disturbed during the day from visitors walking over or close to their burrows. A study by Watson et al. (2014) on the impacts of recreational disturbance on burrowing nesting European storm petrel on the isle of Mousa in Shetland found that despite nesting underground and out of sight, reduced reproductive success was associated with human disturbance above ground. Although birds within burrows remain out of visual contact with humans, they are exposed to odours, noise and vibrations associated with human activity close to or directly above their nests. The study found that whilst human disturbance did not affect incubation period or hatching success, overall nestling mortality was significantly higher in areas exposed to high visitor pressure. This suggests that even when humans do not pose a direct mortality risk, birds may still perceive them as a predation risk and respond accordingly. The cause of reproductive failure in response to disturbance is unknown, although suggested routes include direct effects on the chick itself through increased physiological stress or elevated energetic demands, or via indirect effects on parental care during incubation and /or the early chick rearing period. On Mousa, overall colony productivity was reduced by approximately 1.6% compared with that expected in the absence of visitors. While this study may not be directly analogous to the present situation on Sceilg Mhichíl or to the potential response to disturbance from Atlantic puffin, it highlights that direct visual disturbance need not occur for individuals to be disturbed. Due to the potential for human interaction, Atlantic puffin is therefore vulnerable to disturbance (e.g. visitor access and conservation works).

Atlantic puffin may also be disturbed and potentially displaced by any aircraft or unauthorised drone flights which occur over the Skelligs. While there is minimal potential for individuals to fly within the path of helicopters, with Atlantic puffin typically flying less than 10m above sea level, there is a greater risk of interaction with drone flights as they are typically flown at lower heights. (Johnston *et al.*, 2014). Occurrences of helicopter flights are not common during the visitor season, with flights occurring over at least 10 days of the 2019 visitor season (OPW 2020, pers. comms., May 2020). Such occurrences were found to cause localised higher levels of noise with visitors being unable to hear nearby guides, indicating that the noise generated may potentially disturb any individual birds attempting to communicate with each other.

Figure 4-1 Exposed puffin nest close to the main tourist route (An Taisce, 2019)



**Habitat loss:** Atlantic puffin breeding on Sceilg Mhichíl, due to their burrowing nesting nature, are highly sensitive to habitat loss. The trampling of ground can not only damage nesting sites, but also lead to an increase in soil erosion which can reduce suitable habitat for nesting and may lead to reductions in breeding success. An increase in visitor numbers, and subsequent degradation in the steps leading to the monastery which some puffins nest under, may also increase the rate of habitat loss for the species. Conservation works aimed at strengthening the cultural heritage features of the site may lead to further habitat loss for the species, with reduced availability in crevices to nest within.

**INNS:** As a burrowing nesting species, Atlantic puffin are highly sensitive to any incursion of predatory mammalian INNS such as brown rat on Sceilg Mhichíl. Such an incursion would likely result in reduced breeding success and potentially lead to the eradication of Atlantic puffin from the island.

## 4.2.2 Manx shearwater (*Puffinus puffinus*) (Breeding)

### 4.2.2.1 Conservation Status

European Red List Status	Assessment Rationale	Irish Bird of Conservation Concern status (BoCC)	Irish population
Least Concern	The population size is very large, and hence does not approach the thresholds for Vulnerable under the population size criterion (10% in ten years or three generations, or with a specified population structure). The population trend is not known, but the population is not believed to be decreasing sufficiently rapidly to approach the thresholds	Amber	44, 000 (individuals)

European Red List Status	Assessment Rationale	Irish Bird of Conservation Concern status (BoCC)	Irish population
	under the population trend criterion (30% decline over ten years or three generations).		

(Colhoun and Cummins, 2013; BirdLife International, 2020a; Mitchell *et al.*, 2004)

#### 4.2.2.2 Skelligs SPA population

A migratory species, Manx shearwater return to breed on Sceilg Mhichíl during the months of spring, with chicks remaining on the island until September/October (BirdLife International, 2015). Sceilg Mhichíl, along with other islands located along the Kerry coast, support the majority of the population in Ireland. To estimate their population numbers, a tape playback method is utilised where a sound is played to evoke a response from any nearby incubating individuals. This method allowed for a breeding population of 902 AOS to be estimated during the Seabird 2000 survey (plans for further census work are currently under discussion (NMS, 2020)). However, Arneill *et al.*, (2019) notes that such population estimates are likely to be highly inaccurate, owing to the species' patchy distribution and any estimates of mean density carrying high standard errors.

#### 4.2.2.3 Sensitivity

**Visual & Physical disturbance (including noise disturbance) and displacement:** At sea, Manx shearwater have a low sensitivity to disturbance events, with a disturbance habitat specialisation and disturbance susceptibility ranking of 1 (JNCC, 2017). Manx shearwater spend the majority of their life feeding at sea, only returning to land to breed (JNCC, 2020b). Manx shearwater typically travel 100's of kilometres to other feeding grounds such as Galway Bay, or even as far as the Mid-Atlantic Ridge (Wischniewski *et al.*, 2019) where their diet consists of small fish, plankton, crustaceans and molluscs (BirdWatch Ireland, 2020b). They are also known to raft in large numbers in the seas surrounding the island (approximately 1-10km offshore (Richards *et al.*, 2019; McSorley *et al.*, 2008)) at dusk before returning to their burrows around midnight. However, given the distance from the shore and the timings of these rafts, they are unlikely to come into contact with visitor vessel traffic during the day, therefore sensitivity to visual and noise disturbance will be low.

Manx shearwater are most likely to be sensitive to disturbance and potential displacement at or close to their nest sites on Sceilg Mhichíl during the breeding season (March – September/October). Manx shearwater nest in burrows as well as within crevices found in the monastic stone structures found on the island (BirdWatch Ireland, 2020b) and also in burrows on the slopes adjacent to the steps (UCC pers. comms. September 2020). Adults and chicks may still be disturbed during the day from visitors walking over or close to their burrows. A study by Watson *et al.* (2014) on the impacts of recreational disturbance on burrowing nesting European storm petrel on the isle of Mousa in Shetland found that despite nesting underground and out of sight, reduced reproductive success was associated with human disturbance above ground. Although birds within burrows remain out of visual contact with humans, they are exposed to odours, noise and vibrations associated with human activity close to or directly above their nests. The study found that whilst human disturbance did not affect incubation period or hatching success, overall nestling mortality was significantly higher in areas exposed to high visitor pressure. This suggests that even when humans do not pose a direct mortality risk, birds may still perceive them as a predation risk and respond accordingly. The cause of reproductive failure in response to disturbance is unknown, although suggested routes include direct effects on the chick itself through increased physiological stress or elevated energetic demands, or via indirect effects on parental care during incubation and /or the early chick rearing period. On Mousa, overall colony productivity was reduced by approximately 1.6% compared with that expected in the absence of visitors. While this study may not be directly analogous to the present situation on Sceilg Mhichíl or to the potential response to disturbance from Manx shearwater, it highlights that direct visual

disturbance need not occur for individuals to be disturbed. Manx shearwater are therefore likely to be sensitive to disturbance from human interaction (e.g. visitor access and conservation works).

As Manx shearwater nest within burrows during the day, they are unlikely to be directly disturbed by any helicopters/drones operating during this period (Dr Mark Jessopp, pers. comms., September 2020). While the noise from such flights may disturb birds within their burrows, they will not directly displace individuals or affect their communication, with Manx shearwater typically calling to each other when they return to colonies at night. However, as discussed above, the noise from human activity (in this case aircraft) could have an adverse effect on reproductive success through negative impacts arising from the birds perceived predation risk from the noise (Watson et al. 2014).

**Habitat loss:** Manx shearwater breeding on Sceilg Mhichíl, due to their burrowing nesting nature, are highly sensitive to habitat loss. The trampling of ground can not only damage nesting sites, but also lead to an increase in soil erosion which can reduce suitable habitat for nesting and may lead to reductions in breeding success. As Manx shearwater do not nest directly within the steps leading to the monastery, they are less susceptible to habitat loss than Atlantic puffin. A pair is known to nest within one of the beehive huts, making them susceptible to regular disturbance from visitors during the day. While the nest itself is roped off to limit disturbance, the hut remains accessible to visitors. However, given the large population size, disturbance to one breeding pair will not adversely affect the species at the population level. Conservation works aimed at strengthening the cultural heritage features of the site may lead to further habitat loss for the species, with reduced availability in crevices to nest within.

**INNS:** Manx shearwater are a nocturnal species, and with legs set back quite far on the body, have a slow shuffling walk, making them vulnerable to predation from other larger gull species (BirdWatch Ireland, 2020b). One of the greatest threats to the species is from invasive predatory mammalian species such as rats, which if introduced to a remote island such as Sceilg Mhichíl could lead to a rapid decline in the population. Rats are thought to be responsible for the extirpation of Manx shearwaters on the Calf of Man in the late 18<sup>th</sup> century (JNCC, 2020b).

### 4.2.3 European storm petrel (*Hydrobates pelagicus*) (Breeding)

#### 4.2.3.1 Conservation Status

European Red List Status	Assessment Rationale	Irish Bird of Conservation Concern status (BoCC)	Irish population
Least Concern	The population size is very large, and hence does not approach the thresholds for Vulnerable under the population size criterion (10% in ten years or three generations, or with a specified population structure). The population trend is not known, but the population is not believed to be decreasing sufficiently rapidly to approach the thresholds under the population trend criterion (30% decline over ten years or three generations).	Amber	100,000 (individuals)

(Colhoun and Cummins, 2013; BirdLife International, 2020a; Mitchell *et al.*, 2004)

#### 4.2.3.2 Skelligs SPA population

An Annex I species listed under the Birds Directive; the European storm petrel is the smallest seabird found on Sceilg Mhichíl. The species is found at sea for the majority of its life, typically feeding 100's of kilometres from land, returning to breed on remote islands such as Sceilg Mhichíl. The species typically arrives in April, with individuals remaining on the island until October. Similar to Manx shearwater, the species is typically nocturnal on land and nest in burrows or crevices in the monastic structures or steps found on the island. They will typically lay one egg each breeding season, with the

incubation period lasting between 38 and 50 days (Robinson, 2005). A census of the population on Sceilg Mhichíl in 2018 estimated that a colony size of 963 ( $\pm 193$ ) was present, however due to the difficulty in surveying difficult to reach areas of the island, this figure may be an underestimate (Arneill and Quinn, 2018).

#### 4.2.3.3 Sensitivity

**Visual & Physical disturbance (including noise disturbance) and displacement:** At sea, European storm petrel have a low sensitivity to disturbance events (JNCC, 2017), with a disturbance habitat specialisation and disturbance susceptibility ranking of 1 (JNCC, 2017).

European storm petrel, as for the other burrowing nesting species, are most sensitive to disturbance on Sceilg Mhichíl at or close to their nest sites during the breeding season. Since they are known to site nests within the walls of the monastic structures and lighthouse road, they are likely to be sensitive to disturbance from human interaction (e.g. visitor access and conservation works). Adults and chicks may still be disturbed during the day from visitors walking over or close to their burrows. A study by Watson et al. (2014) on the impacts of recreational disturbance on burrowing nesting European storm petrel on the isle of Mousa in Shetland found that despite nesting underground and out of sight, reduced reproductive success was associated with human disturbance above ground. Although birds within burrows remain out of visual contact with humans, they are exposed to odours, noise and vibrations associated with human activity close to or directly above their nests. The study found that whilst human disturbance did not affect incubation period or hatching success, overall nestling mortality was significantly higher in areas exposed to high visitor pressure. This suggests that even when humans do not pose a direct mortality risk, birds may still perceive them as a predation risk and respond accordingly. The cause of reproductive failure in response to disturbance is unknown, although suggested routes include direct effects on the chick itself through increased physiological stress or elevated energetic demands, or via indirect effects on parental care during incubation and /or the early chick rearing period. On Mousa, overall colony productivity was reduced by approximately 1.6% compared with that expected in the absence of visitors. While this study may not be directly analogous to the present situation on Sceilg Mhichíl, it highlights that direct visual disturbance need not occur for individuals to be disturbed.

As European storm petrel nest within burrows during the day, they are unlikely to be directly disturbed by any helicopters/drones operating during this period (Dr Mark Jessopp, pers. comms., September 2020). While the noise from such flights may disturb birds within their burrows, they will not directly displace individuals or affect their communication. However, as discussed above, the noise from human activity (in this case aircraft) could have an adverse effect on reproductive success through negative impacts arising from the birds perceived predation risk from the noise (Watson et al. 2014).

**Habitat loss:** European storm petrel breeding on Sceilg Mhichíl, due to their burrowing nesting nature, are highly sensitive to habitat loss. The trampling of ground can not only damage nesting sites, but also lead to an increase in soil erosion which can reduce suitable habitat for nesting and may lead to reductions in breeding success. European storm petrel also nest within the monastic structures on the island. Conservation works aimed at strengthening the cultural heritage features of the site may lead to further habitat loss for the species, with reduced availability in crevices to nest within.

**INNS:** As a burrowing nesting species, European storm petrel are highly sensitive to any incursion of predatory mammalian INNS such as brown rat to Sceilg Mhichíl. Such an incursion would likely result in reduced breeding success and potentially lead to the eradication of the European storm petrel on the site.

## 4.3 Cliff-nesting Species

### 4.3.1 Northern gannet (*Morus bassanus*) (Breeding)

#### 4.3.1.1 Conservation Status

European Red List Status	Assessment Rationale	Irish Bird of Conservation Concern status (BoCC)	Irish population
Least Concern	The population size is extremely large, and hence does not approach the thresholds for Vulnerable under the population size criterion (10% in ten years or three generations, or with a specified population structure). The population trend appears to be increasing, and hence the species does not approach the thresholds for Vulnerable under the population trend criterion (30% decline over ten years or three generations).	Amber	47,946 (pairs)

(Colhoun and Cummins, 2013; BirdLife International, 2020a; Cummins et al., 2019)

#### 4.3.1.2 Skelligs SPA population

Northern gannet are found exclusively on Sceilg Bheag, where there exists a long-established colony of international importance. They are a fish-eating species with diet dominated by mackerel, whiting, and sandeel, but are also known to feed on fishery discards. Northern gannet spend much of their life at sea, returning to breeding grounds at Sceilg Bheag in the summer months. Northern gannet will mate with a single mate for life, with pairs typically returning to the same breeding site each year once paired (Dewey, 2020). Females usually will lay a single egg from late April to mid-June, with hatchlings being brooded for approximately 13 weeks before leaving their nest around September and venturing south to their wintering grounds (Dewey, 2020).

The last official species count conducted between 2013-2018 estimated that 35,294 pairs breed on the island, making the site the largest breeding colony in Ireland. The species typically makes its nests on ledges or cliffs above the splash zone, and occasionally on flat tops or on shallow soil (Cummins et al., 2019).

#### 4.3.1.3 Sensitivity

**Visual & Physical disturbance (including noise disturbance) and displacement:** At sea, northern gannet have a low sensitivity to disturbance events (JNCC, 2017), with a disturbance habitat specialisation ranking of 2 and disturbance susceptibility ranking of 1 (JNCC, 2017). The species will not be sensitive to disturbance from the physical presence of visitors as there is currently no method of accessing Sceilg Bheag, with all visitors only making landfall on Sceilg Mhichíl. Given their low sensitivity to disturbance at sea and their absence from Sceilg Mhichíl, their sensitivity to disturbance from vessels transiting to and around the island will be very low.

Individuals on Sceilg Bheag could be disturbed by low flying aircraft travelling to and from Sceilg Mhichíl, particularly early in the breeding season when individuals are establishing nest sites (Dr Mark Jessopp pers. com., September 2020).

**Habitats loss:** Due to the species typically nesting on hard substrata such as cliff tops, the risk of habitat loss for the species is less so than that of burrowing nesting species. Additionally, as the species nests exclusively on Sceilg Bheag within Skelligs SPA, the species will not be subject to any of the pressures associated with the implementation of the Proposed Plan (e.g. visitor access and conservation works).

**INNS:** As Sceilg Bheag is inaccessible to humans due to the steep cliffsides that surround the island and a lack of landing sites for boats (MKO, 2018), the potential for the introduction of INNS to the island is low. As such the sensitivity of northern gannet to INNS within Sceilg Mhichíl is also low.

### 4.3.2 Black-legged kittiwake (*Rissa tridactyla*) (Breeding)

#### 4.3.2.1 Conservation Status

European Red List Status	Assessment Rationale	Irish Bird of Conservation Concern status (BoCC)	Irish population
Endangered	<p>This abundant small gull began undergoing rapid declines across the majority of its European breeding range since the 1980s. Extrapolated over a three-generation period (39 years) these declines result in its classification as Vulnerable in Europe.</p> <p>At a national level, there is sufficient data to show (with medium confidence) that the national population estimate for black-legged kittiwake has significantly declined (by 32%) since Seabird 2000 and previous survey estimates, despite an increase in survey effort and a greater number of colonies being surveyed.</p>	Amber	21,24,728 (pairs)

(Colhoun and Cummins, 2013; BirdLife International, 2020a; Cummins et al., 2019)

#### 4.3.2.2 Skelligs SPA population

Black-legged kittiwake return to breed on the rocky cliffs of Sceilg Mhichíl from February to August (Dr Mark Jessopp pers. com., September 2020), and feed in the surrounding waters on small fish species such as sandeel and juvenile herring. Black-legged kittiwake tend to forage at the ocean surface (up to 3 feet deep) of deep ocean waters (Cornell Lab of Ornithology, 2020). Currently the long-term population trend is in decline on Sceilg Mhichíl, which may in part be due to on-site drivers (David Tierney pers. comms., October 2020). The species population on Sceilg Mhichíl has fluctuated in recent decades, with over 1,000 Apparently Occupied Nests (AON) typically being recorded in the early 1990's before decreasing to a low of 365 AON in 2010. Numbers then recovered to 1,014 AON in 2017 before dropping to 404 AON in 2018, then partially recovering again to 810 in 2019 (NPWS 2020, pers. comms, 6 May).

#### 4.3.2.3 Sensitivity

**Visual & Physical disturbance (including noise disturbance) and displacement:** At sea, black-legged kittiwake has a low sensitivity to visual disturbance (Goodship and Furness, 2019), with a disturbance habitat specialisation and disturbance susceptibility ranking of 2 (JNCC, 2017). Black-legged kittiwake typically nest on narrow ledges on high, steep coastal cliffs, although occasionally nest on buildings and piers, or on flat, rocky or sandy sites up to 20km inland (BirdLife International, 2020b). Black-legged kittiwake breed from around mid-May to mid-June, dispersing from breeding grounds between July and August (BirdLife International, 2020b). Birds are anticipated to be more sensitive to disturbance during the breeding season and this peak population period. Black-legged kittiwake moult after dispersing from breeding grounds, so birds will not be sensitive to disturbance during this period (BirdLife International, 2020b).

On Sceilg Mhichíl, while cliff nesting black-legged kittiwake are situated away from the main tourist route, conservation works could conceivably occur close-to or directly above nesting birds. As such, there exists the potential for the species to be disturbed by conservation works.

Cliff-nesting species such as black-legged kittiwake may be directly disturbed by low flying aircraft such as drones and helicopters. The noise of helicopters and the downdraft from their rotors, can cause birds to take flight and leave their nests, particularly very early in the breeding season when birds are establishing nest sites (Dr Mark Jessopp pers. com., October 2020). This makes the eggs or chicks left unattended vulnerable to predation from gulls (David Tierney pers. comms., October 2020).

Although such occurrences are not common across the visitor season, helicopter flights occurred over at least 10 days of the 2019 visitor season (OPW 2020, pers. comms., May 2020).

**Habitat loss:** Black-legged kittiwake are not sensitive to this pressure because they nest on cliffs on hard substrate that are not sensitive to trampling or erosion and they are located away from the areas of human interaction.

**INNS:** Black-legged kittiwake are sensitive to any incursions of predatory mammalian INNS such as brown rat to Sceilg Mhichíl. While its nests would be less accessible to predators than burrowing nesting bird species, there still exists the potential for their breeding success to be reduced.

### 4.3.3 Common guillemot (*Uria aalge*) (Breeding)

#### 4.3.3.1 Conservation Status

European Red List Status	Assessment Rationale	Irish Bird of Conservation Concern status (BoCC)	Irish population
Near Threatened	This auk began undergoing rapid declines in its European breeding range during the 2000s. Extrapolated over a three-generation period (45 years) these declines result in its classification as Near Threatened in Europe.	Amber	177,388 (individuals)

(Colhoun and Cummins, 2013; BirdLife International, 2020a; Cummins et al., 2019)

#### 4.3.3.2 Skelligs SPA population

Common guillemot is the most common auk species found in Ireland. The breeding season occurs from March/April to August/September during which they nest on narrow inaccessible ledges on sea cliffs (BirdWatch Ireland, 2020a). Common guillemot nest exclusively on steep cliffs, either on narrow ledges or platforms, laying one egg around May/June (Norwegian Polar Institute, 2019). The egg is incubated for about a month and hatchlings leave the nest about 3 weeks later to complete their development at sea (Norwegian Polar Institute, 2019). During the breeding season they feed in the surrounding waters on shoaling species such as sandeel and sprat. Species counts conducted in 2019 estimated a population of 2,100 individuals, a slight increase from 2018 (1,908) but still a marked decrease from 2017 (2,664).

#### 4.3.3.3 Sensitivity

**Visual & Physical disturbance (including noise disturbance) and displacement:** At sea, common guillemot has a high sensitivity to visual disturbance (Goodship and Furness, 2019), with a disturbance habitat specialisation and disturbance susceptibility ranking of 3 (JNCC, 2017). During the breeding season common guillemot are anticipated to be more sensitive to disturbance, when like other auk species they can form small rafts during feeding in the waters surrounding Sceilg Mhichíl. Common guillemot has a foraging depth range generally between 50 – 200m deep, with a maximum diving range of 230m. The foraging depth during the breeding season is generally kept between 50 – 100m (BirdLife International, 2020c). As the immediate surrounding waters of Sceilg Mhichíl are shallower than these depths (EMODnet Geology, 2019), it is unlikely that common guillemot will be found foraging in the waters where tourist vessels circulate. However, common guillemot may occur in rafts (or smaller groups) in the surrounding waters for non-foraging maintenance behaviour. As such they have the potential to be disturbed by any vessels travelling to or from Sceilg Mhichíl. Additionally, young auks leave their breeding ledges prior to fledging, making them more vulnerable to disturbance from passing boats. Common guillemot may also be sensitive during their autumn moult between August – September, when they are flightless (Stone, C.J. et al, 1995). As this period intersects with the end of the visitor season there exists the potential for any birds moulting in the waters around Sceilg



Mhichíl to be disturbed by vessels circulating around the island. However, while they may be flightless, they can still dive and resurface some distance away from any vessels if they have been disturbed.

On Sceilg Mhichíl, while cliff nesting common guillemot are situated away from the main tourist route, conservation works could conceivably occur close-to or directly above nesting birds. As such, there exists the potential for the species to be disturbed by conservation works.

Cliff-nesting species such as common guillemot may be directly disturbed by low flying aircraft such as drones and helicopters. The noise of helicopters and the downdraft from their rotors, can cause birds to take flight and leave their nests, particularly very early in the breeding season when birds are establishing nest sites (Dr Mark Jessopp pers. com., October 2020). This makes the eggs or chicks left unattended vulnerable to predation from gulls (David Tierney pers. comms., October 2020).

Although such occurrences are not common across the visitor season, helicopter flights occurred over at least 10 days of the 2019 visitor season (OPW 2020, pers. comms., May 2020). **Habitat loss:** Common guillemot are not sensitive to this pressure because they nest on cliffs on hard substrate that are not sensitive to trampling or erosion and they are located away from the areas of human interaction.

**INNS:** Common guillemot would be sensitive to any incursion of predatory mammalian INNS such as brown rat to Sceilg Mhichíl. While its nests would be less accessible to predators than burrowing nesting bird species, there still exists the potential for their breeding success to be reduced.

#### 4.3.4 Northern fulmar (*Fulmaris glacialis*) (Breeding)

##### 4.3.4.1 Conservation Status

European Red List Status	Assessment Rationale	Irish Bird of Conservation Concern status (BoCC)	Irish population
Endangered	This seabird began undergoing rapid declines across parts of its European breeding range during the 1980s and 1990s. Extrapolated over a three generation period (92 years), allowing for considerable uncertainty given the long trend period (and even assuming current rates of decline do not continue), the species warrants classification as Endangered in Europe.	Green	32,899 (pairs)

(Colhoun and Cummins, 2013; BirdLife International, 2020a; Cummins et al., 2019)

##### 4.3.4.2 Skelligs SPA population

Northern fulmar are typically present on Sceilg Mhichíl from January to September, nesting on vegetated spots found on the cliffs surrounding the island. The species is widely distributed across Ireland and the UK coast and their population has increased greatly during the 20<sup>th</sup> century which is thought to be attributed to the increase in discards from commercial fishing vessels (JNCC, 2019). While recent census data for the Republic of Ireland indicates that breeding abundances have remained stable since the Seabird 2000 survey at a population estimate of 32,899 AOS, this stability is masked by large shifts in populations at a site level, with the Sceilg Mhichíl population having dropped by 5% since the Seabird 2000 survey (Cummins et al., 2019). Northern fulmar feed out to sea on a wide variety of food sources, making them vulnerable to ingestion of plastics (NMS, 2020). Counts of the species on the island in 2019 estimated a total of 701 AOS were present on the island (NPWS 2020, pers. comms, 19 June).

##### 4.3.4.1 Sensitivity

**Visual & Physical disturbance (including noise disturbance) and displacement:** At sea, northern fulmar has a low sensitivity to visual disturbance (Goodship and Furness, 2019). Northern fulmar nest

on ledges of steep cliffs of crags, but may also use spaces on exposed building sides, low banks or the ground, and occasionally a short distance inland (Natural England, 2012). Females lay one egg around May, which is incubated for ~50 days. Young fledge ~70 days after hatching (Oceanwide Expeditions, 2019). During the breeding season northern fulmar are anticipated to be more sensitive to disturbances. However, given that the species have been recorded to nest on exposed building sides, it seems likely that birds may become habituated to visual disturbances. Moulting generally takes place once birds have dispersed from breeding grounds, therefore northern fulmar will not be sensitive to disturbances during the moult period (Grissot *et al.*, 2020).

On Sceilg Mhichíl, while cliff nesting northern fulmar are situated away from the main tourist route, conservation works could conceivably occur close-to or directly above nesting birds. As such, there exists the potential for the species to be disturbed by conservation works.

Cliff-nesting species such as northern fulmar may be directly disturbed by low flying aircraft such as drones and helicopters. The noise of helicopters and the downdraft from their rotors, can cause birds to take flight and leave their nests, particularly very early in the breeding season when birds are establishing nest sites (Dr Mark Jessopp pers. com., October 2020). This makes the eggs or chicks left unattended vulnerable to predation from gulls (David Tierney pers. comms., October 2020).

Although such occurrences are not common across the visitor season, helicopter flights occurred over at least 10 days of the 2019 visitor season (OPW 2020, pers. comms., May 2020).

**Habitat loss:** Northern fulmar are not sensitive to this pressure because they nest on cliffs on hard substrate that are not sensitive to trampling or erosion and they are located are away from the areas of human interaction.

**INNS:** Northern fulmar are sensitive to any incursion of predatory mammalian INNS such as brown rat to Sceilg Mhichíl. While its nests would be less accessible to predators than burrowing nesting bird species, there still exists the potential for their breeding success to be reduced.

## 4.4 Summary of SCI Assessment

The review of SCI sensitivity presented in the sections above indicates that the burrowing nesting species are most sensitive to potential adverse effects from the implementation of the Proposed Plan. This is summarised in Table 4-1 below.

**Table 4-1 Potential for significant adverse effects from implementation of the Proposed Plan**

SCI's of Skelligs SPA	ZOI	Foraging distance (Mean)*	Potential pressure	Potential for adverse effects from Proposed Plan
Atlantic puffin	2km	62.4km	Visual disturbance	✓
			Habitat loss/damage	✓
			Climate change	✓
			Introduction of INNS	✓
Manx shearwater	2km	136.1km	Visual disturbance	✓
			Habitat loss/damage	✓
			Climate change	✓
			Introduction of INNS	✓
	2km	336km**	Visual disturbance	✓

SCI's of Skelligs SPA	ZOI	Foraging distance (Mean)*	Potential pressure	Potential for adverse effects from Proposed Plan
European storm petrel			Habitat loss/damage	✓
			Climate change	✓
			Introduction of INNS	✓
Northern gannet	2km	120.4km	Visual disturbance	✓
			Habitat loss/damage	X
			Climate change	X
			Introduction of INNS	X
Black-legged kittiwake	2km	54.7km	Visual disturbance	✓
			Habitat loss/damage	X
			Climate change	X
			Introduction of INNS	✓
Common guillemot	2km	33.1km	Visual disturbance	✓
			Habitat loss/damage	X
			Climate change	X
			Introduction of INNS	✓
Northern fulmar	2km	134.6km	Visual disturbance	✓
			Habitat loss/damage	X
			Climate change	X
			Introduction of INNS	✓

\*(Woodward *et al.*, 2019)

\*\* Mean foraging distance for European storm petrel not available, max foraging range used in this instance.

## 5. EXAMINATION OF PROPOSED PLAN ACTIONS AND OBJECTIVES

### 5.1 Summary of Examination Approach

The Screening for AA and AA has been undertaken in parallel with the SEA process which has included consultation with statutory consultees on the Proposed Plan and SEA Scoping report. The Proposed Plan Objectives and Actions contained in the Proposed Plan at the time of this consultation (which commenced 20<sup>th</sup> June 2020) are those which have been examined in this section of the NIS. During the SEA, findings from both the NIS and the SEA led to the proposal in the SEA ER to re-word 8 Plan Actions and add two new Plan Actions to the Proposed Plan. Subsequently the Proposed Plan has been updated to reflect these changes. These Plan Actions have been assessed separately and the findings are presented in Appendix A, Table A-1. Where applicable, these updated wordings have been incorporated into the NIS from Section 7 onwards.

Examination of the Proposed Plan Objectives and Actions has involved a series of steps to identify those elements that are not likely to have an adverse effect on Skelligs SPA, and to ensure elements of the Proposed Plan which could have an adverse effect on Skelligs SPA undergo further appraisal. Categories based on Tyldesley 2015, which define criteria for either a Potential Adverse Effect or No Adverse Effect from implementation of the Objectives and Actions of the Proposed Plan are presented in Table 5-1 and have been applied during the assessment process.

**Table 5-1 Categories for examination of effects of Actions/Objectives**

Category	Criteria for Proposed Plan Action/Objective	Potential for Adverse Effect
<b>1</b>	<b>General Policy Statements</b>	<b>No Effect</b>
1	General statement of policy which sets out a strategic aspiration for the plan making body or a general criteria based policy which expresses the tests or expectations of the plan making body can be screened out because they are unlikely to have a significant effect on a site	
<b>2</b>	<b>No likely significant effects on any Natura 2000 site</b>	<b>No Effect</b>
2a	Elements of the plan intended to protect the natural environment, including biodiversity, or to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a Natura 2000 site;	
2b	Elements of the plan which will not themselves lead to development or other change, e.g. because they relate to design or other qualitative criteria for development or other kinds of change;	
2c	Elements of the plan which make provision for change but which could have no conceivable effect on a Natura 2000 site, because there is no link or pathway between them and the QIs/SCIs, or any effect would be a positive effect, or would not otherwise undermine the conservation objectives for the site;	
2d	Elements of the plan which make provision for change but which could have no significant effect on a Natura 2000 site (and there is a minor effect), because any	

Category	Criteria for Proposed Plan Action/Objective	Potential for Adverse Effect
	potential effects would be insignificant, being so restricted or remote from the site that they would not undermine the conservation objectives for the site;	
2e	Elements of the plan for which effects on any particular Natura 2000 site cannot be identified, because the policy is too general, for example, it is not possible to identify where, when or how the policy may be implemented, or where effects may occur, or which sites, if any, may be affected. These aspects of the plan may also be very similar to or the same as those screened out under screening step 1, relating to general policy statements.	
<b>3</b>	<b>Adverse effects on site integrity cannot be ruled out</b>	<b>Potential Adverse Effect</b>
3	Elements of the Proposed Plan with potential to result in an adverse effect on the integrity of the SPA and therefore require further assessment. This category includes: <ul style="list-style-type: none"> <li>▪ Elements of the Proposed Plan identified as having potential for adverse effects, either alone or in-combination, and directly or indirectly; and</li> <li>▪ Elements of the Proposed Plan where adverse effects cannot be ruled out</li> </ul>	

Table 5-2 below details each Objective and Action listed in the Proposed Plan and assesses them against the above criteria.

When assessing the Proposed Plan Actions against the Category 2 criteria, the assessment of 'No Potential Adverse Effects' has been undertaken applying the pressure-receptor pathway model. This involves considering the potential for a pressure – receptor pathway to exist between activities (and their associated pressures) which may result from implementation of the Proposed Plan Action and the SCIs of Skelligs SPA.

All Actions have been assessed to determine if they will have an adverse effect on the integrity of Skelligs SPA. Where it has been determined that an Action is a general statement with no scope for resulting in a pressure on a Natura 2000 site, or the Action will have no adverse effect on Skelligs SPA, they have been categorised under Category 1 and Categories 2a to 2e where appropriate.

Where an Action has the potential to result in an activity which could lead to an Adverse Effect on the SCIs of Skelligs SPA, or an Adverse Effect cannot be ruled out based on current known information, the Action has been assigned to Category 3 and therefore assessed as Potential for Adverse Effects.

The European Court of Justice has indicated that if the effects of a plan or project would not undermine the conservation objectives of a Natura 2000 site, its effects cannot be regarded as significant<sup>2</sup>. Therefore, where a plan or project may affect a Natura 2000 site, but its effects are positive, that aspect of the plan or project can be assessed as No Potential Adverse Effects. This clarification is applicable to elements of the Proposed Plan which may be assessed as No Potential Adverse Effect under category 2c.

The Habitats Directive recognises that in some cases the effects of a plan or project on its own would be either unlikely or insignificant. It also recognises that there may be a number of plans and projects, each which alone are unlikely to result in a significant effect, but which, if their individual effects were to be added together, by them all coming forward over time, the effects in combination would be

<sup>2</sup> European Court of Justice case C-127/02 Waddenzee ruling 7th September 2004

likely to be significant. Elements of the Proposed Plan that have been classified under Category 2d because any effects of change are likely to be minor, should also be assessed in combination with any other elements of the Proposed Plan classified under 2d to consider any cumulative effects.

Elements of the Proposed Plan that have individually been classified under Categories 2a, 2b, 2c because they will have no effect at all on a Natura 2000 site or because that element is too general in nature (Categories 1 and 2e) do not require an in-combination assessment, since they clearly will have no cumulative effects.

In-combination effects should be considered with other plans and projects. Only effects of other plans or projects which (like those of the Proposed Plan under consideration) would not be likely to be significant alone, need to be added to the in-combination assessment detailed in Section 7.3.

**Table 5-2 Examination of the Proposed Plan's Actions and Objectives**

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
<b>Management Objectives</b>				
<b>Obj 1</b>	<b>Objective 1: To have in place an effective management framework to protect the Outstanding Universal Value of Sceilg Mhichíl.</b>			
A1.1	Continue supporting the activities of the site-management team and agencies responsible for the management and care of Sceilg Mhichíl and its visitors.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA. Therefore, it will not be considered further in this assessment.	1	NO
A1.2	Continue the oversight role of the SMIG <sup>3</sup> throughout the lifetime of this plan.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA. Therefore, it will not be considered further in this assessment.	1	NO
A.1.3	Ensure compliance with World Heritage Convention requirements.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA. Therefore, it will not be considered further in this assessment.	1	NO
<b>Obj 2</b>	<b>Objective 2: To improve liaison with local interest groups and other relevant parties.</b>			
A2.1	Engage with the Commissioners of Irish Lights to secure the lower lighthouse complex for use by staff and visitors.	This Action has the potential if successful to result in a change to the use of the island in a specific location and increase the number of visitors and staff to this part of Sceilg Mhichíl. This in turn has the potential to adversely affect the SCIs of Skelligs SPA. Therefore, this Action will be assessed further.	3	YES

<sup>3</sup> Skellig Michael Implementation Group

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
A2.2	Engage with outside groups and stakeholders to facilitate the effective implementation of the management plan.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA. Therefore, it will not be considered further in this assessment.	1	NO
A2.3	Create a Sceilg Mhichíl stakeholder forum to address issues of mutual interest and inform decision-making processes.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA. Therefore, it will not be considered further in this assessment.	1, 2e	NO
A2.4	Meet with local boat operators to discuss issues of mutual interest, including health and safety and the operational framework.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA. Therefore, it will not be considered further in this assessment.	1, 2e	NO
<b>Conservation Objectives</b>				
<b>Obj 3</b>	<b>Objective 3: To preserve the cultural heritage of the island and sustain its Outstanding Universal Value.</b>			
A3.1	Carry out a full pre-works survey and detailed specification for each annual phase of works in advance of any work commencing on the site.	This Action has the potential to affect the SCIs of the Skelligs SPA through disturbance / damage to species and their supporting habitat. Therefore, this Action will be assessed further.	3	YES
A3.2	Prepare a formal, structured maintenance programme for all conserved structures.	This Action will result in a programme of works which have the potential to adversely affect the SCIs of the Skelligs SPA and their supporting habitats. Therefore, this Action will be assessed further.	3	YES
A3.3(a)	Report on archaeological works undertaken each year.	This Action will not lead to development or other change; therefore, it will not be considered further in this assessment.	2b	NO



ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
A3.3(b)	Publish a full monograph of archaeological works undertaken on the island.	This Action will not lead to development or other change; therefore, it will not be considered further in this assessment.	2b	NO
A3.4(a)	Report on conservation works undertaken each year.	This Action will not lead to development or other change; therefore, it will not be considered further in this assessment.	2b	NO
A3.4(b)	Publish a full monograph of conservation works undertaken on the island.	This Action will not lead to development or other change; therefore, it will not be considered further in this assessment.	2b	NO
A3.5	Ensure that heritage objects for Sceilg Mhichíl are archived and cared for appropriately.	This Action will not lead to development or other change; therefore, it will not be considered further in this assessment.	2b	NO
A3.6	Ensure that the Expert Advisory Committee continues to advise on future research and publication.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA. Therefore, it will not be considered further in this assessment.	1	NO
<b>Natural Heritage Objectives</b>				
<b>Obj 4</b>	<b>Objective 4: To identify and preserve the natural heritage of the island</b>			
A4.1	Prepare site-specific conservation objectives for the bird species for which the Skelligs SPA has been designated.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A4.2	Maintain close co-operation between the SMIG, Site Management Team, the guide service and NPWS.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
A4.3	Secure ministerial consent, underpinned by relevant scientific data and analyses where required, for relevant interventions as required.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A4.4	Ensure an ecological assessment is undertaken for any project or activity which might significantly impact on the biodiversity of the island (including appropriate assessment or screening for any plan or project likely to have a significant effect on the species and their habitats for which the SPA has been designated).	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A4.5	Continue to develop the seabird monitoring programme with particular attention to burrow-nesting seabirds in order derive, among other things, robust population estimates, population trends and the identification of pressures acting on the populations. Such data will inform the management of both public access and the works programme in monitoring potential effects of human activities.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A4.6	On an annual basis carry out a census count of all cliff nesting seabird species and estimate the breeding productivity of Sceilig Mhichíl's black-legged kittiwake population.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A4.7	Ensure that the value of the seabird data collected at Sceilig Mhichíl is optimised by contributing to national and international seabird survey and monitoring initiatives.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
A4.8	Participate in the Seabirds Count census of seabirds in Britain and Ireland.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A4.9	Implement the biosecurity action plan to deal with accidental or deliberate introductions of predator species.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A4.10	Ensure that helicopter flights over and in the vicinity of Skelligs SPA are avoided during the birds' breeding season.	While this Action has the potential to reduce disturbance events from helicopters on the SCIs of Skelligs SPA, it is not detailed how these flights will be avoided. Therefore, it will be considered further in this assessment.	3	YES
A4.11	Finalise and publish a vegetation survey, including an investigation of species that may have been cultivated by the monks.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A4.12	Promote and undertake survey, research, and where needed, conservation work of other biodiversity taxa on the island.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A4.13	Research the impacts of mice and rabbits on the biodiversity and archaeological heritage of the islands. Consider whether eradication is necessary.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
<b>Statutory and Policy Objectives</b>				

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
<b>Obj 5</b>	<b>Objective 5: To further promote the importance of the WHS to ensure continued coordination by government departments, agencies and other statutory bodies with responsibilities for making and implementing national policies and undertaking activities that may impact on Sceilg Mhichíl and its environs</b>			
A5.1	Adopt this management plan as a framework for the policies, future plans and decisions regarding Sceilg Mhichíl.	This is a general Action that is unlikely to have a significant effect on a Natura 2000 site. Therefore, it will not be considered further in this assessment.	1	NO
A5.2	Ensure compliance with all relevant statutory provisions for the protection of the WHS.	This is a general Action that is unlikely to have a significant effect on a Natura 2000 site. Therefore, it will not be considered further in this assessment.	1	NO
A5.3	Work with the local authority to ensure recognition of this management plan in its county development plans.	This is a general Action that is unlikely to have a significant effect on a Natura 2000 site. Therefore, it will not be considered further in this assessment.	1	NO
A5.4	Heighten awareness by Kerry County Council and other relevant agencies and stakeholders of the obligations arising from a WHS designation.	This is a general Action that is unlikely to have a significant effect on a Natura 2000 site. Therefore, it will not be considered further in this assessment.	1	NO
<b>Sustainable Tourism and Visitor Management</b>				
<b>Obj 6</b>	<b>Objective 6: The effective management of visitors to Sceilg Mhichíl.</b>			

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
A6.1	Continue to manage the National Monument, Nature Reserve and SPA at Sceilg Mhichíl while allowing a system of managed public access that ensures the conservation of the World Heritage Site is maintained as a first priority.	The stated aim of this Action to ensure that the conservation of the WHS is the first priority of the Plan needs to be assessed in terms of its potential to adversely affect Skelligs SPA and therefore will be considered further in this assessment.	3	YES
A6.2	Maintain a strictly defined annual season within which the island will, weather and sea conditions permitting, be open to visitors and publicise this appropriately with details of the permitted transit services.	As the annual season is not defined, it is uncertain whether the length of visitor season could have an impact on Skelligs SPA. Therefore, it will be considered further in this assessment.	3	YES
A6.3	Maintain a quality guide service to directly invigilate the island during the season, offer appropriate information to visitors and manage safety systems.	This Action will not lead to development or other change; therefore, it will not be considered further in this assessment.	2b	NO
A6.4	Collect Visitor Statistics for each season and analyse trends in order to provide quality management information.	Any change occurring as a result of this Action should be positive and is unlikely to have a negative effect on Skelligs SPA. Therefore, it will not be considered further in this assessment.	2c	NO
A6.5	Liaise with Fáilte Ireland and local tourism networks in the implementation of the tourism strategy for the greater south Kerry area outlined in the Sceilg Coast Visitor Experience Development Plan.	This Action makes provision for change that may reduce visitor pressure on Sceilg Mhichíl, thus having a positive effect on Skelligs SPA. Therefore, it will not be considered further in this assessment.	2c	NO
A6.6	Continue to regularly review both the sustainable total number of visitors allowed and the patterns of movement across the site.	Although this Action is intended to maintain sustainable levels of visitors and access across the site, it is not clear from this Action what the thresholds of sustainable access are for the Skelligs SPA. Therefore, this Action will be considered further in this assessment.	3	YES

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
A6.7	Continue to maintain safety systems and procedures on Sceilg Mhichíl to ensure that visitor or staff safety is not compromised and there is an effective and trained emergency response in place in the event of accident.	This Action allows for the provision of potential change to the site through the introduction of novel safety structures on the island (e.g. fencing). Construction of such structures may cause visual and noise disturbance to any nearby nesting seabirds. As such, this Action will be considered further in this assessment.	3	YES
A6.8	Engage with aircraft regulatory authorities to mitigate conservation risks arising from inappropriate deployment of airborne devices and aircraft above and around Sceilg Mhichíl in order to manage risks to the site.	While this Action aims to mitigate the conservation risks from aircraft and airborne devices, it is unknown if the outcome of such engagements would be sufficient to not result in an adverse effect on Skelligs SPA. Therefore, this Action will be considered further in this assessment.	3	YES
A6.9	Disseminate information to inform the seagoing community of the necessary controls on access to the island, including biosecurity requirements.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A6.10	Continue the practice of recent years to exclude larger private vessels from landing visitors to the island.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A6.11	Continue to balance the need to preserve the National Monument and facilitate public access through the operation of the boat permit scheme for landing visitors on the island during the visitor season.	There exists the potential that such balancing may lead to an increase in the number of boat permits being made available. This could then lead to an increase in the number of visitors to Skelligs SPA, which may lead to a significant adverse effect. Therefore, this Action will be considered further in this assessment.	3	YES

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
A6.12	Work on the provision of toilet facilities on the island, based in the compound around the lower lighthouse.	This Action has the potential to result in change in the form of building works within the Lower lighthouse. While such works will take place within an existing building, there exists the potential for the noise and vibrations resulting from the works to disturb the SCIs of Skelligs SPA. Therefore, this Action will be considered further in this assessment.	3	YES
<b>Obj 7</b>	<b>Objective 7: To maintain an appropriate standard of safe, regulated visitor access system that supports conservation aims.</b>			
A7.1	Continue to address, in cooperation with boat operators and the Marine Survey Office of the Department of Transport, Tourism and Sport, safety issues relevant to the sea crossing.	This Action will not lead to development or other change; therefore, it will not be considered further in this assessment.	2b	NO
A7.2	Continue the ongoing review of the criteria for the granting of permits for boats to land visitors on the island to ensure that the system adapts to any changing circumstances.	There exists the potential that such a review may lead to an increase in the number of boat permits being made available. This could then lead to an increase in the number of visitors to Skelligs SPA, which may lead to a significant adverse effect. Therefore, this Action will be considered further in this assessment.	3	YES
A7.3	Collect visitor-traffic data and analyse trends with a view to providing quality data for informed decision-making.	This is a general Action that does not present a clear pathway for effect between its' implementation and an effect on Skelligs SPA. It will therefore not be considered further in this assessment.	2e	NO

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
A7.4	Maintain the current minimum time limit of two and a half hours for visits to the island on days when normal weather conditions prevail to improve the visitor experience.	It is unclear if the current minimum time limit of two and a half hours for visitors to the island is having adverse effects on the Skelligs SPA. Therefore, this Action will be considered further in this assessment.	3	YES
A7.5	Continue to work with emergency response agencies to prepare and train for a variety of serious accident and rescue scenarios.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA, therefore it will not be considered further in this assessment.	2e	NO
A7.6	Train guide staff appropriately and maintain regular personal-competency certifications.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA, therefore it will not be considered further in this assessment.	2e	NO
A7.7	Entrust OPW, as site manager, with the maintenance of an up-to-date safety statement for the island, in accordance with health and safety legislation, and continue to use appropriate risk-assessment modelling on the island to plan for visitor and staff safety.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA, therefore it will not be considered further in this assessment.	2e	NO
A7.8	Continue to ensure safe access to the island during the season by regular maintenance of the pier and steps during the official visitor season and ensure that appropriate signage is in place at the pier and at the steps to the South Peak.	This Action makes provision for change which could result in an effect on the SCIs of Skelligs SPA. Therefore, this Action will be considered further in this assessment.	3	YES
A7.9	Maintain an appropriate access arrangement for the South Peak in particular that recognises its particularly	It is unclear from the description of this Action what the appropriate access arrangement entails, and as such cannot be ruled out if this Action will impact the SCI's of Skelligs SPA.	3	YES



ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
	challenging nature; ensure that casual visitor access is controlled.	Therefore, this Action will be considered further in this assessment.		
<b>Promotion and Appreciation Objectives</b>				
<b>Obj 8</b>	<b>Objective 8: To increase understanding of and appreciation for Sceilg Mhichíl and its environs.</b>			
A8.1	Continue to publish, for public distribution, the multilingual visitor guide pamphlet interpreting the monastic and natural history of Sceilg Mhichíl.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA, therefore it will not be considered further in this assessment.	2e	NO
A8.2	Maintain the website for Sceilg Mhichíl and continue to provide relevant information on the significance of the site, provide periodic updates on the implementation of the plan and to advise visitors how to prepare for a safe visit to the island.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA, therefore it will not be considered further in this assessment.	2e	NO
A8.3	Enhance the dissemination of information on Sceilg Mhichíl by providing materials in diverse media and meeting any reasonable requests for information insofar as possible.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA, therefore it will not be considered further in this assessment.	2e	NO
A8.4	Work to create an education outreach programme within the context of the landside facilities being contemplated at the Skellig Experience Visitor Centre in Portmagee, linking to schools and other educational institutions.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA, therefore it will not be considered further in this assessment.	2e	NO

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
A8.5	Continue to support and give natural history public lectures/case study seminars on the conservation works and the history of the island.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA, therefore it will not be considered further in this assessment.	2e	NO
A8.6	Promote public awareness of other heritage sites of importance in the area in order to broaden visitor experience; provide resources to support this in the Skellig Experience Visitor Centre in Portmagee in particular.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA, therefore it will not be considered further in this assessment.	2e	NO
A8.7	Support and incentivise local initiatives, such as organised walks/tours of historical and biodiversity sites of interest, in the Iveragh Peninsula.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA, therefore it will not be considered further in this assessment.	2e	NO
A8.8	Liaise with Fáilte Ireland and any other appropriate third parties to ensure high-quality information and offsite interpretation for visitors is provided where appropriate, including in the Skellig Experience Visitor Centre.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA, therefore it will not be considered further in this assessment.	2e	NO
<b>Landscape and Setting Objectives</b>				
<b>Obj 9</b>	<b>Objective 9: To maintain and enhance the landscape setting of Sceilg Mhichíl.</b>			
A9.1i)	Design alternative onsite accommodation based in the lower lighthouse.	This Action has the potential to result in change in the form of building works within the Lower lighthouse. Although it is acknowledged the works will be in an existing building, there still exists potential for adverse effects through access to the site and disturbance through increased noise. Therefore, it will be considered further in this assessment.	3	YES
A9.1ii)	Ensure the design of temporary work huts is in keeping with the landscape of the island.	Although this Action makes some provision for change, OPW has indicated that all staff will be accommodated within the	2b	NO

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
		Lower Lighthouse complex when works are complete, with the temporary huts no longer being necessary (OPW 2020 pers, Comms). Overall, the change will be positive, and it will not be considered further in this assessment.		
A9.2	Maintain the current waste-management strategy, agreed with Kerry County Council, for the recycling and removal of waste.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA, it will not be considered further in this assessment.	2e	NO
A9.3	Continue regular liaison with the local-authority Environmental Officer.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A9.4	Design and build visitor toilet facilities in the lower lighthouse compound.	This Action has the potential to result in change in the form of building works within the Lower lighthouse. Although it is acknowledged the works will be in an existing building, there still exists potential for adverse effects through access to the site and disturbance through increased noise. Therefore, it will be considered further in this assessment.	3	YES
<b>Monitoring Objectives</b>				
<b>Obj 10</b>	<b>Objective 10: To monitor those factors with the potential to impact on the built and natural environment of Sceilg Mhichíl.</b>			
A10.1	Develop a framework for monitoring climate change.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A10.2	Ensure that any possible impact of climate change on Sceilg Mhichíl is monitored and taken into account in the development of the National Climate Change Strategy.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2e	NO

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
A10.3	Monitor the change of structures using technical assistance as required.	This Action may lead to conservation works on the cultural heritage features of Sceilg Mhichíl, which in turn may disturb birds using such structures for nesting purposes. Therefore, it will be considered further in this assessment.	3	YES
A10.4	Monitor, on an ongoing basis, other factors that may impinge on the built and natural environment.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
<b>Research Objectives</b>				
<b>Obj 11</b>	<b>Objective 11: To establish a research framework for Sceilg Mhichíl.</b>			
A11.1	Support any relevant national research programmes.	This is a general Action that is unlikely to have a significant effect on a Natura 2000 site, therefore it will not be considered further in this assessment.	1	NO
A11.2	Establish a research framework that would encourage involvement from third-level institutions and other interested parties.	This is a general Action that is unlikely to have a significant effect on a Natura 2000 site, therefore it will not be considered further in this assessment.	2e	NO
A11.3	Complete the research programme on geology and historic quarrying.	There exists the potential for research conducted under the purpose of this Action to affect the SCIs of Skelligs SPA. Therefore, it will be considered further in this assessment.	3	YES
A11.4	Complete research on water collection and management.	There exists the potential for research conducted under the purpose of this Action to affect the SCIs of Skelligs SPA. Therefore, it will be considered further in this assessment.	3	YES
A11.5	Complete the programme of vegetation surveys and investigation of plant species which may have been cultivated by the monks.	There exists the potential for research conducted under the purpose of this Action to affect the SCIs of Skelligs SPA. Therefore, it will be considered further in this assessment.	3	YES

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
A11.6	Complete research into the development of drystone construction based on the work being carried out on the monastic structures.	There exists the potential for research conducted under the purpose of this Action to affect the SCIs Interests of Skelligs SPA. Therefore, it will be considered further in this assessment.	3	YES
A11.7	Enhance visitors experience of visiting the island by supporting research and ensuring that the results are disseminated.	This is a general Action that does not present a clear pathway for effect between its' implementation and LSE to Natura 2000 sites. Therefore, it will not be considered further in this assessment.	2e)	NO

## 6. LINK BETWEEN PRESSURE-RECEPTOR PATHWAYS AND PROPOSED PLAN ACTIONS

### 6.1 Action and Pressure Matrix

All Actions assessed as having the potential to result in a potential adverse effect on Skelligs SPA were collated in a matrix to identify for each Action which pressure(s) could occur and lead to an adverse effect, displayed in Table 6-1 below.

**Table 6-1 Summary of identified Actions which require further assessment and the potential pressures they may result in**

Action No.	Action Description	Visual & physical disturbance (including noise disturbance) and displacement	Habitat loss	INNS	Climate change
A2.1	Engage with the Commissioners of Irish Lights to secure the lower lighthouse complex for use by staff and visitors.	✓			
A3.1	Carry out a full pre-works survey and detailed specification for each annual phase of works in advance of any work commencing on the site.	✓	✓		✓
A3.2	Prepare a formal, structured maintenance programme for all conserved structures.	✓	✓		✓
A4.10	Ensure that helicopter flights over and in the vicinity of Skelligs SPA are avoided during the birds' breeding season.	✓			
A6.1	Continue to manage the National Monument, Nature Reserve and SPA at Sceilg Mhichíl while allowing a system of managed public access that ensures the conservation of the World Heritage Site is maintained as a first priority.	✓	✓		
A6.2	Maintain a strictly defined annual season within which the island will, weather and sea conditions permitting, be open to visitors and publicise this appropriately with details of the permitted transit services.	✓	✓		
A6.6	Continue to regularly review both the sustainable total number of visitors allowed and the patterns of movement across the site.	✓	✓		
A6.7	Continue to maintain safety systems and procedures on Sceilg Mhichíl to ensure that visitor or staff safety is not compromised and there is an effective and trained emergency response in place in the event of accident.	✓	✓		
A6.8	Engage with aircraft regulatory authorities to mitigate conservation risks arising from inappropriate deployment of airborne devices and aircraft above and around Sceilg Mhichíl in order to manage risks to the site.	✓			

Action No.	Action Description	Visual & physical disturbance (including noise disturbance) and displacement	Habitat loss	INNS	Climate change
A6.11	Continue to balance the need to preserve the National Monument and facilitate public access through the operation of the boat permit scheme for landing visitors on the island during the visitor season.	✓	✓	✓	
A6.12	Work on the provision of toilet facilities on the island, based in the compound around the lower lighthouse.	✓		✓	
A7.2	Continue the ongoing review of the criteria for the granting of permits for boats to land visitors on the island to ensure that the system adapts to any changing circumstances.	✓	✓	✓	
A7.4	Maintain the current minimum time limit of two and a half hours for visits to the island on days when normal weather conditions prevail to improve the visitor experience.	✓	✓		
A7.8	Continue to ensure safe access to the island during the season by regular maintenance of the pier and steps during the official visitor season and ensure that appropriate signage is in place at the pier and at the steps to the South Peak.	✓	✓		✓
A7.9	Maintain an appropriate access arrangement for the South Peak in particular that recognises its particularly challenging nature; ensure that casual visitor access is controlled.	✓	✓		
A9.1i)	Design alternative onsite accommodation based in the lower lighthouse.	✓		✓	
A9.4	Design and build visitor toilet facilities in the lower lighthouse compound.	✓		✓	
A10.3	Monitor the change of structures using technical assistance as required.	✓	✓		✓
A11.3	Complete the research programme on geology and historic quarrying.	✓	✓		
A11.4	Complete research on water collection and management.	✓	✓		
A11.5	Complete the programme of vegetation surveys and investigation of plant species which may have been cultivated by the monks.	✓	✓		
A11.6	Complete research into the development of drystone construction based on the work being carried out on the monastic structures.	✓	✓		

## 7. ASSESSMENT OF SITE INTEGRITY

Following the assessment of the sensitivities of the SCIs of Skelligs SPA, this section assesses the identified potential pressures of implementing the Proposed Plan against the conservation objectives for Skelligs SPA to examine the potential for adverse effects on the site integrity. This section assesses such potential adverse effects both alone and in-combination with other plans and projects. This section also includes any re-worded or additional Plan Actions assessed as requiring further assessment in Appendix A.

### 7.1 Assessment of Adverse Effects on Skelligs SPA

Screening for AA identified four potential pressures on Skelligs SPA which could result from implementation of the Proposed Plan. These potential pressures are:

- Visual & physical disturbance (including noise disturbance) and displacement
- Habitat loss / damage
- Introduction of INNS / problematic native species
- Climate change

The activities which could result in these pressures acting on the SCI and supporting habitats of Skelligs SPA through the implementation of the Proposed Plan Actions have been assessed against the conservation objective for this site.

"To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA".

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;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future;
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

#### 7.1.1 Visual & physical disturbance (including noise disturbance) and displacement

The following Actions of the Proposed Plan have the potential to lead to visual & physical disturbance (including noise disturbance) and displacement to Skelligs SPA:

- **Renovation of Lower Lighthouse Complex: A2.1, A6.12, A9.1i) and A9.4**

These Actions make provision for the renovation and construction activities planned for the Lower Lighthouse complex.

- **Conservation /Maintenance Works: A3.1, A3.2, A6.1, A6.7, A7.8 and A10.3**

These Actions relate to the conservation/maintenance works of cultural heritage features and visitor pathways on the island.

- **Visitor Access: A4.10, A6.1, A6.2, A6.6, A6.7, A6.8, A6.11, A7.2, A7.4 and A7.9**

These Actions relate to visitor access to the island.

- **Research Programmes: A11.3 – A11.6**



These Actions relate to the completion of research programmes on various aspects of the sites natural and cultural features.

#### 7.1.1.1 Renovation of Lower Lighthouse Complex - A2.1, A6.12, A9.1i) and A9.4

SCI	Puffin	Manx shearwater	European storm petrel	Gannet	Kittiwake	Guillemot	Fulmar
Affected by pressure?	✓	✓	✓		✓	✓	✓

#### Assessment of Site Integrity Prior to Mitigation

Four Proposed Plan Actions relate to the changed use of the Lower Lighthouse Complex. Works are currently ongoing to renovate the lower lighthouse complex on Sceilg Mhichíl, with the aim to repurpose the existing lower lighthouse structure for accommodation for workers and researchers and toilet facilities for visitors (NMS, 2020). Works have already been completed on the structure, including the removal of refurbishments carried out in the 1970's, the removal of asbestos and the removal of some plaster to examine the current state of the structure which largely originates from the 19<sup>th</sup> century. While there are no birds currently nesting within the lighthouse complex itself, such works have the potential to disturb any birds found nesting in the vicinity of the lower lighthouse, and along the access route to the complex e.g. nesting birds in the lighthouse road wall.

The SCIs of Skelligs SPA which could interact with these works are the burrowing nesting species Atlantic puffin, Manx shearwater and European storm petrel. The burrowing nesting species will be most sensitive to disturbance during the breeding season and since the works on Sceilg Mhichíl are restricted by good weather to access the island there is likely to be some temporal overlap. However, as most of the renovation works are focused on the complex's interior, the potential for visual disturbance is greatly reduced. Activities such as the removal of the existing concrete ground floor however may lead to elevated noise levels above that of the natural baseline, potentially disturbing nearby nesting seabirds. Nearby cliff-nesting species could also be impacted by such works, however as such species will not be in direct proximity, disturbance of a significance to cause an effect will not occur. While the sound of the works may propagate to the outside environment, these works will be relatively short term and given the typically high level of ambient noise from the surrounding seas, wind and other birds, such activities will not reach a noise level high enough to displace birds. Additionally, light pollution from the complex during the works and when operational, especially during nights of low visibility e.g. fog/mist, has the potential to disorientate birds and lead to the occurrence of bird strikes.

As the works will be localised entirely to the lower lighthouse complex, which is not currently utilised as habitat by species, the works will not reduce the available habitat within the site. The natural range of sites SCIs will therefore be unaffected.

#### Mitigation

Without prejudice to the conclusion of no significant effects, mitigation has been proposed as best practice.

M1 – Review lighting arrangements for the operation of the Lower lighthouse complex and where practicable implement lighting options which will minimise the risk of bird strikes.

#### Assessment of Site Integrity with Mitigation

Given that there are no nesting birds within the lighthouse complex and disturbance from noise to birds outside the complex will be localised and relatively short term in nature, it has been concluded

that these works will not have any significant adverse effects on any of the burrowing nesting SCI species. The natural range of the species will not be reduced, and the range of their habitat will be unaffected. As a result, these species' populations will continue to maintain itself on a long-term basis, ensuring they remain viable components of Skelligs SPA. Therefore, there will be no adverse effects on site integrity.

#### 7.1.1.2 Conservation / maintenance works - A3.1, A3.2, A6.1, A6.7, A7.8 and A10.3

SCI	Puffin	Manx shearwater	European storm petrel	Gannet	Kittiwake	Guillemot	Fulmar
Affected by pressure?	✓	✓	✓				

#### Assessment of Site Integrity Prior to Mitigation

Conservation/maintenance works on the cultural heritage features on Sceilg Mhichíl have the potential to disturb burrowing nesting bird species, due to these species being known to nest within the structures that may require such works. There are several works programmes currently ongoing/ due to begin on Sceilg Mhichíl, which are discussed in-turn below.

##### Annual maintenance programme

The annual maintenance programme takes place before the opening of the visitor season and lasts for approximately 6 weeks. This programme covers the East, South and North Steps, the Monastery and all the structures on the South Peak. Lighthouse era structures include the pier, the Lower Lighthouse Road and Lighthouse Platform above. Regular maintenance is also required to the canopy at Cross Cove. Burrowing nesting bird species in close proximity to any conservation works could be disturbed by the physical presence and noise of workers and equipment. Maintenance works are carried out by small numbers of workers over a relatively short timeframe. Given that these works have taken place regularly on Sceilg Mhichíl over the past several decades it is likely that the burrowing nesting birds will have habituated to the visual and noise disturbance of such works occurring. Therefore, any disturbance is will be temporary and minimal. As the burrowing bird species will not be excluded from their typical nesting locations, the range of habitat available to these species will be unaffected. However, prior to knowing the exact details of each set of maintenance works it cannot be ruled out that significant disturbance will not occur.

##### Upper lighthouse works

A survey of the remaining upper lighthouse structures is due to be completed in 2020. In the future this will be followed by conservation works and, where appropriate, excavation works. As such this will be a multi-year project. Due to the upper lighthouse not being as widely visited and worked on as other areas of the island, should any burrowing nesting birds be present here they may not be habituated to humans and may be disturbed by the works.

#### Mitigation

M2 - Implementation of Action 4.4 of the Proposed Plan, 'Ensure an Ecological Assessment is undertaken for any project or activity which might significantly impact on the biodiversity of the island (including Appropriate Assessment or screening for any plan or project likely to have a significant effect on the species and their habitats for which the SPA has been designated)', will ensure any works programme is assessed prior to it commencing. This will be conducted in consultation with NPWS so that nature conservation issues are considered prior to the Minister for Housing, Local Government and Heritage deciding if assessment is required.

M3 - Works programmes will be subject to site-specific mitigation measures. This may include, for example, conducting pre-works surveys to establish the location of any burrows utilised for nesting in the works area, the marking of such burrows so they may be avoided, and avoiding certain time-periods where birds may be more susceptible to disturbance.

M4 – Continued supervision of wall maintenance by an ornithologist to ensure that burrow entrances remain accessible to breeding birds, (in particular storm petrel), with best endeavours being made to maintain/increase the amount of potential breeding chambers in the walls subjected to maintenance works.

#### Assessment of Site Integrity with Mitigation

Generally, any disturbance to burrowing nesting SCI species from conservation/maintenance works are likely to be localised and temporary. However, any future conservation/maintenance works will follow the process set out under mitigation above to ensure there are no significant adverse effects. With these measures in place there will not be any significant adverse effects on the SCI of Skelligs SPA. The natural range of the species will not be reduced, and the range of their habitat will be unaffected. As a result, these species’ populations will continue to maintain itself on a long-term basis, ensuring they remain viable components of Skelligs SPA. Therefore, there will be no adverse effects on site integrity.

#### 7.1.1.3 Visitor Access: A4.10, A6.1, A6.2, A6.6, A6.7, A6.8, A6.11, A7.2, A7.4 and A7.9

SCI	Puffin	Manx shearwater	European storm petrel	Gannet	Kittiwake	Guillemot	Fulmar
Affected by pressure?	✓	✓	✓	✓	✓	✓	✓

#### Assessment of Site Integrity Prior to Mitigation

Visitor access includes i) authorised visitors who arrive during the regulated tourist season (usually mid-May to the end of September); ii) unauthorised visitors who may arrive outside the designated tourist season by private craft and iii) other unregulated visitor access around or over the island

Authorised access to Sceilg Mhichíl covers the visitors who arrive by regulated boats. Visitor numbers are capped at a maximum of 180 visitors per day therefore 15 boats with a capacity of 12 visitors are permitted to carry passengers to the island each day. Authorised visitors, transit by boat to Sceilg Mhichíl. After landing on the island visitors receive a safety talk and for safety reasons are encouraged to stick to the tourist routes (steps and roadways) and guides stationed along the tourist routes help to police this. Table 7-1 below details the total visitor numbers from 2008 – 2019, in relation to the total theoretical maximum of each season based on full capacity of visitors per day (i.e. 180/day) but with an average fail rate of 45% of all days the visitor season is open (OPW pers. comms., May 2020).

**Table 7-1 Total visitor numbers to Sceilg Mhichíl from 2008-2019 (OPW pers. comms., May 2020)**

Year	Length of Season	No. of Days in season*	Visitors	Expected visitor maximum**	Difference between total visitors and expected visitor max.	Theoretical visitor maximum***
2008	25 May – 29 Sep	128	10,324	12,672	-2,348	23,040
2009	22 May – 2 Oct	134	10,642	13,266	-2,624	24,120
2010	25 May – 17 Oct	146	12,343	14,454	-2,111	26,280
2011	10 Jun – 6 Oct	119	9,750	11,784	-2,034	21,420
2012	18 May – 19 Oct	155	11,577	15,345	-3,768	27,900
2013	17 May – 1 Oct	138	13,221	13,662	-441	24,840
2014	16 May - 29 Oct	137	12,560	13,563	-1,003	24,660
2015	20 May - 2 Oct	136	15,315	13,464	1,851	24,480
2016	14 May - 2 Oct	142	14,648	14,058	590	25,560
2017	12 May - 5 Oct	147	16,755	14,553	2,202	26,460
2018	23 May - 2 Oct	132	16,792	13,068	3,724	23,760
2019	25 May - 5 Oct	135	15,616	13,365	2,251	24,300

\* The Number of days in season does not equate to sailing days; analyses at various times have indicated a “fail rate” of approx. 45% + of days during the season when no or only partial access has been possible (OPW pers. comms., May 2020).

\*\* Total days in season x 180 visitors per day – 45% of the total to equate for quoted average fail rate.

\*\*\* Total days in season x 180 visitors per day

The general trend in the last five years has been a steady increase, in comparison to the previous five years, which can be attributed to the influence of the Star Wars filming. Visitor numbers appear to be declining from the 2018 peak, based on the 2019 data. Due to Covid-19 the island has been shut to visitors in 2020 and it remains to be seen whether visitor numbers continue to decline over the period of the plan. But due to the raised public awareness of the site it is anticipated that visitor numbers will be sustained at the average of the last five years. Noting this is still below the maximum that would be allowed under the permit scheme, and it has not been determined what level of visitor numbers is sustainable for avoidance of adverse effects.

Unauthorised visitor access to Sceilg Mhichíl is via private craft and can occur outside the tourist season when guides are not present to help keep visitors to the designated routes. Although not permitted, a small number of visitors on foot (who may have arrived on an authorised tour) bring with them drones to film whilst on the island.

Other unregulated visitor access also includes a growing number of vessels operating tours around the island in the absence of securing the permits to land visitors. Additionally, some helicopter tour companies fly visitors over and around the island.

All forms of visitor access have the potential to cause visual and noise disturbance in varying degrees. The SCI species most sensitive to this disturbance (with the exception of visual and noise disturbance

from aircraft which could disturb all the SCIs of Skelligs SPA) are the burrowing nesting species (Atlantic puffin, Manx shearwater and European storm petrel) because they are most likely to come in to contact with visitors.

Birds are most sensitive during the breeding season because both incubating adults and chicks will remain in the confines of their nest for extended periods of time, as opposed to outside the breeding season where such species rarely return to land (Watson, Bolton and Monaghan, 2014). Prolonged disturbance could result in impaired breeding, disruption to incubation, increased nest failures due to predation and nest abandonment (Valente and Fischer, 2011). These factors could affect the demographic characteristics of the population. Since the tourist season overlaps with the breeding season there is potential for significant adverse effects on the SCIs of Skelligs SPA.

Of the three burrowing nesting species, Atlantic puffin are most sensitive to visual disturbance because they site their nests under the steps and in burrows close to tourist paths, and return to the colony throughout the day to feed their chicks. They therefore have most potential to come into contact with visitors. Visitors may also inadvertently prevent puffins from reaching their burrows to feed their chicks if they stand too close to the burrow entrances. During the breeding season puffins can be abundant on and around the steps as shown in Figure 7-1.

**Figure 7-1 Puffins on the steps and pathways on Sceilg Mhichíl (An Taisce, 2019)**



European storm petrel nest in small burrows but also nest under the steps and in crevices in the walls of the monastery and the wall of the Lower lighthouse road. As a nocturnal species that does not leave/return to their burrows during the day, the presence of visitors will not impede their burrow access.

Manx shearwater nest in burrows on the slopes adjacent to the tourist paths but not under the steps so are less sensitive to disturbance along many of the tourist paths, although they have been observed nesting in crevices in the monastic structures. As with the European storm petrel, Manx shearwater are a nocturnal species that does not leave/return to their burrows during the day. As such the presence of visitors will not impede their burrow access.

Given the relatively stable numbers of visitors accessing the island from 1994 – 2012, it is likely that these species have become habituated to the presence of visitors. However, as visitor numbers to the island have continued on an upward trend from 2012 – 2019, birds present on the island during the visitor season, such as Atlantic puffin, may see increased disturbance above which they are currently habituated to, potentially impacting on their long-term population dynamics.

A study on the island of Mousa in Shetland found that the pressure of visitors to the site reduced the productivity of the European storm petrel colony by 1.6% compared to productivity expected in the absence of visitors (Watson et al., 2014). Due to the differences between Mousa and Sceilg Mhichíl these results may not be analogous between the two sites. At present, there has been no in-depth monitoring study conducted on the long-term breeding success or population trends of burrowing nesting species on Sceilg Mhichíl. However, given the demonstrable impact of recreational disturbance that was observed in the Watson et al. study, and the implications that individual birds may regard human disturbances such as noise, vibration or even odours as a predation risk, there exists the potential that similar effects are occurring to birds found nesting beneath or close to the vicinity of the main pathways on Sceilg Mhichíl.

Without detailed data on the distribution of each of the three species across the island and sufficient data on annual breeding success, it is not possible to assess with accuracy the proportion of the population of each species which may be impacted by visitor visual disturbance and whether the increase in the average number of visitors over the previous plan's life (from an annual average of 11,507 from 2009-2013 to an annual average of 15,061 from 2014-2018) (NMS, 2020) has resulted in adverse effects on population levels.

It is likely that each species will capitalise on all available suitable breeding space and site nests all over the island and due to the steepness of slopes and inaccessibility of many parts, there will be areas where nesting birds will not come into human contact. Many of the burrows are sited in the slopes adjacent to the main paths and if visitors stick to these paths, disturbance will be minimised.

The greatest pressures exerted by visitors occur when they stray off the designated paths, are overcrowded along paths and within the monastic structures, and use unpermitted drones. A carrying capacity study of visitors to Sceilg Mhichíl found that the majority of visitors to the site were arriving in the morning, with the island mostly free of visitors by mid-late afternoon (Creagh House Environmental Ltd, 2019). This resulted in overcrowding within the monastic grounds where visitors listen to talks from the guides, which in turn led to visitors standing and sitting in areas outside of the permitted area. Regulation and control of these activities could minimise disturbance of the SCIs (Dr Mark Jessop pers. comms., September 2020).

Efforts have been made in recent years to stagger the arrival of visitors to the site over the course of a day. This was done to avoid the overcrowding problems that had previously arisen when the visitors arrived within a short time of each other. This approach has the potential to have both positive and negative effects on burrowing nesting birds. The spreading out of visitors across the day may result in the spreading of disturbance events, as opposed to a single larger event when visitors arrived within a shorter timeframe. This spread may lead to birds being subject to a consistent lower level of disturbance over the day.

However, spreading out of visitors would reduce the potential for visitors to stray from the designated pathways, both on the steps to the monastery (in reducing the need to step away to let people past) and in the monastic complex itself. This will prevent burrowing nesting birds found away from the pathways, which may be less habituated to human presence, from being disturbed. Additionally, the spacing out of visitors will likely reduce the time in which individuals take to climb the steps to the monastery, through not having to wait for large groups ascending/descending the steps, which may help to reduce the impact of the spread of disturbance.

Sceilg Mhichíl was utilised as a prominent filming location for recent films in the 'Star Wars' film franchise, with the first film featuring the site being released in 2015 (An Taisce, 2019). As a result of this greatly increased exposure on the global stage, visitor numbers to the site have seen a notable increase in recent years, rising from 12,560 in 2014 (across a 137 day visitor season), prior to the new film's release, up to a peak of 16,792 in 2018 (across a 132 day visitor season). This represents an increase of 4,232 over a shorter visitor season. In some isolated instances visitors to the site have

deviated from the designated pathway to re-enact scenes from the films, which in turn has led to habitat utilised by puffins and Manx shearwaters to be trampled and the potential disturbance of such individuals not typically habituated to the presence of humans near their nesting sites.

The flying of helicopters over Sceilg Mhichíl has the potential to disturb seabirds both nesting on the Skelligs islands and flying in the skies above. Additionally, due to the risk of bird strikes to helicopters, pilots do not typically fly close to seabirds. As helicopter flying heights would be higher than the SCI species, collision risk is very low. As described in Section 4 above, nocturnal species such as Manx shearwater and European storm petrel are unlikely to be disturbed by any helicopters/drones operating during the day (Dr Mark Jessopp, pers. comms., September 2020). While the noise from such flights may disturb birds within their burrows, they will not directly displace individuals or affect their communication, with the species typically calling to each other when they return to colonies at night. The effect of buffeting caused by the downdraft of a helicopters rotors is most likely to cause disturbance to seabirds. This may occur if a helicopter flies too low to the site. Such aircraft flights are currently typically infrequent during the visitor (and breeding) season (records from the 2019 season indicate the presence of helicopters was 10 days out of the 135-day season (OPW pers. comms., May 2020)).

The unauthorised use of drones (UAVs), has the potential to cause adverse effects to the breeding SCI species. Drones are piloted at much lower heights, so the risk of bird strike will be higher and the noise they generate being more likely to cause disturbance to nearby birds. Whilst studies on the responses of seabirds to UAV surveys have indicated mixed responses, (nesting birds may be temporarily disturbed by the UAVs presence, however, the majority returned to their nests within 5 minutes; whilst non-breeding birds appeared to be the most susceptible to disturbance, with >99% of the overall 8.5% of birds displaying evasion responses (Brisson-Curadeau *et al.*, 2017)), it is not clear what effect the use of drones by tourists would have on breeding birds.

There has been an increase in recent years of boats cruising around Sceilg Mhichíl and Sceilg Bheag, due to an increase in visitor numbers and lack of space on visitor boats accessing the island directly. Cruises, which offer an alternative to landing on Sceilg Mhichíl have the potential to take away some of the pressure of increasing visitor numbers on the island and therefore may have a beneficial effect on the SCI species of Skelligs SPA. Although increasing numbers of vessels circulating around Sceilg Mhichíl and Sceilg Bheag have the potential to disturb the cliff nesting species foraging in the surrounding waters, based on the sensitivity assessment in Section 4 any disturbance will be minimal. In addition, rafting species such as Atlantic puffin and common guillemot typically raft in large numbers at dusk, as opposed to during the day when cruising vessels operate (Richards *et al.*, 2019). As such, there is limited potential for cruising vessels to directly interact with large groups of rafting seabirds. Manx shearwater, which also form large rafts, do so several kilometres from the shore and therefore will not interact with the cruising vessels. The natural range of rafting species around Skelligs SPA will therefore not be reduced by the presence of cruising vessels.

### **Mitigation**

M5 - Carry out semi-frequent spot checks on points along the access pathways to ensure visitor compliance with adhering to the designated pathways on the site.

M6 – Continue to explore the staggering of the arrival times of boats over the course of the day to reduce overcrowding on the site and reduce the potential for visitors to venture from the designated pathways.

M7 - Continue to provide clear, concise and effective messaging to individuals visiting the island on the need to remain on the designated pathways. This will be done both before boarding a vessel through displaying appropriate signage at the departure points, and after disembarking on the island through talks from accredited guides. This will reinforce its importance to visitors

M8 - Objective 8 of the Proposed Plan, through its Actions, aims to help further promote visitor activities on the mainland of Ireland. The improvement and promotion of such activities may help to reduce the number of visitors travelling to Sceilg Mhichíl, reducing the potential for disturbance to occur.

M9 - Ensure all boat operators landing visitors on Sceilg Mhichíl or taking visitors on tours around the island, are informed of potential adverse effects from visual and physical disturbance on wildlife (e.g. rafting seabirds and seals) and are requested to avoid disturbance. Develop guidance for boat operators taking tourists around the Skelligs islands for vessel speeds and separation distances from wildlife.

M10 – Action 4.10<sup>4</sup> of the Proposed Plan ‘*Exclude recreational and other non-essential helicopter flights from an exclusion zone of 1km surrounding Skelligs SPA*’ will limit the potential for disturbance from helicopters on the SCIs of Skelligs SPA. This is with the exemption of the following essential activities (access for medical emergencies, material drops and visits from the Commissioners of Irish Lights).

M11 - Put in place measures to prevent unauthorised drone flying. These shall include the continued dissemination of information (e.g. at booking, at the piers on the mainland, on the boats) to explain why unauthorised drones are banned on the site, along with the creation of a process for the authorisation of legitimate drone usage on-site.

**Assessment of Site Integrity with Mitigation**

In the short term, adverse effects from visual and physical disturbance to the SCIs of Skelligs SPA can be avoided or reduced to acceptable levels by the implementation of mitigation measures M2 to M10.

In the longer-term monitoring studies will help inform decision making with regards to visitor numbers

- Population distribution data will help determine what proportion of the population of each species comes into contact with human activity and has the potential to be disturbed by visitors and if this disturbance could result in significant adverse effects at the population level.
- Breeding success monitored at areas of high visitor footfall and areas where there are no visitors will help assess trends in breeding success in relation to visual and physical disturbance from visitors. This will help determine if visitor numbers are sustainable and help focus where further mitigation measures may be required.

Implementation of these measures will reduce the adverse effects of visual disturbance to these species from visitor access to the site, ensuring the population dynamics of these species allow them to remain viable in the long-term. The prevention of visitors from straying from the designated pathways will ensure that that range of habitats available to species within the site is not reduced. Therefore, there will be no adverse effects on site integrity.

**7.1.1.4 Research Programmes: A11.3 – A11.6**

SCI	Puffin	Manx shearwater	European storm petrel	Gannet	Kittiwake	Guillemot	Fulmar
Affected by pressure?	✓	✓	✓		✓	✓	✓

**Assessment of Site Integrity Prior to Mitigation**

<sup>4</sup> Based on the updated wording of Action 4.10, detailed in Appendix A, Table A-1 of this report.



There are several planned and ongoing research programmes due to be carried out on Sceilg Mhichíl. This includes research on geology and historic quarrying, research on water collection and management, completion of a vegetation survey, and research into the development of drystone construction. The timings and scopes of these works are not currently available; however, it is confirmed that such works will be non-intrusive (OPW pers. comms. 12/05/20). These programmes will require individuals to be present on-site, which could potentially lead to birds being disturbed by their presence. However, such programmes will not involve the presence of large numbers of researchers simultaneously within the site. Due to the limited spatial and temporal extent of such programmes and the low sensitivity of the present species to visual disturbance, research programmes will not lead to a significant level of disturbance, ensuring their natural range is maintained and the range of existing habitat available is not reduced. The ability of the SCIs to maintain their population on a long-term basis will therefore not be affected.

### **Mitigation**

M2 - Implementation of Action 4.4 of the Proposed Plan, *'Ensure an Ecological Assessment is undertaken for any project or activity which might significantly impact on the biodiversity of the island (including Appropriate Assessment or screening for any plan or project likely to have a significant effect on the species and their habitats for which the SPA has been designated)'*, will ensure any works programme is assessed prior to it commencing. This will be conducted in consultation with NPWS so that nature conservation issues are considered prior to the Minister for Housing, Local Government and Heritage deciding if assessment is required.

M3 - Works/research programmes will be subject to site-specific mitigation measures. This may include, for example, conducting pre-works surveys to establish the location of any burrows utilised for nesting in the works area, the marking of such burrows so they may be avoided, and avoiding certain time-periods where birds may be more susceptible to disturbance.

M12 - Research programmes will be staggered to prevent programmes from occurring simultaneously within the same location on Sceilg Mhichíl.

### **Assessment of Site Integrity with Mitigation**

With the mitigation in place, these programmes will not have a negligible impact on the SCIs of the site. The natural range of the species will not be reduced, and the range of their habitat will be unaffected. Therefore, there will be no adverse effects on the site integrity of Skelligs SPA.

## **7.1.2 Habitat loss / damage**

The following Actions of the Proposed Plan have the potential to lead to habitat loss/damage to Skelligs SPA:

- **Conservation / Maintenance Works: A3.1, A3.2, A6.1, A7.8 and A10.3**

These Actions relate to the conservation/maintenance works of cultural heritage features and visitor pathways on the island.

- **Visitor Access: A6.2, A6.6, A6.7, A6.11, A7.2, A7.4 and A7.9**

These Actions relate to visitor access to the island.

- **Research Programmes: A11.3 – A11.6**

These Actions relate to the completion of research programmes on various aspects of the sites natural and cultural features.

### 7.1.2.1 Conservation / Maintenance Works: A3.1, A3.2, A6.1, A7.8 and A10.3

SCI	Puffin	Manx shearwater	European storm petrel	Gannet	Kittiwake	Guillemot	Fulmar
Affected by pressure?	✓	✓	✓				

#### Assessment of Site Integrity Prior to Mitigation

The restoration/strengthening of the historical structures, retaining walls and steps within the site has the potential to significantly reduce the available habitat of burrowing nesting species that utilise such structures for breeding and nesting purposes. Such works would be conducted during the annual maintenance programme. This maintenance programme takes place before the opening of the visitor season, and lasts for approximately 6 weeks. This programme covers the East, South and North Steps, the Monastery and all the structures on the South Peak. Lighthouse era structures include the pier, the Lower Lighthouse Road and Lighthouse Platform above. Regular maintenance is also required to the canopy at Cross Cove. Works on these areas may include the strengthening of walls to replace any original mortar used in their construction.

Over time as the original mortar used in the construction of the numerous structures across the island has eroded, such areas need strengthening to avoid the structures collapse. However, their state of deterioration and any gaps in the structures may have since been exploited by species such as Atlantic puffin, storm petrel and Manx shearwater to be used for nesting purposes. Over time the areas requiring strengthening will continue to increase, which if done without regard for the resident birds may lead to a reduction in available habitat.

#### Mitigation

M2 - Implementation of Action 4.4 of the Proposed Plan, 'Ensure an Ecological Assessment is undertaken for any project or activity which might significantly impact on the biodiversity of the island (including Appropriate Assessment or screening for any plan or project likely to have a significant effect on the species and their habitats for which the SPA has been designated)', will ensure any works programme is assessed prior to it commencing. This will be conducted in consultation with NPWS so that nature conservation issues are considered prior to the Minister for Housing, Local Government and Heritage deciding if assessment is required.

M4 - Continued supervision of wall maintenance by an ornithologist to ensure that burrow entrances remain accessible to breeding birds, (in particular storm petrel), with best endeavours being made to maintain/increase the amount of potential breeding chambers in the walls subjected to maintenance works.

M12 – Works/research programmes will be subject to site-specific mitigation measures. This may include, for example, conducting pre-works surveys to establish the location of any burrows utilised for nesting in the works area, the marking if such burrows so they may be avoided, and avoiding certain time-periods where birds may be more susceptible to disturbance.

#### Assessment of Site Integrity with Mitigation

Assessments of any future works and maintenance will take place in consultation with NPWS which will identify mitigation measures required to avoid or reduce potential adverse effects. Through mapping of the distribution of occupied nests within the various structures across the site, care can be taken when conducting conservation works to make sure the nests remain viable into the future, thus ensuring the range of available habitat is not reduced. This in turn will ensure that the population

of the burrowing nesting species remains viable into the future. Through following these measures, conservation/maintenance works will not adversely affect the site, ensuring the site integrity is maintained.

#### 7.1.2.2 Visitor Access: A6.2, A6.6, A6.7, A6.11, A7.2, A7.4 and A7.9

SCI	Puffin	Manx shearwater	European storm petrel	Gannet	Kittiwake	Guillemot	Fulmar
Affected by pressure?	✓	✓	✓				

#### Assessment of Site Integrity Prior to Mitigation

Should visitors venture from the prescribed pathways, they may cause damage to the existing breeding habitat used by burrowing bird species.

The movement of visitors across Sceilg Mhichíl is generally limited to the prescribed pathways on the island, from the pier up to the monastery via the sequence of steps leading up to it. The vast majority of visitors to the island adhere to the instructions and remain within the designated pathways. However, in recent years (particularly in the wake of the filming of the Star Wars films on Sceilg Mhichíl) there have been incidences of visitors straying from these pathways. It has been reported that some Star Wars fans have left the tourist paths to stand on the location of a particular scene to re-enact the scene. For example, an area in Christ's Saddle utilised by burrowing Atlantic puffin was subject to inadvertent trampling from visitors in 2017, which required fencing to be erected to limit further damage. An Taisce has raised concerns that fencing installed to reduce habitat damage from visitors leaving the designated paths could do more damage than good because the fencing presents a collision hazard to puffins trying to access and leave nests quickly and to airborne storm petrels and Manx shearwaters at night.

With average annual visitor numbers having increased over the course of the previous plans life (from an annual average of 11,507 from 2009-2013 to an annual average of 15,061 from 2014-2018) (NMS, 2020), there is greater risk of visitors straying from the pathways and damaging the existing habitat on Sceilg Mhichíl.

There has also been a historical tendency for boat operators to drop off the majority of visitors to the island in the morning as opposed to spreading out arrival times throughout the day. This has caused issues with overcrowding of the site, requiring individuals to step away from the designated pathway to let others past, inadvertently damaging the existing habitat.

In addition, there is a risk of unregulated visitors accessing the site outside of the regular visitor season. With no guides present on the island in these instances, any visitors may be more susceptible to straying from the designated path leading to sensitive breeding habitat being trampled.

#### Mitigation

M6 - Continue to explore the staggering of the arrival times of boats over the course of the day to reduce overcrowding on the site and reduce the potential for visitors to venture from the designated pathways.

M7 - Continue to provide clear, concise and effective messaging to individuals visiting the island on the need to remain on the designated pathways. This will be done both before boarding a vessel through displaying appropriate signage at the departure points, and after disembarking on the island through talks from accredited guides. This will reinforce its importance to visitors

M13 - Options to limit access to the site outside of the visitor season will be explored, such as the construction of a physical barrier at the site entrance and/or use of CCTV cameras to monitor the pier area.

#### Assessment of Site Integrity with Mitigation

Through a more even distribution of visitors to the site and clear communication to visitors as to the importance to remaining on the designated pathway and limitation of unregulated access to the site, habitat loss caused by visitor access will be avoided, and the range of available habitat will not be reduced. Prevention of visitors from straying from the pathways through the lifetime of the plan will ensure that the natural range of the species will not be reduced into the future, and allow the species to maintain their population on a long-term basis.

#### 7.1.2.3 Research programmes: A11.3 – A11.6

SCI	Puffin	Manx shearwater	European storm petrel	Gannet	Kittiwake	Guillemot	Fulmar
Affected by pressure?	✓	✓	✓		✓	✓	✓

#### Assessment of Site Integrity Prior to Mitigation

There are several planned and ongoing research programmes due to be carried out on Sceilg Mhichíl. This includes research on geology and historic quarrying, research on water collection and management, completion of a vegetation survey, and research into the development of drystone construction. The timings and scopes of these works are not currently available; however, it is confirmed that such works will be non-intrusive (OPW pers. comms. 12/05/20). These programmes could lead to damage to habitat through individuals inadvertently trampling on areas of sensitive habitat for burrowing nesting species. Given the limited number of individuals that would be present conducting such research however, and limited timeframe in which such activities would likely be conducted over, such programmes will not lead to loss in habitat.

#### Mitigation

M2 - Implementation of Action 4.4 of the Proposed Plan, *'Ensure an Ecological Assessment is undertaken for any project or activity which might significantly impact on the biodiversity of the island (including Appropriate Assessment or screening for any plan or project likely to have a significant effect on the species and their habitats for which the SPA has been designated)'*, will ensure any works programme is assessed prior to it commencing. This will be conducted in consultation with NPWS so that nature conservation issues are considered prior to the Minister for Housing, Local Government and Heritage deciding if assessment is required.

M3 - Works/research programmes will be subject to site-specific mitigation measures. This may include, for example, conducting pre-works surveys to establish the location of any burrows utilised for nesting in the works area, the marking of such burrows so they may be avoided, and avoiding certain time-periods where birds may be more susceptible to disturbance.

M12 - Research programmes will be staggered to prevent programmes from occurring simultaneously within the same location on Sceilg Mhichíl.

#### Assessment of Site Integrity with Mitigation

Should each research programme be sufficiently assessed for their environmental impact prior to the beginning, these programmes will not lead to a reduction in available habitat. This will ensure that

the natural range of the sites SCIs is not reduced and that their population dynamics will not be affected, ensuring they will remain viable into the future.

### 7.1.3 Introduction of INNS / problematic native species

The following Actions of the Proposed Plan have the potential to lead to the introduction of INNS to Skelligs SPA:

- **A6.12, A9.1i) and A9.4**

These Actions make provision for works to occur within the Lower Lighthouse compound of Sceilg Mhichíl. This will require equipment and materials to be transported to the site, therefore providing a potential pathway for invasive species to access the island.

- **A6.11, A7.2**

These Actions make provision for the landing of tourist vessels on Sceilg Mhichíl. Tourist vessels also have the potential to introduce INNS to the Skelligs SPA.

SCI	Puffin	Manx shearwater	Storm petrel	Gannet	Kittiwake	Guillemot	Fulmar
Affected by pressure?	✓	✓	✓		✓	✓	✓

#### Assessment of Site Integrity Prior to Mitigation

One of the greatest threats to maintaining the Skelligs SPA in a favourable conservation status is from the introduction of Invasive Non-Native Species (INNS). The introduction of INNS can seriously threaten native wildlife through predation, competition, and habitat modification. This threat is more so in fragile island ecosystems such as the Skelligs (Sceilg Mhichíl and Sceilig Bheag). Invasive species can rapidly reach high numbers and predatory mammal species can have devastating effects, particularly on vulnerable ground-nesting and burrowing bird populations (MKO 2019).

Human aided pathways have already led to the introduction of two non-native terrestrial mammal species to Sceilg Mhichíl – the house mouse (*Mus musculus*) and the European rabbit (*Oryctolagus cuniculus*), which are likely to have been present for many decades (MKO 2018). In contrast, no invasive species are currently known to occur on Sceilig Bheag, a smaller, unvegetated and generally inaccessible island with no infrastructure for boat landings. As such, the potential for the introduction of INNS on Sceilig Bheag is significantly less than Sceilig Mhichíl (MKO 2018).

Whilst the smallish rabbit population may be relatively benign (and Manx shearwaters and puffins can make use of rabbit burrows for breeding sites) the impact of mice on nesting storm petrels has not been investigated (BirdWatch Ireland 2019) and the impact of these already established mammals is largely unknown (MKO 2018).

A review of biosecurity on the Sceilig islands conducted in 2018 determined that the most likely pathway for new species to reach the island was through boats landing on the island, where animals could stow away within cargo or on the vessel itself (MKO, 2018). Of the various types of boats that land on the island (e.g. tourist vessels, cruise ships, cargo boats), unauthorised landings from vessels such as yachts and diving parties outside of the visitor season are thought to pose the greatest biosecurity risk. While during the visitor season such unscheduled landings would be met by a guide present on the island, there is no such guide presence outside the visitor season, highlighting a potential pathway for invasive species to enter the island unchecked (MKO, 2018).

The potential for species to reach the island through swimming was also assessed. While the potential for species to swim directly to Sceilig Mhichíl is negligible, with the island being located at a distance

over twice the known record of invasive species’ swimming ability, invasive species could potentially swim shorter distances and “island-hop” to Sceilg Mhichíl. Such a route would start on the mainland then travel to Puffin Island (0.11km), then to Lemon Rock (4.06km), onwards to Sceilg Bheag (3.84km) and then finally to Sceilg Mhichíl (1.8km). Such distances are close to the maximum swimming distances for brown rat. However, given the typically choppy sea conditions between the mainland and Sceilg Mhichíl, and the lack of suitable access points on the intermediary islands, such an occurrence is improbable.

The biosecurity review identified the species which could be introduced to the Skelligs, the risk of incursion of each species, pathways, the possible impacts, the speed of impact and overall impact severity. The assessment results indicated that the species which poses the greatest risk to the Skelligs SPA is the brown rat (*Rattus norvegicus*) which has a high incursion risk, impacts include predation on seabirds, eggs and chicks and transmitter of disease, impact speed is rapid and impact severity is critical (MKO 2018).

House mouse has a high incursion risk and possible impacts include predation on seabirds, eggs and chicks, but impact speed is slow and overall impact severity is moderate. Rabbits also have a high incursion risk, with possible impacts being through habitat degradation (grazing by rabbits can lead to exposure of soil, leading to greater erosion and a reduction in plant cover for ground-nesting birds), impact speed is slow and overall impact severity is moderate (MKO 2018).

#### Mitigation

M14 – Actions 4.9 and 4.13 of the Proposed Plan, ‘Implement the biosecurity action plan to deal with accidental or deliberate introductions to predator species’ & ‘Research the impacts of mice and rabbit on the biodiversity and archaeological heritage of the islands. Consider if eradication necessary’, must be implemented at the earliest possible opportunity.

#### Assessment of Site Integrity with Mitigation

Action 4.8 of the Proposed Plan states that the recommendations detailed in the 2018 Biosecurity Review will be implemented, with reviews of these measures being planned for 2021 and Year 5 of the Proposed Plan. Therefore, the potential for the introduction of INNS to significantly adversely affect the SCI species of Skelligs SPA is as low as reasonably practicable.

### 7.1.4 Climate change

#### A3.1, A3.2, A7.8 and A10.3

These Actions relate to the conservation/maintenance works of cultural heritage features and visitor pathways on the island.

SCI	Puffin	Manx shearwater	European storm petrel	Gannet	Kittiwake	Guillemot	Fulmar
Affected by pressure?	✓	✓	✓		✓	✓	✓

#### Assessment of Site Integrity Prior to Mitigation

As described previously in Section 5.1.2.1, the effects of Climate Change on Skelligs SPA (i.e. increased storm frequency and intensity leading to increased rockfall events within the site) may necessitate conservation works to be undertaken to fix/mitigate against such events, which themselves may lead to visual disturbance of nesting bird species found in the vicinity of such works. Such works would likely lead to the potential visual disturbance of the sites burrowing seabirds only, with cliff nesting species being situated away from the site of any potential required works.

While Action 3.1 of the Proposed Plan describes how a full pre-works survey will be carried out for each annual phase of works, works resulting from incidents such as rockfalls are not able to be planned in advance, owing to their spontaneous nature and requirement for works to begin quickly upon their discovery. This need for works to begin shortly after discovery of damages may lead to a rushed programme being implemented that adversely affects birds in the vicinity of the incident.

The increasing frequency in rockfall events, an in-direct result of climate change through increasing storm intensity and frequency leading to soil erosion, may lead to habitat loss for both burrowing and cliff-nesting bird species. This may reduce the available habitat for species on the island, gradually reducing their natural range.

### Mitigation

M15 - Objective 10 of the Proposed Plan and its associated Actions prescribe for a framework for monitoring climate change and its associated impacts to be monitored on Sceilg Mhichíl. With the potential for increasing frequency and intensity of storm events likely to continue, implementation of these Actions should be a priority.

### Assessment of Site Integrity with Mitigation

Through implementation of an appropriate monitoring and mitigation framework it may be possible for precautionary measures to be undertaken to prevent/mitigate against rockfall events from occurring. This will reduce the potential for habitat loss to occur, ensuring the range of available habitat, and thus the natural range of the sites SCIs, is maintained. With any required works being subject to review prior to commencing, the potential for climate change to in-directly impact Skelligs SPA should be reduced.

## 7.1.5 Summary of assessment

Table 7-2 below presents the site summary of impacts for Skelligs SPA.

**Table 7-2 Site summary of impacts to SCIs of Skelligs SPA**

SCI's of Skelligs SPA	Pressure	Potential for significant effect	Mitigation	Potential for Adverse effect with mitigation applied?
Atlantic puffin	Visual disturbance	Yes	M1, M2, M3, M4, M5, M6, M7, M8, M9, M10, M11, M12	No
	Habitat loss/damage	Yes	M2, M3, M4, M12, M13	No
	Climate change	No	M15	No
	INNS	Yes	M14	No
Manx shearwater	Visual disturbance	Yes	M1, M2, M3, M4, M5, M6, M7, M8, M9, M10, M11, M12	No
	Habitat loss/damage	Yes	M2, M3, M4, M12, M13	No

SCI's of Skelligs SPA	Pressure	Potential for significant effect	Mitigation	Potential for Adverse effect with mitigation applied?
	Climate change	No	M15	No
	INNS	Yes	M14	No
European storm petrel	Visual disturbance	Yes	M1, M2, M3, M4, M5, M6, M7, M8, M9, M10, M11, M12	No
	Habitat loss/damage	Yes	M2, M3, M4, M12, M13	No
	Climate change	No	M15	No
	INNS	Yes	M14	No
Northern gannet	Visual disturbance	No	M10, M11	No
Black-legged kittiwake	Visual disturbance	Yes	M1, M8, M10, M11	No
	Habitat loss/damage	No	M2, M3, M13	No
	Climate change	No	M15	No
	INNS	Yes	M14	No
Common guillemot	Visual disturbance	Yes	M1, M8, M9, M10, M11	No
	Habitat loss/damage	No	M2, M3, M13	No
	Climate change	No	M15	No
	INNS	Yes	M14	No
Northern fulmar	Visual disturbance	Yes	M1, M8, M10, M11	No
	Habitat loss/damage	No	M2, M3, M13	No
	Climate change	No	M15	No
	INNS	Yes	M14	No

**At the plan level, based on the available data, with appropriate mitigation measures and Plan Actions being implemented at the earliest opportunity, it can be concluded that the implementation of the Proposed Plan will not lead to an adverse effect on the integrity of Skelligs SPA.**

## 7.2 Schedule of Mitigation

All mitigation measures implemented in the assessment are presented in Table 7-3 below.

**Table 7-3 Summary of mitigation measures for all impacts**



Mitigation Code	Definition
<b>M1</b>	Review lighting arrangements for the operation of the Lower lighthouse complex and where practicable implement lighting options which will minimise the risk of bird strikes.
<b>M2</b>	Implementation of Action 4.4 of the Proposed Plan, ' <i>Ensure an Ecological Assessment is undertaken for any project or activity which might significantly impact on the biodiversity of the island (including Appropriate Assessment or screening for any plan or project likely to have a significant effect on the species and their habitats for which the SPA has been designated)</i> ', will ensure any works programme is assessed prior to it commencing. This will be conducted in consultation with NPWS so that nature conservation issues are considered prior to the Minister for Housing, Local Government and Heritage deciding if assessment is required.
<b>M3</b>	Works/research programmes will be subject to site-specific mitigation measures. This may include, for example, conducting pre-works surveys to establish the location of any burrows utilised for nesting in the works area, the marking of such burrows so they may be avoided, and avoiding certain time-periods where birds may be more susceptible to disturbance.
<b>M4</b>	Continued supervision of wall maintenance by an ornithologist to ensure that burrow entrances remain accessible to breeding birds, (in particular storm petrel), with best endeavours being made to maintain/increase the amount of potential breeding chambers in the walls subjected to maintenance works.
<b>M5</b>	Carry out spot checks on points along the access pathways to ensure visitor compliance with adhering to the designated pathways on the site.
<b>M6</b>	Continue to explore the staggering of the arrival times of boats over the course of the day to reduce overcrowding on the site and reduce the potential for visitors to venture from the designated pathways.
<b>M7</b>	Continue to provide clear, concise and effective messaging to individuals visiting the island on the need to remain on the designated pathways. This should be done both before boarding a vessel through displaying appropriate signage at the departure points, and after disembarking on the island through talks from accredited guides. This will reinforce its importance to visitors.
<b>M8</b>	Objective 8 of the Proposed Plan, through its Actions, aims to help further promote visitor activities on the mainland of Ireland. The improvement and promotion of such activities may help to reduce the number of visitors travelling to Sceilg Mhichíl, reducing the potential for disturbance to occur.
<b>M9</b>	Ensure all boat operators landing visitors on Sceilg Mhichíl or taking visitors on tours around the island, are informed of potential adverse effects from visual and physical disturbance on wildlife (e.g. rafting seabirds and seals) and are requested to avoid disturbance. Develop guidance for boat operators taking tourists around the Skelligs islands for vessel speeds and separation distances from wildlife.

Mitigation Code	Definition
<b>M10</b>	Action 4.10 <sup>5</sup> of the Proposed Plan ' <i>Exclude recreational and other non-essential helicopter flights from an exclusion zone of 1km surrounding Skelligs SPA</i> ' will limit the potential for disturbance from helicopters on the SCIs of Skelligs SPA. This is with the exemption of the following essential activities (access for medical emergencies, material drops and visits from the Commissioners of Irish Lights).
<b>M11</b>	Put in place measures to prevent unauthorised drone flying. These shall include the continued dissemination of information (e.g. at booking, at the piers, on the boats) to explain why unauthorised drones are banned on the site, along with the creation of a process for the authorisation of legitimate drone usage on-site.
<b>M12</b>	Research programmes will be staggered to prevent programmes from occurring simultaneously within the same location on Sceilg Mhichíl.
<b>M13</b>	Options to limit access to the site outside of the visitor season will be explored, such as the construction of a physical barrier at the site entrance and/or use of CCTV cameras to monitor the pier area.
<b>M14</b>	Actions 4.9 and 4.13 of the Proposed Plan, ' <i>Implement the biosecurity action plan to deal with accidental or deliberate introductions to predator species</i> ' & ' <i>Research the impacts of mice and rabbit on the biodiversity and archaeological heritage of the islands. Consider if eradication necessary</i> ', must be implemented at the earliest possible opportunity.
<b>M15</b>	Objective 10 of the Proposed Plan and its associated Actions prescribe for a framework for monitoring climate change and its associated impacts to be monitored on Sceilg Mhichíl. With the potential for increasing frequency and intensity of storm events likely to continue, implementation of these Actions should be a priority.

### 7.3 In-Combination Effects Assessment

As detailed in the Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities (2011), the impacts and effects of any plan should be considered in combination with other plans and projects that may also affect Natura 2000 sites. This is because other plans could lead to potentially significant 'in-combination' effects when implemented together with the Proposed Plan. Any plans and projects in County Kerry that have the potential to interact with the geographic scope of the Proposed Plan i.e. Sceilg Mhichíl, vessel routes and their associated piers have been identified and considered in the in-combination effects assessment. Applicable plans and projects have been identified through a search of the Department of Housing, Planning and Local Government website and a further desk-top review of other published literature and websites. Current commercial fisheries, shipping interests have been scoped out of the list of projects as they are considered to represent baseline conditions, and are not considered as projects, plans or licensed activities.

Table 7-4 below details the relevant in-combination plans and projects that have been considered in relation to the Proposed Plan. Other small-scale activities such as sport-fishing, SCUBA diving around the site and the use of craft such as kayaks and jet-skis have been recorded to occur on a very limited basis by local guides on Sceilg Mhichíl (OPW, pers. comms. May 2020). Individuals participating in such activities are not permitted from landing on Sceilg Mhichíl, outside of local arrangements being

<sup>5</sup> Based on the updated wording of Action 4.10, detailed in Appendix A, Table A-1 of this report.

in place for some dive operators where divers may use the pier area for resting purposes. Owing to the infrequent nature of these activities and lack of interaction with the main site of Sceilg Mhichíl itself, these activities will not lead to any significant effects to the site, alone or in-combination with the Proposed Plan.

As a result of the below assessment, it has been determined that there is no pathway for cumulative effect between the above plans/projects and the Proposed Plan.

**Table 7-4 Potential in-combination effects of relevant plans/projects with the Proposed Plan**

Plan	Plan/Project Summary	Details of HRA Work Completed	Potential impacts that may cause in-combination effects?	Further Assessment Required?
Kerry County Development Plan 2015 – 2021	The Kerry County Development Plan (KCPD) 2015 – 2021 is an integrated document detailing the policies and objectives across a wide range of sectors that outline how the County will develop in the future.	Appropriate Assessment – Determined that the Kerry County Development Plan is not likely to have significant effects on a Natura 2000 site, either by itself or in combination with other plans or projects and that adverse impact on the integrity of Natura 2000 sites are not likely to occur.	The KCPD makes no provision for any specific policies relating to any Natura 2000 sites in the study area. Where reference is made to Natura 2000 sites in the policies, it is made to ensure that the integrity of such sites will not be affected. The plan makes no specific provision for the expansion of tourism to Sceilg Mhichíl, with the only policy relating to the site being to support the sustainable public access to the site. For these reasons, in addition to the AA conducted for the Plan determining it would not have an adverse impact alone or in-combination with another plans/projects, there are no potential impacts from this plan that may cause in-combination effects.	NO
West Iveragh Local Plan 2019 – 2025	The purpose of the plan is to set out a comprehensive local planning framework with clear policies and objectives including land use zoning in the interests of the common good, with its successful implementation ensuring the are develops positively in a sustainable manner.	Appropriate Assessment – Was concluded that (after all Material Alterations were accounted for) adverse impacts on the integrity of Natura 2000 sites, in view of the site’s conservation objectives, were not likely to occur.	As detailed in the Natura Impact Report for the plan, the policies and objectives in the plan will either: <ul style="list-style-type: none"> <li>▪ Not lead to development;</li> <li>▪ Are intended to protect the natural environment including biodiversity;</li> <li>▪ Are intended to conserve or enhance the natural built or historic environment and are unlikely to have an effect on a Natura 2000 site;</li> </ul>	NO

Plan	Plan/Project Summary	Details of HRA Work Completed	Potential impacts that may cause in-combination effects?	Further Assessment Required?
			<ul style="list-style-type: none"> <li>▪ Will positively steer development away from Natura 2000 sites and associated sensitive areas;</li> <li>▪ Positively make provision to ensure that implementation will not have a significant effect or an adverse effect on the integrity of a Natura 2000 site;</li> <li>▪ And/or have been formulated using a caveat or conditional approach requiring, where necessary, a case by case environmental assessment/HDA.</li> </ul> <p>In addition, the plan refers to the Proposed Plan and its support for its implementation. As such, the plan will not lead to impacts that could have an in-combination effect with the Proposed Plan.</p>	
<p>Regional Planning Guidelines for the South-West Region 2010 – 2022</p>	<p>The Regional Planning Guidelines sets out a series of recommendations to local authorities, which are clearly linked to and support national investment priorities and are designed to strengthen integrated approaches to policy making and planning at local level, in line with regional and national planning frameworks.</p>	<p>N/A</p>	<p>This document is a high-level strategic planning document that provides broad guidance for further plans (i.e. KCDP) to develop and adapt for their specific area’s needs. As such, the policies outlined in this document are of too general a nature to have a foreseeable in-combination impact pathway with the Actions proposed by the Proposed Plan.</p>	<p>NO</p>

Plan	Plan/Project Summary	Details of HRA Work Completed	Potential impacts that may cause in-combination effects?	Further Assessment Required?
Skellig Coast Visitor Experience Development Plan	The aim of the plan is to “extend the season and attract visitors to engage with the true essence and story of the Skellig Coast without compromising the environment or culture of the region”.	Screening Report completed – Concluded that AA was not required.	One of the ‘Catalyst Projects’ for the Plan is supporting the continued operation of a marine eco-tour from Portmagee, Cahersiveen or Valentia Island as an alternative or addition to the Skellig Boat journey. Encouraging the addition of further boat tours around Sceilg Mhichíl, separately to the Proposed Plan, could potentially lead to an in-combination effect with the boats already provisioned in the Proposed Plan to loafing and foraging seabirds around the island.	NO
Kerry Local Economic & Community Plan 2016 – 2022	The Kerry Local Economic & Community Plan (LECP) provides a blueprint for economic and community development for the county for the period 2016 – 2022. This evidence-based Plan was adopted by Kerry County Council in April following extensive research and public consultation over a preceding 18-month period.	N/A	The LECP has been developed in full compliance with the KCDP 2015-2021. As it was determined in the AA for the KCDP that it would not have an adverse effect on a Natura 2000 site, the LECP will itself not lead to any significant effects on the environment. The LECP makes no provisions within its actions and objectives that could lead to an in-combination effect in conjunction with the Proposed Plan, with the actions being general in nature or leading to a positive sustainable impact on the area.	NO
County Kerry Tourism Strategy and Action Plan 2016 - 2022	Plan to ‘to maximise, in a sustainable manner, tourism’s contribution to the quality of life, economy, employment and local community development, paying	Screening Report completed – Concluded that AA was not required.	There are no policies in the plan that in-combination with the Proposed Plan would lead to a negative effect on any Natura 2000, with any policy being general in nature, referring to areas outwith the Natura 2000 sites or having a positive impact to Natura	NO

Plan	Plan/Project Summary	Details of HRA Work Completed	Potential impacts that may cause in-combination effects?	Further Assessment Required?
	particular attention to nurturing and protecting the natural, built, cultural and linguistic heritage of the county’.		2000 sites. As a result, along with the associated Screening Report concluding that AA was not required, there are no potential impacts that may cause in-combination effects.	
Heritage Ireland 2030 (Under consultation)	Ireland’s new national heritage plan providing a framework of values, principles, strategic priorities and actions to guide and inform the heritage sector up to 2030.	N/A	The Heritage Ireland 2030 plan is currently in the consultation phase, with no specific plans or policies that may refer to Sceilg Mhichíl or other heritage features along the County Kerry coastline being outlined. As such, there is currently no identifiable in-combination effects between this plan and the Proposed Plan.	NO
CHERISH project	Cross-disciplinary project aiming to raise awareness and understanding of the past, present and near future impacts of climate change, storminess and extreme weather events on the rich cultural heritage of the Irish and Wales regional seas and coasts.	N/A	The CHERISH project, with permission, is aiming to conduct survey work on Sceilg Mhichíl, specifically an unmanned aerial vehicle (UAV) photogrammetric survey of the island. As such the use of drones on Sceilg Mhichíl is tightly regulated, requiring permission to be obtained for their use, the scope-of-works for this project will be assessed by competent ecologists prior to it commencing. This will ensure that any potential in-combination impacts are mitigated against/prevented.	NO

## 8. CONCLUSION AND RECOMMENDATIONS

### 8.1 Conclusion

In conclusion, the Actions and Objectives that the Proposed Plan has outlined will not have an adverse effect on Skelligs SPA, with these Actions either actively benefitting the site, having no clear pathway for effect, causing a negligible effect or the significance of their effects being reduced through effective mitigation measures.

### 8.2 Recommendations

- Prioritise SCI species monitoring efforts to ensure data can be used to develop quantitative conservation objectives, recognising that this is required in the long-term to inform future decision making. The following monitoring methods are recommended to supplement the ongoing monitoring campaign for the burrowing nesting bird species:
  - Annual monitoring of breeding success by following a subset of nests checked at the beginning and towards the end of the breeding season to determine the number of chicks fledged per apparently occupied burrow (AOB).
  - Continue the placement of artificial nesting habitat at the site in keeping with the natural environment to facilitate monitoring, particularly of European storm petrel and Manx shearwater whose burrows are less accessible to monitoring than Atlantic puffin.
  - Undertake a desk-based assessment, using monitoring programme data, to understand population distribution across the site and determine what proportion of the population interacts with human activities.
  - Undertake a desk-based assessment, using monitoring programme data, to quantify impacts of visitors by comparing breeding success of birds under/adjacent to paths with those away from immediate visitor traffic.
- Any future amendments made to the Proposed Plan will be screened for AA and, if required, updates will be made to the NIS to reflect these changes.
- Continue investigations into the type and number of birds rafting in the waters of Skelligs SPA, to determine if species are affected by passenger vessels circumnavigating the island.
- Begin the climate change monitoring programme at the earliest opportunity to identify areas on the island that could be affected by adverse weather events in the future, allowing for proactive works to be conducted to reduce the severity of their effects on the site.
- Guides to continue to assist NPWS on Sceilg Mhichíl with ensuring visitors understand the ecological sensitivities of the island and the importance of keeping to designated routes.



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# APPENDIX A

## Examination of Re-worded/Additional Proposed Plan Actions

**Table A-1 Examination of the Re-Worded/Additional Actions to the Proposed Plan**

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
<b>Re-worded Actions</b>				
A4.1	Prepare site-specific conservation objectives for the bird species for which the Skelligs SPA has been designated. Include quantitative conservation objectives attributes and targets.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A4.10	Exclude recreational and other non-essential helicopter flights from an exclusion zone of 1km surrounding Skelligs SPA.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO
A6.1	Continue to balance the need to preserve the integrity of the National Monument, Nature Reserve and SPA at Sceilg Mhichíl while allowing a system of managed public access so as to ensure the conservation of the World Heritage Site and Sceilg Mhichíl's other Statutory Designations are maintained as a first priority over public access.	This re-worded Action gives equal priority to the SCIs of Skelligs SPA with that of the WHS and other designations and gives priority to all of these features over public access. This Action will therefore have a beneficial effect on the SCIs of Skelligs SPA and will not be considered further in this assessment.	2a	NO
A6.4	Collect Visitor Statistics for each season and analyse trends in order to provide quality management information. Publish annual statistics and analytical report online.	Any change occurring as a result of this Action should be positive and will not undermine the conservation objectives of the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2c	NO
A6.6	Continue to regularly review both the patterns of movement across the site and whether the 180 visitors per-day limit is sustainable, with regards to the cultural and natural heritage features of the site and to visitor safety.	This Action aims to determine if the current 180 visitor per-day limit is sustainable and makes provision for this limit to be changed should it be found to be unsustainable. This Action will therefore have a beneficial effect on the SCIs of Skelligs SPA and will not be considered further in this assessment.	2a	NO

ID	Objective / Action	Discussion	Applicable Criteria	To Be Assessed Further?
A6.11	Continue to balance the need to preserve the cultural and natural heritage designated features of Sceilg Mhichíl and facilitate public access through the operation of the boat permit scheme for landing visitors on the island during the visitor season.	Despite the re-wording of this Action to include the natural heritage features of the site, there still exists the potential that such balancing may lead to an increase in the number of boat permits being made available in the future. This could then lead to an increase in the number of visitors to Skelligs SPA, which may lead to a significant adverse effect. Therefore, this Action will be considered further in this assessment.	3	YES*
A8.2	Maintain the website for Sceilg Mhichíl [ <a href="http://www.worldheritageireland.ie">www.worldheritageireland.ie</a> ] and continue to provide relevant information on the significance of the site, provide periodic updates on the implementation of the plan and to advise visitors how to prepare for a safe visit to the island.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA. Therefore, it will not be considered further in this assessment.	2e	NO
<b>New Actions</b>				
A2.5	Make publicly available existing and future reports on Sceilg Mhichíl via a dedicated website page for Sceilg Mhichíl.	This is a general Action that is unlikely to have a significant effect on Skelligs SPA. Therefore, it will not be considered further in this assessment.	2e	NO
A4.15	Develop guidance for boat operators to follow to reduce potential impacts on wildlife on Sceilg Mhichíl, and in the surrounding waters.	This Action will have a beneficial effect on the SCIs of Skelligs SPA. Therefore, it will not be considered further in this assessment.	2a	NO

\* The reasoning for further assessment of this Action remains identical to that of the Action's previous version. As such, the assessment of this Action conducted in Section 7 of this report remains the same for this re-worded Action also.